



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 advisers 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 an asterisk (*) are offered only at the Regional Campuses. Course abbreviations marked with an asterisk indicates **all** course offerings are at the Regional Campuses.

Abbreviation	Department	page
A&S	Arts and Sciences	323, 425
ACCT	Accounting	307
ACTT*	Accounting Technology (Regional Campuses)	425
ADED	Adolescent/Adult Education	307
ADMS	Administrative Sciences	308
AMST	American Studies	311
ANTH	Anthropology	311
ARCH	Architecture and Environmental Design	313
ART	Art	315
ASTU	Aerospace Studies	310
AUTT*	Automotive Engineering Technology (Regional Campuses)	425
B AD	Business Administration	.See Graduate Schools Catalog
BFRT*	Banking, Finance and Related Technologies (Regional Campuses)	426
BFSM	Blossom Festival School of Music	326
BMRT*	Business Management and Related Technologies (Regional Campuses)	427
BMS	Biomedical Sciences	.See Graduate Schools Catalog
BSCI	Biological Sciences	324, 427
C&I	Curriculum and Instruction	340
CACM	Center for Applied Conflict Management	327
CADT*	Computer Design and Animation Engineering Technology (Regional Campuses)	428
CHDS	Counseling and Human Development Services	335
CHEM	Chemistry	327, 429
CJST	Criminal Justice Studies	335
CLAS	Modern and Classical Language Studies—Classics	330
CLS	Clinical Laboratory Sciences	330
COMM	Communication Studies	332
COMT*	Computer Technology (Regional Campuses)	429
CPHY	Chemical Physics	.See Graduate Schools Catalog
CPSY	Counseling Psychology	.See Graduate Schools Catalog
CRIT	Critical Languages	337
CS	Computer Science	333
DAN	Dance	340
ECED	Early Childhood Education	342
ECET*	Early Childhood Education Technology (Regional Campuses)	430
ECON	Economics	343
EDAD	Educational Administration	345
EDPF	Educational Psychology and Foundations	345
EDUC	Education	345
EEET*	Electrical/Electronic and Related Engineering Technologies (Regional Campuses)	430
ELED	Elementary Education	346
EMGT*	Environmental Management Technology (Regional Campuses)	431
ENG	English	347
ENVT*	Environmental Technology (Regional Campuses)	431
ELS	Exercise, Leisure & Sport	.See Graduate Schools Catalog
EXPR	Experimental Programs	350
FCS	Family and Consumer Studies	351
FD&M	Fashion Design and Merchandising	354
FIN	Finance	356
FPA	Fine and Professional Arts	358

Abbreviation	Department	page
FR	Modern and Classical Language Studies—French	358
GCOL	Graduate College	See Graduate Schools Catalog
GEOG	Geography	360, 432
GEOL	Geology	362
GER	Modern and Classical Language Studies—German	364
GRE	Modern and Classical Language Studies—Greek	365
HEBR	Modern and Classical Language Studies—Hebrew	367
HED	Health Education	365
HIST	History	367
HONR	Honors College	371
HORT*	Horticulture Technology (Regional Campuses)	432
HST*	Human Services Technology (Regional Campuses)	432
IERT*	Industrial Engineering and Related Technologies (Regional Campuses)	433
ILS	Integrated Life Sciences	373
ITAL	Modern and Classical Language Studies—Italian	373
ITEC	Instructional Technology	372
JMC	Journalism and Mass Communication	374
LABT*	Laboratory Technology (Regional Campuses)	437
LAT	Modern and Classical Language Studies—Latin	378
LEGT*	Legal Assisting Technology (Regional Campuses)	433
LEST	Leisure Studies	378
LS*	Labor Studies (Regional Campuses)	433
LSCI	Library Science	379
MATH	Mathematical Sciences	380, 435
MCED	Middle Childhood Education
MERT*	Mechanical Engineering and Related Technologies (Regional Campuses)	435
MCLS	Modern and Classical Language Studies	383
MFGT*	Manufacturing Engineering Technology (Regional Campuses)	434
MKTG	Marketing	379
MROT*	Marine Retail Operations Technology (Regional Campuses)	434
MSCI	Military Science	383
MUS	Music	384, 436
NRST*	Nursing Technology (Regional Campuses)	436
NURS	Nursing	389
OMRT*	Office Management and Related Technologies (Regional Campuses)	437
OTAT*	Occupational Therapy Assisting Technology (Regional Campuses)	437
PADM	Public AdministrationSee Graduate Schools Catalog
PAS	Pan-African Studies	390
PEB	Physical Education—Basic	394
PEP	Physical Education—Professional	396
PHIL	Philosophy	392
PHY	Physics	399, 439
PLCT*	Plastics Technology (Regional Campuses)	439
POL	Political Science	401
PORT	Modern and Classical Language Studies—Portuguese	404
PSCI	Physical Science	398
PSYC	Psychology	404
PTAT*	Physical Therapy Assisting Technology (Regional Campuses)	438
RADT*	Radiologic Technology (Regional Campuses)	439

*Courses offered only at Regional Campuses.

Abbreviation	Department	page
RERT*	Real Estate and Related Technologies (Regional Campuses)	440
RHAB	Rehabilitation Counseling	406
RUSS	Modern and Classical Language Studies—Russian	406
SEED	Secondary Education	407
SOC	Sociology	408
SP&A	Speech Pathology and Audiology	414
SPAN	Modern and Classical Language Studies—Spanish	410
SPED	Special Education	412
SPSY	School PsychologySee Graduate Schools Catalog
SWK	Social Work	408
TECH	Technology	415, 440
THEA	Theatre	420
US	Undergraduate Studies	503
VOED	Vocational Education	422

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 semester hours.

23021 Introduction to Managerial Accounting (3)

Introduction to principles of accounting as they relate to managerial accounting, including cost relationships. Prerequisite: ACCT 23020.

NOTE 1: Registration in any 30000 level accounting course except 33000, 33061, and 33063 is restricted to officially declared or conditionally declared accounting majors and minors. The 40000 level accounting courses are restricted to officially declared accounting majors who have satisfied the progression requirements.

To major in Accounting, students also must obtain a satisfactory score on the APAT (Accounting Programs Admission Test). Accounting majors also must have a 2.50 or better grade point average for the junior level (ACCT 30000) accounting courses to take senior level (ACCT 40000) accounting courses. Please see adviser in the Undergraduate Programs Office for clarification of policy.

NOTE 2: Admission to all 30000/40000 level courses requires completion of all prerequisites and appropriate academic status.

NOTE 3: Registration in ACCT 33000, 33061, and 33063 is restricted to the following groups:

- 1. Officially declared upper-division business administration majors.*
- 2. Officially declared nonbusiness majors with a minimum 60 semester hours completed and a minimum 2.00 cumulative grade point average. Registration priority is extended to those majors that specifically require ACCT 33000, 33061, 33063.*
- 3. Officially declared prebusiness majors (with a minimum 60 semester hours completed and a minimum 2.25 cumulative grade point average) registering for upper-division business courses.*

33000 Fundamental Tax Procedures (3)

Nontechnical presentation of federal income tax laws and regulations as they relate to individuals. Prerequisite: Junior standing; Nonaccounting majors; see notes 2 and 3.

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 skills are emphasized. Prerequisite: ACCT 23021; see current catalog notes 1 and 2.

33004 Introduction to Accounting Systems (3)

Study of accounting information systems with emphasis on internal controls. Design and application of spreadsheets are integrated throughout the course. Microcomputer skills in accounting are emphasized. Prerequisites: ACCT 23021 and ADMS 24053.

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. Microcomputer skills in accounting are emphasized. Prerequisites: 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 skills in accounting emphasized. Prerequisites: 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 towards accounting major. Prerequisite: Junior standing; ACCT 23021; see notes 2 and 3.

33063 Cost Control and Analysis for Management (3)

Cost accounting concepts and procedures; analysis of revenue, cost, and income variances. Open only to non-accounting major; cannot count towards accounting major. Prerequisite: ACCT 23021; Nonaccounting majors; see notes 2 and 3.

43010 Principles of Auditing and Control (3)

Integration of concepts and practical aspects of auditing. The importance of strong controls is stressed. Prerequisites: ACCT 33010 and 33012. This course may be used to satisfy the writing-intensive course graduation 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 and teamwork skills are emphasized. Prerequisite: ACCT 33010; see notes 1 and 2.

43014 Advanced Accounting Systems (3)

Readings and cases in the analysis, design, and implementation of accounting information systems. Advanced spreadsheet and data base applications. Prerequisite: ACCT 33014; see notes 1 and 2.

43020 Corporate Accounting III (3)

Business combinations, consolidated financial statements, specialized disclosures; foreign currency impacts; intercorporate investments. Verbal communication and working-in-teams skills are emphasized. Prerequisites: ACCT 33012 and 43031.

43031 Income Taxation (3)

Basic concepts of income recognition and deductions for individuals and corporations. Detailed coverage of the taxation of C corporations. Professional accounting research and written communication skills are emphasized. Prerequisite: ACCT 33012; see current catalog notes 1 and 2.

43033 Income Tax II (3)

Advanced partnership and corporate tax problems; estate and gift taxation; tax administration and practice. Prerequisite: ACCT 33031.

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 and teamwork skills are emphasized. Prerequisite: ACCT 33012.

43092 Accounting Internship (3)

Study of activities related to concurrent on-the-job experience with cooperating industrial and public accounting firms. "S/U" grading. Prerequisites: Junior standing; Permission of instructor; see notes 1 and 2.

43093 Variable Title Workshop in Accounting (1-3)

To be determined when a specific course is proposed for a particular term. Prerequisite: Permission.

43096 Individual Investigation in Accounting (1-3)

Open only to senior majors in accounting with permission of adviser. Prerequisites: Senior Accounting majors; Permission; see notes 1 and 2.

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 or permission.

20010 Computerized Accounting Systems (1)

A computer laboratory course using commercial accounting software systems. Prerequisites: ACTT 11001 and COMT 11000.

20011 Spreadsheets for Accountants (2)

An advanced laboratory course applying various financial and managerial accounting concepts to electronic spreadsheets. Prerequisites: ACTT 11001 and COMT 11011 or permission.

21000 Accounting III — Financial (4)

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 (2)

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 or permission.

21004 Introduction to Cost Accounting (3)

Accounting for manufacturing costs. Both manual and computerized applications will be studied. Prerequisite: ACTT 11001.

21005 Budgeting, Profit Planning, and Control (3)

Use of flexible budgets for manufacturing cost control and profit planning. Prerequisite: ACTT 21004.

21006 Introduction to Corporate Tax Preparation (3)

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

21092 Internship in Accounting Technology (2)

Supervised field experience requires minimum of fourteen hours per week for unpaid work experiences or twenty hours per week for employment with pay. Prerequisites: ACTT 21000 and permission.

21095 Special Topics (1-3)

Special topics in accounting. Repeated registration permitted. Prerequisite: Permission.

21096 Individual Investigation—Accounting Technology (1-3)
Independent in-depth research of an accounting topic supervised and coordinated by an accounting technology faculty member. Prerequisites: Twelve credit hours of ACTT courses and permission.

ADMINISTRATIVE SCIENCES (ADMS)

14266 Introduction to Business Administration (3)
Survey of social and economic environment of business emphasizing production, marketing, finance, and industrial relations. (Only lower-division students in other colleges can receive graduation credits.) Prerequisite: None.

24001 Principles of Systems Development (3)
Provides an overview of the information systems profession, a rigorous introduction to programming logic and language syntax, and a framework for the IS curriculum. Prerequisite: None.

24002 Computer Programming for Business I (3)
Introduces a programming language currently used in business and industry for data processing, decision making, and other information systems applications. Prerequisite: ADMS 24001 or permission.

24042 Systems Analysis I (3)
Coverage of the system life cycle, structured process modeling and data modeling methodologies, logical system design, and automated analysis tools. Prerequisite: ADMS 24053.

24053 Introduction to Computers and Information Systems (3)
To develop an appreciation for the contribution of computers and software to society. Develop competency in operation of hardware and several software applications. Prerequisite: None.

24055 Principles of Business Statistics (3)
Descriptive statistics, probability, binomial, normal distributions, sampling distributions, estimation of mean and proportion, tests of hypotheses together with computer applications through a statistical software package. Prerequisite: MATH 11012 or 12002.

NOTE 1: Registration in any 30000 or 40000 level Administrative Sciences course is restricted to the following groups:

- 1. Officially declared upper-division business administration majors.*
- 2. Officially declared nonbusiness majors with a minimum 60 semester hours completed and a minimum 2.00 cumulative grade point average. Registration priority is extended to those majors that specifically require 30000 and 40000 level Administrative Sciences courses.*
- 3. Officially declared prebusiness majors (with a minimum 60 semester hours completed and a minimum 2.25 cumulative grade point average) registering for upper-division business courses.*

NOTE 2: Admission to all 30000 or 40000 level courses requires completion of all prerequisites and appropriate academic status.

34031 Systems Simulation (3)
Concepts and methods of simulating systems to facilitate managerial decision making. Students design computerized simulation models using simulation language to analyze complex problems. Prerequisites: ADMS 24002 and ADMS 34056 or equivalent; see notes 1 and 2.

34032 Data and File Technology (3)
An introduction to file architecture and data base management systems. The application of these technologies is detailed. Prerequisite: ADMS 24053; see notes 1 and 2.

34033 Computer Programming for Business II (3)
Continuation of Computer Programming for Business I. Emphasis on problem solving, developing systems, structured programming, programming style conventions, and programming in teams. Prerequisite: ADMS 24002 or permission.

34036 Large Systems Technology (3)
An introduction to the use of large computer systems; experience with job control language, utilities, teleprocessing monitors, exec. languages, and job streams. Prerequisite: None; see notes 1 and 2.

34045 Small Systems Technology (3)
An examination of the role of small computer systems within an organization's information systems environment. Prerequisite: None; see notes 1 and 2 above.

34056 Intermediate Statistics (3)
Chi-square tests: goodness of fit; contingency tables; analysis of variance; one-way and two-ways of classification; linear, curvilinear, and multiple regression and correlation; elements of time series analysis. Prerequisite: ADMS 24055; see notes 1 and 2.

34057 Decision Science I (3)
Fundamentals of management science techniques from a problem-solving perspective. Stresses problem formulation, decision theory, solution sensitivity analysis, and solution implementation using practical applications. Prerequisites: MATH 11012 and ADMS 24055; see notes 1 and 2.

34058 Operations Research I (3)
Matrix algebra, linear programming, transportation problems, and network flow problems. Theory and solution methods of each problem developed in conjunction with applications and foundations. Prerequisites: MATH 11011 or 12001, and ADMS 34057; see notes 1 and 2.

34060 Operations Management (3)

A survey course in production and operations management that covers the managerial concepts and the quantitative tools used in the design, planning, operation, and control of production systems. Prerequisites: ADMS 24053 and 24055; see notes 1 and 2.

34061 Manufacturing Processes: Design and Control (3)

Analytical approaches to design and control of cost-effective, energy-conserving manufacturing processes: methodologies and cases from a variety of industrial applications. Prerequisites: ADMS 24055 and 34060; see notes 1 and 2.

34062 Job Design and Measurement (3)

Practical and theoretical considerations in the design of work systems and the measurement of job content and development of compensation plans. Prerequisite: ADMS 34060; see notes 1 and 2.

34063 Operations Analysis: Modern Technology (3)

Case-method study of selected operating problems including such topics as materials handling, plant layout, line balancing, and capacity problems. Prerequisites: ADMS 34056 and 34060; see notes 1 and 2.

34095 Special Topics (3)

Special topics course that will be offered on a semester basis with different topics and different faculty involved each time the course is offered. Prerequisite: See notes 1 and 2.

34123 Entrepreneurship in the United States Economy (3)

A study of the major factors in our society affecting the creation of new enterprise. Special attention will be given to an understanding of a supportive political and economic environment. Prerequisite: ECON 22060; see notes 1 and 2.

34163 Principles of Management (3)

Introductory course in management and organization design. The leading contributions to the area are reviewed and practical problems and applications are developed. Prerequisite: Junior standing; see notes 1 and 2.

34165 Dynamics of Leadership (3)

Contemporary theories of management and leadership; practical application cases; personal assessment and opportunities to develop individual and group leadership. Prerequisite: see note 1.

34180 Human Resource Management (3)

Focuses on the competitive advantage derived from the better management of a firm's human resources. Problems related to managing people at work will be discussed from both practical and theoretical perspectives. Prerequisite: ADMS 34163; see notes 1 and 2.

34183 Developing and Training Human Resources in Organizations (3)

The roles of training and development in organizations are presented. Different training approaches/methods are discussed along with a recommended model of training design. Discuss current challenges with respect to societal concern. Prerequisite: ADMS 34180; see notes 1 and 2.

34185 Individual and Group Behavior in Organizations (3)

Determinants of individual and group behavior within work organizations. Topics covered include: motivation, job design, learning, decision making, leadership, and group behavior as they relate to performance and other outcomes in work organizations. Prerequisite: Junior standing; see notes 1 and 2. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

34280 Social Responsibility in the Workplace (3)

Using a case-based approach to learning, this course provides information on what constitutes appropriate business behavior by examining the major business and nonbusiness factors that influence business policies and practices. Prerequisite: ADMS 34163; see notes 1 and 2.

44042 Telecommunications and Networking (3)

Presentation of current and emerging telecommunications services and networking technologies with emphasis on their strengths, limitations, and business applications. Prerequisite: None; see notes 1 and 2. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

44043 Data Base Applications (3)

The design, implementation, and management of data base management systems within organizations are studied from both theoretical and applied perspectives. Prerequisite: ADMS 24053; see notes 1 and 2.

44044 Systems Analysis II (3)

Physical system implementation: mapping logical data models and process models to physical data bases and system design; system coding, testing, installation, conversion, training, and automated tools. Prerequisite: ADMS 24042 or permission; see notes 1 and 2 above.

44048 Software Integration (3)

The design and implementation of information systems. Traditional and alternative development strategies are investigated from a theoretical and applied perspective. Group project to implement information system with software packages. Prerequisite: ADMS 44043; see notes 1 and 2.

44049 Network Management (3)

Practical aspects of installing and managing PC networks within business organizations. Emphasis on commonly used network operating systems, LAN and WAN technologies, inter-networking and media. Prerequisite: ADMS 44042; see notes 1 and 2.

44056 Statistical Models for Business Applications (3)

The application of linear statistical models such as regression analysis of variance, analysis of covariance, and design of experiments for managerial decision problems. Prerequisite: ADMS 34056; see notes 1 and 2.

44063 Quality and Cost Control (3)

Modern Q&R assurance that combines statistical and behavioral aspects: sampling plan, statistical process control, tolerancing, reliability assurance, product and process optimization, quality motivation and management. Prerequisite: ADMS 24055, 34056, and 34060. see notes 1 and 2.

44064 Manufacturing Resource Planning (3)

A systems approach to the control of materials and resources in an operating environment. Emphasizes forecasting, material and capacity planning, implementation, and control. Prerequisite: ADMS 34060; see notes 1 and 2.

44065 Strategies in Production and Operations Management (3)

Senior project in industrial management. Applies concepts from all prior coursework to the solution of real and simulated operating problems. Prerequisite: ADMS 44064 or permission; see notes 1 and 2. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

44093 Variable Title Workshop (1-6)**44095 Special Topics (3)**

Special topics course that will be offered on a semester basis with different topics and different faculty involved each time the course is offered. Prerequisite: Junior standing; see notes 1 and 2.

44096 Individual Investigation in Management (3)

Presents opportunity to undertake research. Approval of topic and agreement to work with student must be secured from faculty member and the chairperson of the department prior to registration. Prerequisite: Controlled; see notes 1 and 2.

44150 Total Quality Management (3)

Considers the application of sound management principles and theories needed for successful implementation of quality processes and systems. The course will be based on class discussion and cases. Prerequisite: See note 1. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

44172 Arbitration, Mediation, Conciliation (3)

Provides overview of dispute resolution procedures used in U.S. IR System and opportunity to develop skills through case analyses. Prerequisite: ADMS 34182; see notes 1 and 2.

44173 Labor and Employment Legislation (3)

Major labor legislation and court rulings, with emphasis on underlying philosophy and impact. Utilizes systems approach to understanding and evaluating both labor and employment legislation. Prerequisite: ADMS 34182 or permission; see notes 1 and 2.

44179 Organizational Theory/Design (3)

Theory and behavior of organizations. Emphasizes the nature of organizations as total entities, and problems which arise in designing structures and jobs. Prerequisite: ADMS 34163; see notes 1 and 2.

44181 Personnel Systems (3)

Analysis and design of human resource systems with emphasis on planning, skills inventories, computer-based management information systems, the behavioral impact of systems upon individuals, groups, and organizations. Prerequisites: ADMS 24053 and 34180; see notes 1 and 2.

44191 Senior Research Seminar in Management (3)

Combination of individual or group research and class discussion for superior students. Investigations in administration and organization conducted in accordance with scholarly interests of participants. Prerequisite: Controlled; see notes 1 and 2.

44285 Policy/Strategy (3)

Integrative approach to study of policy formulation and implementation. Case analysis of actual business situations provides student with opportunity to develop analytical skills. Prerequisite: Controlled; see notes 1 and 2.

44292 Internship in Information Systems (3)

Preparation of a research report concurrent with on-the-job experience in the information systems department of a cooperating business or industrial organization. Prerequisite: student finds position; department approval, and a 2.50 minimum grade point average.

ADOLESCENT/ADULT EDUCATION (ADED)**32272 Teaching of Speech (4)**

Methods of teaching speech communication, radio-TV-film, and theater in secondary school curricula. This course contains 55 field/clinical hours. Prerequisite: Advanced standing and ADED 32142 or permission.

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.

33192 Secondary Education Practicum (3)

Field experience conducted in conjunction with the first special methods course and implemented at the student teaching site. Purpose is to blend theoretical and research principles with classroom practice through observation, planning and teaching. "S/U" and "IP" grading permissible. Prerequisite: ADED 32142.

42157 Teaching with Microcomputers: Secondary Classroom (3)

In depth study of instructional use of microcomputers in all subject areas of the secondary classroom. Use of BASIC and LOGO in developing and modifying instructional software. Prerequisite: None.

42196 Individual Project in Adolescent Education (2-4)

IP grade permissible. Prerequisite: Permission.

42272 Teaching of Computer Science in Secondary School (4)

Methodology and materials for effective teaching of secondary school computer science and computer use. Prerequisite: CS 43001 and 43101; ADED 32142.

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.

42292 Field Work Practicum (1-4)

Designed to meet the individual needs of education students who require additional field clinical experiences prior to student teaching. "S/U" and "IP" permissible. Prerequisite: Permission junior or senior standing.

42295 Special Topics in ADED (1-3)

Prerequisite: Permission.

42358 Secondary Student Teaching (4)

Provides a 10 week student teaching experience. See student teaching section of this catalog. "IP" permissible. Prerequisite: Eligibility for admission to student teaching.

47248 Teaching Critical Thinking (2)

Techniques, procedures and materials for developing skills in application of analysis and thinking process. Prerequisite: ADED 32142 and senior standing.

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 unit; collaborative problem solving; conducting an action research project and creating a portfolio. Prerequisite: Admission to student teaching.

AEROSPACE STUDIES (ASTU)**10101 The Air Force Today I (1)**

Introduction to the United States Air Force and Air Force Reserve Officer Training Corps. Explores mission and organization of the Air Force, officership and professionalism, officer opportunities, and introduction to communication skills. Prerequisite: None.

10102 The Air Force Today II (1)

Introduction to environment of the Air Force officer, basic principles of leadership, selected topics that contribute to an understanding of the Air Force today, and practice of basic communication skills. 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. Prerequisite: None.

20101 The Air Force Way I (1)

A survey course designed to facilitate the transition from Air Force ROTC cadet to Air Force ROTC candidate. Topics include development of air power, Air Force heritage, and Air Force leaders. Prerequisite: None.

20102 The Air Force Way II (1)

Introduction to quality Air Force principles, ethics and values, leadership, and continuing application of communication skills. 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. Prerequisite: None.

20105 Leadership Evaluation I (2)

Leadership Evaluation will develop self-discipline as related to military conduct and measure the effectiveness of the person's capability to interact in a leadership role during field training. Prerequisites: ASTU 10101, 10102, 20101, 20102.

20106 Leadership Evaluation II (4)

Leadership Evaluation will develop self-discipline as related to military conduct and measure the effectiveness of the person's capability to interact in a leadership role during field training. Prerequisite: Permission.

30101 Air Force Leadership and Management I (3)

Study of leadership and quality management fundamentals, professional knowledge, and communication skills required for an Air Force officer. Prerequisite: Permission.

30102 Air Force Leadership and Management II (3)

Employs case studies to examine Air Force leadership and management situations as a means of demonstrating and exercising practical application of concepts. Explores Air Force officer's responsibilities and duties as a subordinate leader. Prerequisite: Permission.

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. Prerequisite: None.

30192 Leadership Practicum I (1-4)

The Leadership Practicum will place a person directly into a leadership position for a twelve- to eighteen-day period to make decisions on Air Force management. Prerequisites: ASTU 30101, 30102, 30103, and 30104.

40101 Preparation for Active Duty I (3)

Professional ethics, personal responsibilities of military leaders; civil-military relations. Socialization processes within the armed forces. Military law and justice systems. Prerequisite: Permission.

40102 Preparation for Active Duty II (3)

Political, economic, and social constraints upon national security/defense structure. Determinants of national security policy. Role of military establishment in democratic society. Prerequisite: Permission.

40103, 40104 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. Prerequisite: None.

40201 Aerospace Ground School (0)

Provided to those cadets who have been identified for duty as Air Force pilots, and who do not have a fixed-wing pilot's license. This course must be taken the semester prior to entering the 14 hours of flight instruction. Prerequisite: Permission.

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 permission.

40096 Individual Investigation (1-3)

(repeated registration permitted) Individual research project. Prerequisites: Senior standing and permission.

40197 Senior Colloquium (3)

Intensive research into comparative culture pattern or theme, reading, and discussion. Prerequisites: Senior standing and permission.

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.

18420 Introduction to Archaeology (3)

This course introduces students to the study of prehistory with a focus on both methods and techniques and on the major events leading to the emergence of world civilizations. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

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.

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.

28210 Primitive Art (3)

Anthropological approach to the study of art form and aesthetics that especially looks at styles and traditions that developed on Oceania, sub-Saharan Africa, Siberia, Australia, and North America, both Indian and Eskimo. Prerequisites: ANTH 18210 or ART 12001 or 22006, 22007.

38050 Theory in Cultural Anthropology (3)

Development of anthropological thought. Prerequisites: ANTH 18210 and junior standing or permission.

38096 Individual Investigation in Anthropology (1-3)

Readings and/or research supervised by a member of the anthropology staff. "IP" grade permissible. Prerequisite: Permission.

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 or permission.

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.

38260 Patterns of Peasant Life (3)

"Rural" peasantry found throughout the world, examined analytically as one of the components of change in the emergence of new nations. 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 or permission.

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 laboratory analysis of prehistoric remains. Course will include laboratory exercises as well as class lectures. Prerequisites: ANTH 18420 and permission.

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 ANTH 18630 or ANTH 38630.

38492 Field Work in Archaeology (3)

Field and laboratory techniques in archaeological research. Prerequisite: Permission.

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 ANTH 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. Prerequisite: Junior standing and permission.

48095 Special Topics in Anthropology (3)

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

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 and junior standing or permission.

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 writing-intensive course graduation 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 and junior standing or permission.

48230 Socio-cultural Change (3)

Analysis of institutional change where peoples of different cultures are in sustained contact. Prerequisites: ANTH 18210 and junior standing or permission.

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 and junior standing or permission.

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 or permission.

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 or permission.

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. Prerequisite: ANTH 18210 and junior standing; or, 12 hours of anthropology coursework including 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 or permission.

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 or permission.

48410 Stone Age Archaeology (3)

Survey of Old World cultural history, using archaeological data. Stresses the period of 3 million years ago to 10,000 years ago. Prerequisites: ANTH 18420 and junior standing or permission.

48420 Archaeology of North America (3)

Survey of major North American and Mexican archaeological sequences with emphasis on interareal relationships. Prerequisites: ANTH 18420 and junior standing or permission.

48425 Prehistory: Mesoamerica (3)

An examination of cultural attainments in pre-Columbian Mesoamerica from the evidence of the earliest man to the coming of the Spanish. Prerequisites: ANTH 18420 and junior standing or permission.

48440 Prehistory: Ohio (3)

Prehistoric culture sequence of Ohio with special emphasis on ecological and cultural interpretations. Prerequisites: ANTH 18420 and junior standing or permission.

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 and junior standing or 12 hours of anthropology coursework including 18210.

48691 Seminar in Ethnic Studies (3)

Comparative analysis of peoples and cultures in one of the following culture areas: Africa, South Asia, Southeast Asia, Europe and Latin America. Offered when special resource personnel are available. Prerequisite: ANTH 18210 or SOC 12050 or permission.

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 or permission.

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 10181 or permission.

ARCHITECTURE AND ENVIRONMENTAL DESIGN (ARCH)**11013 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.

12014 Theory of Architecture I (4)

Introduction to the fundamental principles of visual organization, structural system concepts, and graphic communication skills. Prerequisite: Architecture majors and/or departmental approval. Special Fee: \$3.75/cr. hr. — subject to change.

12024 Theory of Architecture II (4)

Continuation of ARCH 12014. Prerequisite: ARCH 12014. Special Fee: \$3.75/cr. hr. — subject to change.

20001 Survey of Architectural History I (3)

History of architecture from Neolithic times through the fourteenth century. Prerequisite: Not open to Architecture majors. This course may be used to satisfy the Liberal Education Requirements.

20002 Survey of Architectural History II (3)

History of Western architecture from the Renaissance to the early twentieth century. Prerequisite: ARCH 20001; not open to architecture majors. This course may be used to satisfy the Liberal Education Requirements.

22034 Theory of Architecture III (4)

Introduction to a design process as it relates to architectural problems and development of verbal and communicative skills. Prerequisite: ARCH 12024. Special Fee: \$3.75/cr. hr. — subject to change.

22044 Theory of Architecture IV (4)

Continuation of ARCH 22034. Prerequisite: ARCH 22034. Special Fee: \$3.75/cr. hr. — subject to change.

24303 Structural Mechanics I (3)

Statics, strength of materials, and structural analysis. Prerequisite: MATH 12002.

34015 Architectural Design I (5)

Concentration of analysis and synthesis affecting the ordering and structuring of the built environment. Prerequisite: Admission to the Professional Program. Special Fee: \$3.00/cr. hr. — subject to change.

34025 Architectural Design II (5)

Emphasis and study, in greater depth, of selected facets of architecture, using a variety of studio experiences. Prerequisite: ARCH 34015. Special Fee: \$3.00/cr. hr. — subject to change.

34313 Structural Mechanics I (3)

Structural analysis of building elements and building systems. Prerequisite: ARCH 24303.

40093 Variable Title Workshop in Architecture (1-6)

Workshop in architectural applications. Prerequisite: None.

44035 Architectural Design III (5)

A studio course which recognizes the diversity of cultural values, beliefs, and traditions, and studies architectural design primarily in terms of formal and symbolic aesthetics. Prerequisite: ARCH 34025. Special Fee: \$3.00/cr. hr. — subject to change. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

44045 Architectural Design IV (5)

Observation of, as well as solutions to, spaces and places in the environment. Consideration of life styles, culture, linkages, and human need. Prerequisite: ARCH 44035. Special Fee: \$3.00/cr. hr. — subject to change.

44214 History of Architecture I (3)

History of architecture from prehistoric times through the Gothic. Prerequisite: Admission to the Professional Program.

44224 History of Architecture II (3)

Continuation of ARCH 44214. History of architecture from Renaissance to the early twentieth century. Prerequisite: ARCH 44214.

44314 Structures I (4)

Design of structural elements and systems in wood and steel. Prerequisite: ARCH 24303 and 34313.

44324 Structures II (4)

Design of structural elements and systems in masonry and reinforced concrete. Prerequisite: ARCH 24303 and 34313.

44414 Methods and Materials I (4)

Exploration into the nature of construction materials and their assembly into component parts while measuring their performance in natural and man-made environments. Prerequisite: Admission to the Professional Program.

44424 Methods and Materials II (4)

Develop and analyze a simple building function and system as a design problem and produce the documentation for same by way of working documents. Prerequisite: ARCH 44414.

44514 Environmental Technology I (4)

Fundamental principles of environmental lighting, acoustics, and thermal conditioning with regard to human comfort and current-day technology. Prerequisite: Admission to the Professional Program.

44524 Environmental Technology II (4)

Integration of building environmental systems including lighting, acoustical, heating, ventilating and air conditioning, plumbing, electrical, and transportation systems. Prerequisite: ARCH 44514.

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 44035.

45013 Introduction to Preservation of the Built Environment (3)

An overview of preservation including building analysis, conservation, adaptive reuse, economic benefits of preservation planning as a revitalizing strategy. Prerequisite: Permission.

45056 Architectural Design V (6)

Urban form studies and architectural design dealing with large-scale building uses. Prerequisite: ARCH 44045. Special Fee: \$2.50/cr. hr. — subject to change.

45066 Architectural Design VI (6)

Building systems studies and architectural design studies dealing with a system applicable to large-scale institutional, commercial, and industrial uses. Prerequisite: ARCH 45056. Special Fee: \$2.50/cr. hr. — subject to change.

45113 Introduction to Urban Design (3)

Introduces the student to the legal, political, and physical urban context in the design of cities, and the elements of an urban design plan. Prerequisite: Instructor's permission.

45223 American Architecture: Colonial to Present (3)

A stylistic and social history of American building from the Colonial period to the present. Prerequisite: Permission.

45334 Structures III — Building Structural Systems (4)

Design of floor systems, bearing wall systems, post and beam systems, and foundation systems. Prerequisite: ARCH 44324.

45813 Professional Practice (3)

Study of practice of architecture, including professional options, office organizations, marketing of services, comprehensive architectural services, law, contracts, project management, and construction contract administration. Prerequisite: Admission to the Bachelor of Architecture Program.

45823 Specifications (3)

Study of contract documents, including their content, organization, preparation and modification of project manuals, specifications, bidding requirements, conditions of construction contracts and construction contracts. Prerequisite: Admission to the Bachelor of Architecture Program.

45913 Land Use Control Law (3)

Seminar discussing land use control policies, systems, programs, and laws including private controls, constitutional considerations, and environmental issues. Prerequisite: Permission.

45931 Current Issues in Historic Preservation (1)

Seminar in which practicing professionals including architects, planners, developers, and government officials present preservation-related work. Repeated registration permitted. Prerequisite: Permission.

45953 Architectural Theory and the Media (3)

An overview of architectural analysis and the written, graphic, and electronic communication of that analysis. Emphasis is placed on development of writing skills for design professional. Prerequisite: Permission.

46213 History of Cities (3)

Content varies: offerings may include history of cities to 1850, history of cities from 1850 to present, history of architecture, and planning in selected cities. Prerequisite: Permission.

46223 Studies in Architectural History (3)

Content varies: offerings may include American architecture, selected nineteenth-century architects, selected twentieth-century architects, building materials, and techniques of the Industrial Revolution. Prerequisite: Permission.

46233 Frank Lloyd Wright (3)

(cross-listed with ART 42080) 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: ART 22007 or ARCH 44224 or permission.

46243 Renaissance Architecture (3)

History and theory of Renaissance architecture from 1400 until 1600. Prerequisites: ARCH 44214 and 44224; or 20001 and 20002; or ART 22006 and 22007.

46253 Baroque Architecture (3)

History and theory of architecture from 1600 through 1750 in Europe. Prerequisites: ARCH 44214 and 44224; or 20001 and 20002; or ART 22006 and 22007.

46263 Modern Architecture (3)

History and theory of architecture from the Chicago School through World War II. Prerequisites: ARCH 44214 and 44224; or 20001 and 20002; or ART 22006 and 22007.

46273 Contemporary Architecture Since World War II (3)

History and theory of architecture since the Second World War. Prerequisites: ARCH 44214 and 44224; or 20001 and 20002; or ART 22006 and 22007.

46343 Structures IV — Advanced Analysis and Design of Systems (3)

Analysis and design of long span roof systems. Prerequisite: ARCH 44324.

46353 Structures V (3)

Analysis and design of long span roof systems. Prerequisite: ARCH 44324.

46453 Site Analysis and Design (3)

Analysis of environmental factors as a basis for site selection and site planning. Prerequisite: None.

46463 Introduction to Landscape Architecture (3)

Introduction to landscape design with emphasis upon the relationship between landscape and buildings. Prerequisite: None.

46513 Environmental Design and Energy (3)

Seminar discussing the potential and present responsibilities, involvement and opportunities of environmental designers in the application of our natural resources, particularly in Northeast Ohio. Prerequisite: Permission.

46613 Urban Design Theory (3)

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

46623 Community Infrastructure Facilities (3)

Examines criteria and standards for the development of public community facilities designed to serve the health, safety, and welfare of citizens. Prerequisite: None.

46713 Information Processing in Architecture (3)

Survey of methods for programming, data collection, analysis, synthesis, development, and communication of information relevant to the architectural design process. Prerequisite: None.

46723 Systems Analysis and Design Methods in Architecture (3)

Introduction to design methods and systems analysis applications in architecture, engineering, construction, and planning. Prerequisite: None.

46753 Developing Environments for Older Adults (3)

Research of existing built environments of the elderly and an investigation of the planning design process. The physical form response and adaptive ability. Prerequisite: None.

46991 Seminar (3-12)

(repeatable for a total of 12 hours) Advanced study in selected topics which will vary semester by semester depending on needs and interests of students. Prerequisite: Permission.

46992 Field Study (3-6)

Field study and documentation of buildings, urban areas, etc. Each project normally requires supporting investigation analysis. The student must obtain faculty approval prior to registration. Prerequisite: Permission.

46996 Individual Investigation (3)

Individual investigation, analysis, synthesis, and evaluation of a selected topic. The student must outline a proposed project and obtain faculty approval prior to registration. Prerequisite: Permission.

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

An introduction to the history of art for the nonart major, 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. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

12002 Art Survey (3)

See ART 12001. Prerequisite: Honors College students only.

13003 Introduction to Graphic Design (3)

Organization of two-dimensional space utilizing type and imagery. Prerequisite: None. Special Fee: \$4.00/cr.hr. — subject to change.

13007 Basic Studio Skills / Graphic Design and Illustration (2)

Introduction to the use of basic tools, materials, and fundamental techniques for illustration and graphic design. Prerequisite: None.

13301 Exploratory Materials and Processes (3)

Introduction and use of powered equipment and thermal processes as means for solving problems of pure design, custom equipment, and products. Prerequisites: ART 13003 and 14000. Special Fee: \$3.33/cr. hr. — subject to change.

13700 Visual Organization I (3)

Fundamental experiences in visual organization; elements of structured space on two-dimensional plane and study of value. Prerequisite: None.

13701 Visual Organization II (3)

Continuation of Visual Organization I with emphasis on color and its interaction through a series of nonapplied (abstract) exercises. Prerequisite: None.

14000 Drawing I (3)

Fundamental drawing and studio experiences; exploration of basic drawing ideas and media. Prerequisite: None. Special Fee: \$4.00/cr. hr. — subject to change.

14001 Drawing II (3)

Continued practice in drawing with particular emphasis upon dimensional representation and pictorial structure. Prerequisite: ART 14000. Special Fee: \$4.00/cr. hr. — subject to change.

14020 Art Issues I (1)

An introduction to the forms and functions of visual art and the development of aesthetic awareness. Prerequisite: None.

14021 Art Issues II (1)

Continuation of Art Issues I with emphasis on media. Prerequisite: ART 14020.

14022 2D Composition (3)

Basic introduction in flat pictorial composition for the studio or craft artist. Prerequisite: None. Special Fee: \$10.00/cr. hr.—subject to change.

14055 Sculpture I (3)

An introduction to the basic concepts of three-dimensional form. Prerequisite: None. Special Fee: \$10.00/cr. hr.—subject to change.

14060 Painting I (3)

Opaque, water-based media used to introduce fundamental form language and vocabulary of painting. Emphasis upon structured study and effective use of colors. Prerequisites: ART 13700, 14000, or permission. Special Fee: \$4.00/cr. hr. — subject to change.

21001 Art Experiences (3)

Designed especially for nonart students. Laboratory work in art structure to form a basis for self-development in arts. Prerequisite: None. Special Fee: \$4.00/cr. hr.—subject to change.

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.

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.

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 perspective. Prerequisite: None.

23007 Intermediate Studio Skills/Graphic Design and Illustration (3)

A technical lecture course designed to outline the process and describe and discuss the technologies and vocabulary used in the printing industry. Prerequisite: ART 23201 and/or permission. Special Fee: \$9.00/cr. hr.—subject to change.

23009 Sophomore Entrance Examination/Portfolio Review Graphic Design/Illustration (1)

Visual communication design faculty will review a portfolio of work selected from ART 13003, 23101, 23102, 23201, 23302, and taken concurrently with ART 23007, and a diagnostic examination of technical and drawing skills and formal organizational ability through a series of "hands on" tests. Taken concurrently with ART 23007. "S/U" grading. Prerequisite: ART 13003, 23101, 23102, 23201, 23302 and/or permission. Special Fee: \$5.00/cr. hr.—subject to change.

23101 Design/Illustration Techniques I (3)

Introductory course in design/illustration. Object drawing with emphasis toward rendering materials and techniques used in reproduction, perspective, spacial organization, and use of reference material. Prerequisites: ART 13003 and/or permission.

23102 Design/Illustration Techniques II (3)

Continuation of Design/Illustration Techniques I with expanded emphasis on black and white media used for illustration purposes with emphasis on media capable of reproduction by traditional printing methods. Prerequisite: ART 23101 and/or permission.

23201 Introduction to Typography (3)

Historical study of letter forms and their application to the development of new forms. Execution and use of letter forms as design elements in layout and illustration using fundamental typographic theories and rules of spatial organization. Prerequisites: 'B' or better in ART 13003 or permission. Special Fee: \$3.50/cr. hr. — subject to change.

23300 Studio Production Rendering (3)

Familiarizes students with special rendering and model-making techniques of professional design. Prerequisite: None. Special Fee: \$3.33/cr. hr. — subject to change.

23302 Introduction to 3D Graphic Design (3)

Continuation of Introduction to Graphic Design and Introduction to Typography with application of typography and imagery to 3D form. Prerequisites: ART 13003, 23201 and/or permission.

23303 Product Design (3)

Research and design of singular self-contained objects. Utilization of industrial materials and fabricating techniques emphasizing aesthetics. Prerequisite: ART 23300. Special Fee: \$3.33/cr. hr. — subject to change.

23309 Sophomore Portfolio Review (1)

Preparation and review of a portfolio of work under supervision of Industrial Design Faculty, to be judged at end of term. See "Requirement 1" under Bachelor of Science Degree Industrial Design. Prerequisite: ART 23300; corequisite: ART 23303.

23401 Interiors Rendering (3)

The production of professional techniques in design communication using felt pens, chalks, and pencils. Elevations, plans, furniture, perspectives, axonometrics, and furnishings are produced in color. Prerequisite: TECH 11083. Special Fee: \$3.33/cr. hr. — subject to change.

23701 Visual Design for Media II: Desktop Publishing (1)

A lab course in which students apply the design concepts taught in Visual Design Media I to computer generated communication pieces using a layout software program. May not be used toward degree requirements by Visual Communication Design majors. Prerequisite: ART 23700.

24001 Drawing III (3)

Emphasis on continued development of drawing with focus on nonfigurative representations of pictorial space. Prerequisite: ART 14001. Special Fee: \$3.33/cr. hr. — subject to change.

24002 Anatomy (3)

Study of the human figure and its skeletal and muscular systems in fine art. Prerequisite: ART 24001. Special Fee: \$12.00/cr. hr. — 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 average of C) 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" grades and "IP". Prerequisite: ART 24020.

24020 Art Issues III (1)

Continuation of Art Issues II. The focus of this course is on current issues in the visual arts. Prerequisite: ART 14021.

24040 Printmaking I (3)

Basic traditional and contemporary techniques of relief (woodcut, lino-cut, etc.), and intaglio (etching, engraving, collograph, etc.), printing. Prerequisite: ART 14000. Special Fee: \$11.00/cr. hr. — subject to change.

24050 Sculpture: Life Modeling (3)

To provide a beginning in the study of the human figure in sculpture. Prerequisite: ART 14050. Special Fee: \$15.00/cr. hr. — subject to change.

24055 Sculpture II (3)

Continuation of Sculpture I with greater emphasis on materials and processes. Prerequisite: ART 14055. Special Fee: \$10.00/cr. hr.—subject to change.

24060 Painting II (3)

Continuation of work begun in Painting I. Introduction to oil painting with emphasis upon direct painting from observed sources and study of expressive capabilities of painting. Prerequisite: ART 14060. Special Fee: \$5.00/cr. hr. — subject to change.

25005 Sophomore Review-Crafts (1)

Diagnostic review by crafts faculty of portfolio of work selected from "foundation" and 20000-level crafts electives courses. Student's knowledge of art history is also examined. Student must receive a passing score (above average of C) 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. Prerequisite: Permission

25100 Fiber Arts: General I (3)

Investigation of varied fiber art media and processes with emphasis on originating and developing creative ideas in areas of choice. Prerequisite: None. Special Fee: \$5.00/cr. hr. — subject to change.

25200 Fiber Arts: Tie and Dye (3)

Resist dye processes incorporating manipulated techniques of tying, binding, folding, knotting, or stitching cloth before dyeing. Emphasis on developing awareness of surface design of fabric. Prerequisite: None. Special Fee: \$12.00/cr. hr. — subject to change.

25300 Textile Arts: Pattern (3)

Introduction to pattern making with linear structures and constructing with units. The evolution and universality of decorative patterns will be considered. Prerequisite: None. Special fee: \$10.00/cr. hr. — subject to change.

25400 Ceramics I (3)

Clay as creative medium emphasizing aesthetic and personal solution of ceramic design. Construction, firing, and glazing. Prerequisite: None. Special Fee: \$17.00/cr. hr. — subject to change.

25500 Enameling I (3)

Testing and exploration of vitreous enamel as creative medium. Prerequisite: None. Special Fee: \$10.00/cr. hr. — subject to change.

25600 Glass I (3)

Introduction to basic glass blowing techniques. Brief introduction to history of glass. Prerequisite: None. Special Fee: \$17.00/cr. hr. — subject to change.

25601 Stained Glass I (3)

Introduction to designing and executing a leaded and copper foiled stained glass window. Original design is stressed. Prerequisite: ART 13701 or permission. Special Fee: \$8.33/cr. hr. — subject to change.

25700 Jewelry/Metals I (3)

Basic techniques for metal smithing and jewelry making, including fabrication, finishing, hammerwork, and casting. Special emphasis on personal creativity. Prerequisite: None. Special Fee: \$17.00/cr. hr. — subject to change.

31001 Art Education: K-6 (3)

For Education and Art Education majors. Concepts for teaching the expressive and responsive dimensions of art in the elementary grades. Eleven field and/or clinical hours are associated with this course. Prerequisites: 2.50 GPA and sophomore standing in Art Education, or admission to Professional Education, or permission.

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. Prerequisite: 2.50 GPA; ART 31001.

31005 Art Education Special Topics (2-4)

Special topics (experimental course). "IP" grade permissible. Prerequisite: Permission of instructor.

31006 Introduction to Art Therapy (2)

Historical, developmental, and theoretical overview of art therapy, with field experience, designed to expand student's comprehension of basic principles of the therapeutic value of art. Prerequisite: ART 31001.

31096 Individual Study — Art Education (2-10)

Additional study in areas of a student's choice in consultation with adviser. "IP" grade permissible. Prerequisite: Permission.

33009 Junior Portfolio Review Graphic Design/Illustration (1)

To be taken concurrently with ART 33103 and 33203. Visual communication design faculty will review a portfolio of the work completed in ART 33101, 33103, 33201, and 33203. Students successfully passing review, depending on qualifications, may continue in the BA degree or petition to change to the BFA degree or BS/MA combined degrees in Visual Communication Design. Students not passing the review should see special requirements in program section. "S/U" grading. Prerequisites: ART 33101, 33201 and taken concurrently with ART 33103, and 33203.

33101 Illustration I (3)

Continuation of Design/Illustration Techniques I and II with emphasis on technique and creative solutions as they apply to four specific illustration areas, viz., editorial, book, advertising and institutional. Prerequisite: ART 23009 and/or permission.

33103 Illustration II (3)

Illustration as communication: conceptual problem solving visualizations of ideas utilizing felt tip markers as the medium of expression. Prerequisite: ART 33101 and/or permission.

33201 Graphic Design I (3)

Continuation of Introduction to Graphic Design and Introduction to Typography in the structuring of 2-D communication design utilizing headline, body copy, and illustration with the addition of limited conceptual content. Prerequisites: ART 23009 and/or permission. Special Fee: \$10.00/cr. hr. — subject to change.

33203 Graphic Design II (3)

Continuation of Graphic Design I utilizing basic layout with emphasis on concept as applied to problem solving methodologies through a series of exercises and problems. Prerequisites: ART 33101, 33201 and/or permission. Special Fee: \$10.00/cr. hr. — subject to change.

33300 Component Product Design (3)

Special problems in aesthetic product design involving combinations of separate but related objects, assembled sets, and products having operable assemblies. Prerequisite: ART 23309. Special Fee: \$3.33/cr. hr. — subject to change.

33301 Advanced Rendering Techniques (3)

Further development of broad range of illustrative skills in areas of conceptual sketching and professional presentation techniques. Prerequisite: ART 23300. Special Fee: \$3.33/cr. hr. — subject to change.

33305 Furniture Design (3)

Problems involving aesthetics, human anatomy, and function as the basis for furniture and equipment design; graphic presentations and full-scale construction. Prerequisites: ART 33300 and 33301. Special Fee: \$3.33/cr. hr. — subject to change.

33307 Professional Familiarization and Manufacturing Processes (3)

Philosophies, practices, and procedures of design offices; consultant, corporate, institutional, and governmental; patents and copyrights; portfolio design and professional research. Prerequisite: ART 23309. Special Fee: \$3.33/cr. hr. — subject to change.

33309 Portfolio Review — Industrial Design (1)

At completion of ART 33300, 33301, 33305, and 33307, student with major in industrial design must register for this course. See Requirement 2. Prerequisite: ART 33305; Corequisite: ART 33307.

33701 Survey of Lettering (3)

Study of historic and contemporary lettering using various media. Development of letterforms for manuscript and display purposes. Not available to visual communication design majors. Prerequisite: ART 13700 and/or permission. Special Fee: \$4.00/cr. hr. — subject to change.

34001 Drawing IV (3)

Further study and understanding of concepts and ideas which enable the student to understand and professionally realize their drawings. Prerequisite: ART 24001. Special Fee: \$3.33/cr. hr. — subject to change.

34003 Portfolio Review (1)

A diagnostic and advisory conference with the students covering their work to date by a faculty committee from the Division of Painting and Sculpture. "IP" grade permissible. Prerequisite: Permission.

34031 Film Making I (3)

Motion picture photography and basic principles of filmmaking and editing. Film considered as "visual" in essence: problems dealing with composition, space, and movement. Prerequisite: None. Special Fee: \$12.00/cr. hr. — subject to change.

34032 Film Making II (3)

Broadening of scope of ART 34031 with introduction of more complex film techniques (excluding sound). Student experimental films required. Prerequisite: ART 34031. Special Fee: \$12.00/cr. hr. — subject to change.

34040 Printmaking: Intermediate Intaglio (3)

Continuation of ART 24040 emphasizing individually assigned problems in intaglio with introduction to color intaglio techniques. Prerequisite: ART 24040. Special Fee: \$9.00/cr. hr. — subject to change.

34041 Serigraphy I (3)

Initial presentation of fundamental concepts and processes pertaining to serigraphy. Includes printing techniques and aesthetic considerations in the making of art. Prerequisite: ART 24040 or permission. Special Fee: \$7.50/cr. hr. — 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. Prerequisite: ART 24040 or permission. Special Fee: \$9.00/cr. hr. — subject to change.

34050 Sculpture: Life Modeling (3)

Continuation of the study of the human figure in sculpture. Prerequisite: ART 24050. Special Fee: \$12.00/cr. hr. — 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: ART 24005 and 24055. Special Fee: \$10.00/cr. hr.—subject to change.

34060 Painting III (3)

Continuation of the painting experience, in various media, using formal means of painting expressively. Prerequisite: ART 24060. Special Fee: \$6.25/cr. hr. — subject to change.

34068 Painting: Selected Topics (2)

(repeatable for a total of 8 hours) Individual studio research. Prerequisite: ART 34060 or permission.

35095 Crafts: Selected Topics (3)

Specialized courses in crafts that focus on specific techniques and media. Prerequisite: completion of appropriate introduction course.

35100 Fiber Arts: General II (3)

(repeatable for a total of 12 hours) Continued exploration of fiber processes and media or in-depth involvement in fiber process of choice. Special emphasis on creative solutions. Prerequisite: ART 25100. Special Fee: \$3.33/cr. hr. — subject to change.

35200 Fiber Arts: Batik (3)

Designing and creating art fabrics through resist techniques (wax and paste) and dye methods (immersion, painting, spraying, stencilling, and stamping). Historic and contemporary implications considered. Prerequisite: ART 13701 or permission. Special Fee: \$13.00/cr. hr. — subject to change.

35300 Textile Arts: Dimensional (3)

Basic introduction to loom processes that are either woven in the round or structured for manipulation into 3D form upon removal from the loom. Wrapping and coiling also explored. Prerequisites: ART 14002 and 14060 or permission. Special Fee: \$13.00/cr. hr. — subject to change.

35301 Fiber Arts: Screen and Block Printing (3)

Exploration and development of fabric printing and dyeing including mono-printing and screen printing with emphasis on design and developing studio competency in medium as art form. Prerequisites: ART 24040 and 14060 or permission. Special Fee: \$13.00/cr. hr. — subject to change.

35302 Textile Arts: Feltmaking (3)

Aesthetic investigations in the unique process of feltmaking. Dyeing of wool fleece plays a major role in the exploration. Prerequisites: ART 14002 and 14060 or permission. Special Fee: \$13.00/cr. hr. — subject to change.

35303 Textile Arts: Tapestry (3)

Introduction to a variety of traditional tapestry techniques to be executed on the frame loom. Both tapestry and carpet history will be presented to reveal traditional processes, patterns and images. Dyeing is major role. Prerequisites: ART 14022 and 14060 or permission. Special Fee: \$13.00/cr. hr. — subject to change.

35304 Textile Arts: Pictorial Weaving (3)

Basic introduction to several weaver-controlled processes to be executed on the floor loom. Immersion dyeing and warp painting will be explored. Prerequisites: ART 14022 and 14060 or permission. Special Fee: \$12.00/cr. hr. — subject to change.

35350 Textile Arts: Design and Production (3)

An introduction to the mechanics of designing and constructing cloth on the floor loom. The cloth notation system of drafting, both by hand and with the aid of the computer will provide the foundation for the creation of fabric. Prerequisites: ART 14022 and 14060 or permission. Special Fee: \$13.33/cr. hr. — subject to change.

35400 Ceramics II (3)

Continuation of ART 25400 emphasizing design, use of potter's wheel, and chemistry of glazes. Prerequisite: ART 25400 or permission. Special Fee: \$17.00/cr. hr. — subject to change.

35500 Enameling II (3)

Application of vitreous enamel in execution of finished objects in traditional techniques. Prerequisite: ART 25500 or permission. Special Fee: \$12.00/cr. hr. — subject to change.

35600 Glass II (3)

Further exploration of hot glass techniques. Design and execution emphasized. Introduction to sculptural techniques. Prerequisite: ART 25600 or permission. Special Fee: \$17.00/cr. hr. — subject to change.

35602 Beginning Neon (3)

A course to light up your life. An introduction to bending, bombarding and creating Neon tubes leading to the creation of light sculptures. Prerequisite: None. Special Fee: \$15.00/cr. hr. — subject to change.

35700 Jewelry/Metals II (3)

Further develops technical skill, historical knowledge, and expressive capacity of metal-smithing and jewelry. Prerequisite: ART 25700 or permission. Special Fee: \$18.50/cr. hr. — subject to change.

41001 Current Problems in Art Education (2)

Exploration of contemporary philosophies in art education based upon available resources. Prerequisite: ART 31002.

41002 Art Education: Methods and Materials (2)

An examination of relationships between content, materials, and strategies for teaching art. Seven field and/or clinical hours are associated with this course. Prerequisites: 2.50 GPA; ART 31004.

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: 2.50 GPA; ART 31004. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

41009 Art Education Major Review (1)

Examination of student's knowledge, proficiency and ability to apply concepts in art and art education. "S/U" grades and "IP". Prerequisite: 2.50 GPA, and pre- or corequisite: ART 41002 and 41003.

41093 Variable Title Workshop in Art (1-6)

(repeatable for a total of 18 hours) Prerequisite: Permission.

41096 Individual Study—Art Education (2-10)

Additional study in areas of students' choice in consultation with adviser. "IP" grade permissible. Prerequisite: Permission.

41525 Art Education: Inquiry into Professional Practice (3)

Concepts and practices related to teaching art. Inquiry into art teaching as a professional practice. Emphasis on teacher as a critical, disciplined investigator. Prerequisite: 2.5 GPA and ART 41009 or permission.

41557 Art Education: Student Teaching and Seminar (9)

Provides a ten week student teaching experience and associated seminar. "S/U" grades and "IP" permissible. See student teaching section in catalog. Prerequisite: ART 41525 and eligibility for admission to student teaching.

42000 Research and Writing in Art History (2)

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. Prerequisite: Junior or senior standing. This course may be used to satisfy the writing-intensive course graduation 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.

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.

42027 Art of Central Africa (3)

Study of the arts, crafts and architecture of Central Africa from prehistoric times to the present. Prerequisite: Junior or senior standing.

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 twelfth century to the fifteenth century. Emphasis on the ties to contemporary philosophical and literary developments. Prerequisite: Art History (ART 22006/7) or permission.

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.

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.

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.

42047 Rococo Art in the 18th Century (3)

Study of eighteenth-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 eighteenth-century and nineteenth-century British, French, German, and Spanish art and architecture within the broader context of western culture and ideas. Prerequisite: Junior or senior standing.

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 American Film, Photography, Art and Ideas (3)

Key examples from colonial through post-modern American photography, film, video, fine and graphic arts examined within the broader context of Western cultural and intellectual history. Prerequisite: None.

42061 Early 20th-Century Art (3)

Study of painting, sculpture, architecture, and allied arts in Europe from 1880 to 1940. Prerequisite: ART 22007.

42066 Late Modern Art Since 1940 (3)

Painting, sculpture, and allied arts in the United States and Europe from 1940 to the present. Prerequisite: ART 22007.

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: ART 12001 for nonart majors; ART 22006 and 22007 or permission for 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. ART 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: ART 22006, 22007, or permission.

42080 Frank Lloyd Wright (3)

(cross-listed with ARCH 46233) 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: ART 22007 or ARCH 44224 or permission.

42091 Art History Seminar (3)

Open format course with topics announced in advance. Designed to allow detailed examination of selected topics. "IP" grade permissible. Prerequisites: Junior standing and permission of instructor.

42092 Art Museum Internship (3)

A supervised internship in a regional art museum emphasizing the practical application of museological principles and practices. "IP" grade permissible. Prerequisites: Junior or senior standing and ART 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. Prerequisites: Junior or senior standing or permission.

42096 Individual Investigation: Art History (3)

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

43001 Basic Computer Graphic Design/Illustration (3)

An introduction to the use of the computer as a tool in graphic design and illustration. Exploration of the relationship and integration of various hardware configurations and software solutions to meet the demands of today's designers/illustrators. Prerequisite: ART 33009 and/or permission.

43003 Intermediate Computer Graphic Design and Illustration — Various Software Programs (3)

Addresses the issues of page layout and design, digital manipulation, and vector graphic illustration for graphic design professionals. Prerequisite: ART 43001 or permission. Special Fee: \$10.00/cr. hr. — subject to change.

43007 Advanced Studio Skills/Graphic Design and Illustration — Electronic Prepress Production (3)

A technical lecture course designed to teach the fundamental techniques and processes of electronic prepress and printing production. This material is presented through a series of lectures, demos, written tests, and field trips. Prerequisite: ART 43003.

43025 Professional Portfolio Graphic Design and Illustration (1-2)

Development of a professional portfolio in graphic design and/or illustration through selection and refinement of previously completed classroom work, and/or development of projects in areas of deficiency, with emphasis on organization and presentation. May carry an "IP" grade when appropriate. Prerequisite: B.F.A. major and/or permission. Special Fee: \$7.50/cr. hr. — subject to change.

43051 Calligraphy and Layout (3)

Development of creative techniques and technical proficiency in calligraphy as applied to illustration and graphic design. Prerequisites: ART 33009 and/or permission.

43052 Graphic Design—Travel and Field Experience (1-16)

Development of awareness and understanding in the practical application of graphic design and communication through directed field trip experience. "S/U" grading; "IP" permissible. Prerequisite: Permission.

43053 Graphic Design Studio—Glyphix (1-8)

(repeatable for a total of 24 credit hours)

Professional experience through an internal design studio. Involves responsibilities and procedures for the production of communication materials for off-

campus clients including nonprofit organizations, charities, arts groups, and selected on-campus groups and departments. May carry an "IP" grade when appropriate. Prerequisite: Permission. Special Fee: \$8.00/cr. hr. — subject to change.

43091 Internship 1 — Graphic Design/Illustration (1)

Preparation for experience in design studio, agency or company involving design responsibilities and procedures to broaden a students' understanding of the profession through real job situations. "S/U" grading; "IP" permissible. Prerequisite: Permission.

43092 Internship 2 — Graphic Design/Illustration (1-6)

Experience in design studio, agency or company involving design responsibilities and procedures to broaden a student's understanding of the profession through a real job situation. Three (3) credit hours required; maximum of 6 credit hours allowable. "S/U" grading; "IP" permissible. Prerequisite: ART 43091 and permission.

43095 Special Topics: Graphic Design/Illustration (1-4)

(repeatable for a total of 16 credit hours)

To broaden the course offerings into specialized areas of study in graphic design and illustration taught by experts in the profession as guest faculty. Primarily used to fulfill electives in graphic design or illustration. "S/U" grading; "IP" permissible. Prerequisite: ART 33009 and/or permission. Special Fee: \$6.00/cr. hr. — subject to change.

43096 Individual Investigation in Graphic Design and Illustration (1-8)

(repeatable for a total of 16 credit hours) Individual study related to topics of graphic design and illustration approved by and under the direction of a faculty member. "S/U" grading; "IP" permissible. Prerequisite: Permission.

43101 Advanced Illustration/Media (3)

Discussions and practice of media and grounds as they pertain to the illustration field. Discussion will also center around the problems in developing work for reproduction. Prerequisite: ART 33009 and/or permission.

43102 Fashion Illustration (3)

Development of student's skills in fashion illustration, with emphasis on stylization of the human figure. Prerequisite: ART 33205 and permission. Special Fee: \$6.66/cr. hr. — subject to change.

43103 Editorial Illustration (3)

Exploration and discussion of various illustration techniques and their application in the publishing field. Emphasis is placed on client needs, concept, and intended audience. Prerequisite: ART 33009 and/or permission.

43104 Advertising Illustration (3)

Exploration and discussion of various illustration techniques and their application in advertising. Emphasis is placed on client need, concept of solution, and intended audience. Prerequisite: Successful completion of ART 33009.

43105 Computer Illustration (3)

An introductory course on the use of the computer as an illustration tool. The class will cover the necessary computer applications for advertising, editorial, and book illustration. Prerequisite: ART 43001

43200 Kinetic and Sequential Graphic Design (3)

The exploration of the use of the computer in kinetic and sequential graphic design. 3D modeling, and sound. Prerequisite: ART 43001 and/or permission. Special Fee: \$8.33/cr. hr. — subject to change.

43202 Typographic/Photographic Graphic Design (3)

The use of typography (rather than visual imagery) as the primary design form in solving graphic design communication problems. Prerequisite: ART 33009 and/or permission. Special Fee: \$10.00/cr. hr. — subject to change.

43203 Corporate Identity/Graphic Design (3)

Use of graphic design forms (typography, photography, and illustration) in the development of corporate identification for total advertising programs. Prerequisite: ART 33009 and/or permission. Special Fee: \$9.00/cr. hr. — subject to change.

43205 Issues for Graphic Design Businesses (3)

Designed to familiarize students with the basic business, marketing, legal, and ethical standards in the graphic design industry. Prerequisite: ART 33205 and permission.

43254 Experimental Typography (1-3)

(repeatable for a total of 12 credit hours)

Investigation of form, pattern, and texture in typographic usage. Emphasis on linking traditional letterform technology and computer-generated forms. May carry an "IP" grade when necessary. Prerequisite: Successful completion of ART 33009. Special Fee: \$10.00/cr. hr. — subject to change.

43301 Transportation and Mobile Equipment Design (3)

Use of human needs, function, and aesthetics in designing automotive, watercraft, rail, highway, and specialized vehicles; model and prototype presentations. Prerequisite: ART 33309. Special Fee: \$3.33/cr. hr. — subject to change.

43302 3D Graphic Design-Direct Mail/Packaging/Point Purchase (3)

Use of typography and visual images, photography and illustrations, in the structure of information for communication on three dimensional surfaces: direct mail, packaging, and point of purchase display. Prerequisite: ART 33009 and/or permission. Special Fee: \$8.33/cr. hr. — subject to change.

43303 Environmental Design (3)

Aims at coordinating architectural planning, interior design, systems analysis, and graphic communications. Prerequisite: ART 33309. Special Fee: \$3.33/cr. hr. — subject to change.

43304 Packaging and Exhibition Design (3)

Study and design of containers, packaging systems, and exhibits, in relation to particular function, including merchandising, learning, and recreation. Prerequisite: ART 33309. Special Fee: \$3.33/cr. hr. — subject to change.

43325 Professional Portfolio — Industrial Design (1)

Development of a professional portfolio in industrial design through selection and refinement of classroom and studio work. Assignment of projects in areas of deficiency. Emphasis on organization and presentation. Prerequisite: B.S. Industrial Design major and/or permission.

43396 Individual Study — Industrial Design (2-10)

Further time to explore special interests within design disciplines, or developmental time to extend previous efforts in any major area. Prerequisite: Permission.

43399 Senior Project — Industrial Design (4)

Individual research synthesizing all prior design experiences and acquisition of skills. Thoroughly developed design study culminating in visual, oral, and written juried presentation. Prerequisite: Permission. Special Fee: \$2.50/cr. hr. — subject to change. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

43701 Information Graphics (3)

(cross-listed with JMC 46001)

Introduction to shapes, color, type and combinations of these for computer-designed news graphics; maps, charts, graphs and diagrams. Prerequisites: JMC 20004, 20007; ART 13003 or 27300; ART major, minor or permission.

43997 Senior Project Proposal/Graphic Design and Illustration (1)

A written proposal for a final, research-based visual project to be completed in graphic design or illustration by a senior. Project proposal must be approved by a faculty committee before project is started. Project must meet the educational and professional criteria of the program. "S/U" grading; "IP" grade permissible. Prerequisite: Senior standing and/or permission.

43998 Senior Project Paper/Graphic Design and Illustration (2)

Written documentation of the completed senior project in graphic design or illustration. To be taken concurrently with ART 43999 and presented for final review by a faculty committee. "IP" grade permissible. Prerequisite: Senior standing; ART 43997; and/or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

43999 Senior Project/Graphic Design and Illustration (3)

A final visual project in graphic design or illustration structured by a senior (with approval by faculty committee), completed independently and presented for review and evaluation by a faculty committee during final semester before graduation. To be taken concurrently with ART 43899. "IP" grade permissible. Prerequisite: Senior standing and permission. Special Fee: \$6.00/cr. hr.—subject to change

44000 Fine Art Photography: Issues and Techniques (3)

Lecture/studio course that addresses the conjoining of photography with painting, sculpture, and printmaking. Prerequisites: ART 34010 and any 40000-level Fine Art Studio. Special Fee: \$8.67/cr. hr. — subject to change.

44003 Drawing V (3)

Continuation of ART 34001. Prerequisite: ART 34001. Special Fee: \$3.33/cr. hr. — subject to change.

44031 Individual Study — Film Making (2-5)

(repeatable for a total of 10 hours) Additional study in film making in areas of students' interest in consultation with instructor. "IP" grade permissible. Prerequisites: ART 34031 and 34032. Special Fee: \$10.00/cr. hr. — subject to change.

44040 Printmaking: Advanced Intaglio (3)

Continuation of ART 34040 with special emphasis on color and photographic techniques in intaglio. Prerequisite: ART 34040. Special Fee: \$7.00/cr. hr. — subject to change.

44041 Serigraphy II (3)

(repeatable for a total of 9 hours) Continuation of ART 34041 emphasizing individually assigned projects. Prerequisite: ART 34041. Special Fee: \$6.00/cr. hr. — subject to change.

44042 Lithography II (3)

(repeatable for a total of 9 hours) Continuation of ART 34042 with emphasis on individually assigned projects and printing of editions. Experiments in color lithography, plate, and photolithography. Prerequisite: ART 34042. Special Fee: \$7.00/cr. hr. — subject to change.

44050 Sculpture: Life Modeling (3)

(repeatable for a total of 15 hours) To continue the study of human figure in sculpture. Prerequisite: ART 34050. Special Fee: \$10.00/cr. hr. — subject to change.

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: ART 34055. Special Fee: \$10.00/cr. hr. — 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: ART 34060. Special Fee: \$5.00/cr. hr. — subject to change.

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: Junior standing in art or permission. Special Fee: \$6.00/cr. hr. — subject to change.

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. Letter grades and "IP". Prerequisites: Senior standing and permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

45008 Professional Practices Crafts (3)

An introduction to the concerns and practices of the professional artist/craftsperson. Prerequisite: Senior standing in crafts. Special Fees: \$7.00/cr. hr. —subject to change. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

45095 Crafts: Selected Topics (3)

Specialized courses in crafts that focus on specific techniques and media. Prerequisite: Junior standing or permission. Special Fee: \$15.00/cr. hr. — subject to change.

45096 Individual Study: Crafts (1-6)

(repeatable for a total of 12 hours) Additional study and/or special topics in ceramics, enameling, glass, jewelry/metals, or fiber arts. "IP" grade permissible. Prerequisite: Permission. Special Fee: \$15.00/cr. hr. — 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" permissible. Prerequisite: Senior standing in crafts. Special Fee: \$15.00/cr. hr. — subject to change. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

45200 Fiber Arts: Advanced Resists (2-6)

(repeatable for a total of 40 hours) Advanced resist methods (batik, tie-dye) with option of pursuing individual directions in-depth with or without additional fabric techniques in surface design (flat or dimensional). Prerequisite: ART 25200 or 35200 or permission. Special Fee: \$13.00/cr. hr. — subject to change.

45301 Textile Arts: Advanced Studio (3)

(repeatable for a total of 6 hours) Structured time for individual investigations in textiles. Emphasis on self-designed study. Bi-weekly presentations of contemporary work in textiles and weekly discussions or critiques with open studio. "IP" grade permissible. Prerequisite: Senior standing in crafts. Special Fee: \$9.00/cr. hr. — subject to change.

45400 Advanced Ceramics (2-6)

(repeatable for a total of 40 hours) Individual problems in ceramics. Prerequisite: ART 35400 or permission. Special Fee: \$20.00/cr. hr. — subject to change.

45500 Advanced Enameling (2-6)

(repeatable for a total of 30 hours) Advanced study allows student to work in-depth with media. Prerequisite: ART 35500 or permission. Special Fee: \$7.00/cr. hr. — subject to change.

45600 Advanced Glass Blowing (2-6)

(repeatable for a total of 40 hours) Individual exploration of glass design including sculptural and functional glass pieces. Introduction to glass chemistry and furnace construction. Prerequisite: ART 35600 or permission. Special Fee: \$20.00/cr. hr. — subject to change.

45701 Advanced Jewelry/Metals I (3)

Advanced technical and artistic exploration in jewelry and metalsmithing. First of four courses at this level. Prerequisite: ART 35700 or permission. Special Fee: \$18.50/cr. hr. — subject to change.

45702 Advanced Jewelry/Metals II (3)

Advanced technical and artistic exploration in jewelry and metalsmithing. Second of four courses at this level. Prerequisite: ART 35700 or permission. Special Fee: \$18.50/cr. hr. — subject to change.

45703 Advanced Jewelry/Metals III (3)

Advanced technical and artistic exploration in jewelry and metalsmithing. Third of four courses at this level. Prerequisite: ART 35700 or permission. Special Fee: \$18.50/cr. hr. — subject to change.

45704 Advanced Jewelry/Metals IV (3)

Advanced technical and artistic exploration in jewelry and metalsmithing. Fourth of four courses at this level. Prerequisite: ART 35700 or permission. Special Fee: \$18.50/cr. hr. — subject to change.

ARTS AND SCIENCES (A&S)**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: A&S 11001.

30000 Colloquium in Women's Studies (3)

An examination of the status of women, their concerns, and attitudes toward them from various perspectives— historical, sociological, literary, political, philosophical, and psychological. Prerequisite: Junior standing or permission.

30001 Colloquium: Feminisms (3)

An examination of feminisms that figure in humanities studies such as art, history, literature, philosophy, or political theory. Prerequisite: None.

30196 Individual Investigation (1-3)

(repeated registration permissible)

Registration requires prior approval from the College of Arts and Sciences office. Prerequisite: Permission.

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: Completion of Freshman English sequence and the college requirement in a foreign language.

40197 Russian Area Studies Colloquium (3)

Interdisciplinary investigation of selected basic problems in nineteenth and twentieth century Russia and the U.S.S.R. Prerequisites: Senior standing; knowledge of Russian language or permission.

40897 Colloquium in Comparative Literature (4)

Comparative study of major themes, types, authors, or movements across historical, cultural, and disciplinary boundaries. Prerequisites: Completion of College English sequence and at least one prior literature course.

Developmental Courses

The following courses are offered in support of nondepartmental Developmental Programs sponsored by the University.

10004 DEVELOPMENTAL MATHEMATICS (4)

Survey of the fundamentals of mathematics. Covers real numbers, integers, equations, decimals. Prerequisite: Assessment testing or permission. Hours not counted toward graduation.

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.

Since 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)

30095 Special Topics (1-5)

40095 Special Topics (1-5)

AUTOMOTIVE ENGINEERING TECHNOLOGY (AUTT)*

12000 Introduction to Automotive Technology (4)

Overview of basic concepts. Systems and components are explored in a lecture/lab format. Students will learn the basic service and repair skills needed to enter a technical automotive curriculum. Individuals with automotive experience are permitted to take alternative coursework. Prerequisite: None.

12010 Engine Fundamentals and Repair (4)

In-depth study of the Otto-Cycle Engine design, mechanical components, inspection and overhaul, troubleshooting and performance testing, exploration of diesel, and other alternatives. Prerequisite: None.

12011 Fuel and Exhaust Systems (4)

A study of fuel and exhaust systems. Both carburetors and fuel injection will be covered. Operating principles will be stressed. Prerequisite: AUTT 12020.

12012 Heating and Air Conditioning Systems (4)

Study of engine cooling and vehicle heating and air conditioning systems. Operating principles, design considerations, diagnostic techniques, and repair procedures are addressed. Prerequisite: AUTT 12020.

12020 Auto Electrical Systems I (4)

The electron theory, circuit analysis, meter usage, batteries, circuit protection, and lighting are covered. Emphasis is placed on understanding concepts so that they can be applied to electrical systems in subsequent courses. Prerequisite: None.

12021 Auto Electrical Systems II (4)

A study of relays, solenoids, electrical heating, various motors and their automotive applications, and charging systems with an emphasis placed on failure diagnosis. Prerequisite: AUTT 12020.

12030 Automotive Brake Systems (4)

Study of operating principles, design, construction, diagnosis and repair of service and parking brake systems. Various power assist and antilock units are covered. Prerequisite: None.

22011 Engine Performance and Emission Controls (4)

A study of the use of oscilloscopes and infrared exhaust gas analyzers as diagnostic tools. Also alternative ignition systems, alternative fuels, and emission control systems. Prerequisites: AUTT 12011 and 12021.

22020 Electrical and Vacuum Systems (4)

A study of computerized control of automotive systems such as ignition timing, carburetor circuits, and fuel injection. Prerequisite: AUTT 12020.

22030 Differentials and Manual Transmissions (4)

Study of the operating principles, design, construction, diagnosis, and repair of manual transmissions, clutches, propeller shafts, differentials, and axle assemblies. Prerequisite: None.

22031 Suspension and Steering Systems (5)

Front and rear suspension systems design, construction, repair, and alignment are addressed. Tires, wheel balance, and steering systems are covered. Prerequisite: None.

22032 Automatic Transmissions/Transaxles (4)

Operating principles, design considerations, construction, diagnosis, and repair are covered. Prerequisite: AUTT 22030.

22095 Special Topics (1-5)

In-depth study of developments in the automotive field. Prerequisite: Permission of instructor.

BANKING, FINANCE AND RELATED TECHNOLOGIES (BFRT)*

11000 Introduction to Financial Institutions (3)

Introduction to purposes, organization, functions, and services of financial institutions, stressing such basic operations as deposits, accounting, loans, investments, etc. Corequisite: BMRT 11000.

11001 Money and Banking (3)

Concentrates on operation of the commercial banking system; characteristics of money; Federal Reserve System; current monetary problems; effects of deregulation; competition between institutions. Prerequisites: BFRT 11000 and ACTT 11000.

*Courses offered only at Regional Campuses.

11002 Theory and Administration of Savings Accounts (3)

Basic theory of savings: contractual nature of classification of savings by ownership, passbook, certificates of deposit, and legal aspects. Prerequisite: None.

11003 Teller Operations (2)

Overview of various teller functions as they apply to financial institutions. Includes study of the processing of financial documents; record keeping, balancing, and security procedures. Prerequisite: None.

11010 Trust Department Organization and Services (3)

Introduction to trust department powers, functions, responsibilities, and organization in relation to personal, corporate, and institutional services. Prerequisite: BFRT 11000.

11011 Investments (3)

Capital and money market investments. Characteristics of these investments and the strategy employed for investing: risk versus return. Prerequisites: BFRT 11001.

21000 Consumer Credit (3)

Basic consumer credit functions, credit policy, analyzing financial data, making the credit decision, pricing, closing, servicing, and collecting loans. Consumer compliance and loan portfolio management. Prerequisite: None.

21002 Analyzing Financial Statements (3)

Treats basics of analyzing financial statements from fundamental concepts to practical applications, includes ratios, cash flows, forecasting, etc. Prerequisites: ACTT 11000, BFRT 11001.

21003 Mortgage Lending (3)

Mortgage function, from developing mortgage portfolios and determining mortgage plans to legal aspects of mortgage loans. Servicing and management of foreclosed real estate. Prerequisite: None.

21005 International Banking (2)

The framework and fundamentals of international banking with emphasis on the institutions and instruments utilized in international banking. Prerequisite: BFRT 11001.

21010 Bank Cards and the EFT System (3)

Introduction to the bank card industry; various types of debit/credit cards; collection procedures and policies; security measures. Development of electronic fund transfer. Prerequisite: BFRT 11001.

21012 Managing Financial Institutions (3)

A capstone course covering all aspects of managing various financial institutions, including current trends in financial markets and institutions. Prerequisite: BFRT 11000, 11001, 21002, and BMRT 21050.

21092 Internship in Banking and Finance Technology (2)

Supervised field experience requires minimum of fourteen hours per week for unpaid work experiences or twenty hours per week for employment with pay. Prerequisite: Permission.

21095 Special Topics in Banking and Finance Technology (1-3)

(repeatable for a total of 99 hours) Special topics in banking and finance technology announced when scheduled. Prerequisite: Permission of BFRT or BMRT full-time faculty.

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 must enroll in BSCI 10181 and 10182. Nonmajors should enroll in BSCI 10001 and 10002 series OR in courses specifically designated in the students' program of study. Lower-division biological sciences courses with a third digit of zero (i.e., 10001, 10002, 20001, 20002, 20020, and 20021) 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 (10181 and 10182) and the nonmajor series (10001, 10002, 20001, 20002, 20020, and 20021). Some upper-division biological sciences courses with a third digit of zero (i.e., 30000, 30030, 30050, and 40020) are accepted for ELECTIVE credit only in a biological sciences major or minor. Students should verify acceptability of one of these courses prior to enrollment.

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.

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 1-hour lecture/demonstrations per week. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

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.

10181 Biological Principles I (4)

First introductory course primarily for biology majors. Considers molecular, cellular, and organismal biology. Lecture 3 hours, laboratory 2 hours, and recitation 1 hour per week. Prerequisite: None.

10182 Biological Principles II (4)

Second course in introductory series primarily for biology majors. Surveys plant and animal kingdoms and considers topics at the population, community, and ecosystem levels of organization. Lecture 3 hours, laboratory 2 hours, and recitation 1 hour per week. Prerequisite: BSCI 10181.

*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 and procedures. Lecture 3 hours weekly, lab 2 hours weekly. Offered only on the Salem Campus. Prerequisite: Admission to the radiologic technology program; corequisite: RADT 14020.

*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.

*16001 Horticultural Botany (3)**

To provide students with an understanding of the basic anatomy and physiology and growth characteristics of plants. Lecture 2 hours weekly, lab 3 hours weekly; offered only at the Salem Campus. Prerequisite: None.

20001 Zoological Foundations of Medicine (4)

General zoology, including elements of human and mammalian physiology, anatomy, and histology. Lecture 2 hours, laboratory 4 hours weekly. Prerequisite: Controlled registration (required of first year students in Phase I of NEOUCOM'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. Lecture 4 hours, laboratory 3 hours weekly. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

20021 Basic Microbiology (3)

Principles which will give the students an understanding of microorganisms having a direct relationship on the health and well-being of man. Lecture 2 hours, laboratory 3 hours weekly. Prerequisites: BSCI 20020 and one course in college level chemistry.

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 10181, 10182; CHEM 10060, 10061, 10062, 10063; pre- or corequisite: MATH 11011 or 12001.

20275 Local Flora (4)

Identification and field study of local plants: native, naturalized, and cultivated. Lecture 2 hours, laboratory 6 hours weekly. Prerequisites: BSCI 10181 and 10182 or permission.

20560 Invertebrate Zoology (4)

Survey of the animal kingdom emphasizing evolutionary developments. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182.

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

Basic principles of integrated pest management, pesticide application, pest identification, and environmental effects. Lecture 3 hours weekly; offered only at the Salem Campus. Prerequisites: BSCI 26001 and CHEM 16001.

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

Identification and selection of horticulturally important plant species. Emphasis on woody species, shrubs, and trees. Lecture 2 hours weekly, lab 3 hours weekly. Offered only at the Salem Campus. Prerequisites: HORT 16001 and BSCI 16001, or permission.

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

Identification and selection of horticulturally important plant species. Emphasis on herbaceous species, ground covers, and vines. Lecture 2 hours weekly, lab 3 hours weekly. Offered only at the Salem Campus. Prerequisites: BSCI 16001 and HORT 16001, or permission.

30010 H.P.E. Physiology (3)

Basic aspects of nervous and circulatory physiology, blood function, and metabolism. Open only to HPE majors and minors (or permission). Lecture 3 hours weekly. Prerequisite: BSCI 20020.

30030 Human Physiology (4)

Integrating mechanisms, pharmacological, and pathological considerations for selected organ systems. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 20020 or 10181 and 10182; 10 hours of chemistry.

30050 Human Genetics (3)

Modern concepts of genetics applicable to the human including examination of genetically related diseases and their societal implications. Lecture 3 hours weekly. Prerequisites: Eight hours of biology, 5 hours of chemistry, or permission.

30156 Elements of Genetics (3)

Principles of organic mechanisms for expression and transmission of traits as studied in molecules, cells, organisms, and populations. Lecture 3 hours weekly. Prerequisites: BSCI 10181 and 10182.

30171 General Microbiology (4)

Fundamental principles of microbiology and of organisms including their structure, physiology, genetics, pathogenicity, classification, mechanisms of cultivation, and control. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 20140; CHEM 10060, 10061, 10062, and 10063.

30267 Plant Physiology (4)

Survey of physiological and biochemical processes, their interactions and effect on plant growth and behavior. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 20140; CHEM 10060, 10061, 10062, and 10063.

30273 Plant Pathology (3)

Symptoms, causes, and control of plant disease with emphasis on ecological relationships of the organisms involved. Lecture 2 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182.

30274 Forestry (2)

Management of the forest resource within appropriate environmental constraints for sustained use relative to watershed protection, lumber production, recreation, and wildlife. Lecture 1 hour, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182 or permission.

30277 Economic Botany (2)

Biology of plants important to man and their relation to climate and geography. Lecture 2 hours weekly. Prerequisites: BSCI 10181 and 10182.

30360 General Ecology (4)

Principles of ecology based on field studies of local plant and animal communities. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182; BSCI 30156 or GEOL 32066; and MATH 12001.

30361 Biogeography (3)

Geographical distribution of biotic communities with special reference to North America and to their environmental control. Lecture 3 hours weekly. Prerequisites: BSCI 10181 and 10182.

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. Lecture 3 hours, laboratory 3 hours weekly. Prerequisite: BSCI 10181 or 10182.

30519 Vertebrate Embryology and Developmental Anatomy (4)

Gametogenesis, fertilization, embryogenesis, organogenesis, normal/abnormal embryological development; emphasizing mammal; amphibian, bird illustrating general principles and concepts. Laboratory studies of frog, chick, pig developmental anatomy. Three 1 hour lectures and one 3 hour lab. Prerequisite: BSCI 20001 or 30518; and BSCI 20140.

30580 Entomology (4)

Classification, biology, and ecology of the principal groups of insects. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182 and 20560.

30582 Ornithology (4)

Field study of natural history of local birds. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182.

40020 Biology of Aging (3)

Aging in cells, plants, and animals, including man; maintaining human health during aging; current theories of aging. Lecture 3 hours weekly. Prerequisites: BSCI 20020; CHEM 10050 and 10052.

40096 Biological Research At Leiden University (6)

Five-week biological sciences research experience at Leiden University in the Netherlands during which the participant will work with members of the Leiden research faculty. Prerequisite: Eighteen hours of BSCI and permission.

40142 Bioenergetics (3)

Lecture and discussion of respiration and photosynthesis, their origin, development, and control in living systems. Concepts are introduced from fundamental principles. Lecture 3 hours weekly. Prerequisite: BSCI 40430 or permission.

40143 Eukaryotic Cell Biology (3)

Current survey of the structure and function of eukaryotic cells, including recent advances in research technology. Lecture 3 hours weekly. Prerequisite: BSCI 40430 or permission.

40158 Molecular Biology of the Gene (3)

Molecular genetics of prokaryotic cells and their viruses, DNA replication, mutation, genetic transcription, translation, and recombination. Lecture 3 hours weekly. Prerequisites: BSCI 20140 and 30156.

40160 Marine Biology (3)

Natural history and ecology of marine organisms, with emphasis on life in coastal habitats. Lecture 3 hours. Prerequisite: BSCI 20560 or permission.

40163 Organic Evolution (3)

History of evolutionary theory, the evidences of evolution, the evolutionary forces, and the products of these courses. Lecture 3 hours weekly. Prerequisites: BSCI 20140, 30156 and 4 hours of biology.

40165 History of Biology (2)

Historical development of biology from antiquity to the present. Lecture 2 hours weekly. Prerequisites: BSCI 10181 and 10182.

40170 Stream Biology (3)

Identification, biology, and ecology of stream-inhabiting organisms. Lecture 2 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182.

40174 Immunology (2)

Survey of the immunological system of man and animals, including both humoral and cellular immunological phenomena, immunochemistry, and immunological reactions. Lecture 2 hours weekly. Prerequisites: BSCI 30171 and CHEM 10060, 10061, 10062, and 10063.

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

Topics to be offered will meet specific needs in the biological sciences. Prerequisite: Permission.

40195 Special Topics in Biology (1-3)

Prerequisites: Eighteen hours of biology and permission of instructor. "IP" grade permissible.

40196 Individual Investigation (1-3)

Prerequisites: Eighteen hours of biology and permission of instructor. "IP" grade permissible.

40269 Biology of the Algae (4)

Morphology, ecology, and systematics of freshwater and marine algae. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181, 10182 plus 10 hours of biology.

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. Lecture 2 hours, laboratory 6 hours weekly. Prerequisites: BSCI 10181 and 10182.

40275 Systematic Botany (4)

Biosystematics, angiosperm phylogeny, survey of some major families of dicotyledons. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

40276 Plant Taxonomy (4)

Nomenclature, classification, and floristics; survey of major families of monocotyledons and some major families of dicotyledons. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182.

40277 Morphology of Lower Plants (4)

Nonvascular plants, emphasizing structure, reproduction, evolution, fossil history, economic, ecological, and medical importance. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182.

40280 Palynology and Paleoecology (4)

Structure and function of pollen and spores emphasizing use in geology (stratigraphy, paleo-climatic indications), botany (taxonomy), archaeology and medicine (aeroallergens). Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181 and 10182 and junior standing, or permission.

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- or corequisites: BSCI 30171, 30360.

40364 Limnology (4)

Field and laboratory study of the principles of aquatic ecology. Recitation 1 hour, lecture 2 hours, laboratory 3 hours weekly. Prerequisite: BSCI 30360 or equivalent. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

40367 Limnological Techniques (2)

Analysis and significance of ecologically important variables and constituents of surface waters. Lecture 1 hour, laboratory 4 hours weekly. Prerequisite: BSCI 40364 or permission.

40369 Lake Management (3)

Lecture/discussion related to management of lakes and reservoirs, emphasizing eutrophication problems. Current literature and problem-solving techniques emphasized. Lecture 3 hours weekly. Prerequisite: BSCI 40364.

40430 General Physiology (4)

Physiologic principles and concepts. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: BSCI 20140; CHEM 10060, 10061, 10062, and 10063.

40432 Endocrinology (3)

Principles of endocrine regulation of physiological and metabolic processes. Morphological and functional interrelationships between systems. Lecture 3 hours. Prerequisite: Five hours of 40000-level physiology.

40433 Mammalian Physiology I (3)

The internal environment, metabolism and energy balance, temperature regulation, nervous system, and special senses. Lecture 3 hours. Prerequisites: BSCI 40430; 9 hours math or permission; 20 hours chemistry or permission. Corequisite: BSCI 40444.

40434 Mammalian Physiology II (3)

Physiology of cardiovascular, renal, respiratory, and digestive systems. Lecture 3 hours. Prerequisites: BSCI 40430; 9 hours math or permission; 20 hours chemistry or permission. Corequisite: BSCI 40445.

40435 Reproductive Physiology of Mammals (3)

Current concepts of reproductive processes based on studies with laboratory and domestic animals and man. Lecture 3 hours. Prerequisites: BSCI 40430 and 40432 or permission.

40436 Reproductive Physiology Laboratory (1)

Anatomy and histology of the reproductive systems; research methods for studying reproductive processes. Laboratory 3 hours weekly. Pre- or corequisite: BSCI 40435.

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 10181 and 10182 and CHEM 10060, 10061, 10062, and 10063.

40444 Mammalian Physiology Lab I (1)

Laboratory experimentation emphasizing physiological principles covered in BSCI 40433. Corequisite: BSCI 40433. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

40445 Mammalian Physiology Lab II (1)

Laboratory experimentation emphasizing physiological principles covered in BSCI 40434. Laboratory 4 hours weekly. Corequisite: BSCI 40434. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

40515 Animal Behavior (3)

Study of patterns of animal behavior and the ecological and physiological mechanisms which regulate their form and occurrence. Lecture 3 hours weekly. Prerequisites: BSCI 20140 and course in zoology of major animal group.

40517 Histology (3)

Study of the microscopic and submicroscopic structure of the mammalian body in relation to function. Lecture 2 hours, laboratory 3 hours weekly. Prerequisites: BSCI 10181, 10182, 20140, and 4 hours of biology.

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. Lecture 3 hours weekly. Prerequisites: BSCI 10181 and 10182, plus 4 hours of biology or permission.

40556 Vertebrate Zoology (4)

Field approach to identification and natural history of all Ohio vertebrates except birds. Lecture 3 hours, laboratory and field 3 hours weekly. Prerequisites: BSCI 10181 and 10182, plus 4 hours of biology.

40581 Animal Parasitology (4)

Morphology, physiology, life-histories, systematics, and economic importance of parasites. Lecture 2 hours, laboratory 6 hours weekly. Prerequisites: BSCI 10181, 10182, plus 4 hours of biology.

BLOSSOM FESTIVAL SCHOOL OF MUSIC (BFSM)**40026 Accompanying Projects (2-4)**

(repeatable for a total of 8 hours) Rotating assignment among responsibilities in solo vocal recital preparation, opera coaching, choral rehearsals, chamber music preparation, master classes, and voice lessons. Individual responsibilities change weekly. "S/U" grades. Prerequisite: Audition.

40031 Chamber Music (1-4)

(repeatable for a total of 8 hours) Rehearsal, coaching, and performance of representative chamber repertoire from the Baroque era through the twentieth century. Woodwinds, horn, strings, piano, voice. Intensive daily rehearsal and coaching. "S/U" grades. Prerequisite: Audition.

40032 Orchestral Repertoire and Technique (1)

(repeatable for a total of 2 hours) Study and performance of standard orchestral repertoire and common audition requirements. Technical and interpretive approaches relating specifically to orchestral performance. All instrumental students except pianists. "S/U" grades. Prerequisite: Audition.

40042 Applied Music—Instrumental (1-2)

(repeatable for a total of 4 hours) Private studio instruction in orchestral instruments. "S/U" grades. Prerequisite: Audition.

40093 Variable Title Workshop in Music (1-4)

Offered for specific professional needs. Emphasis on performance and pedagogical skills. Prerequisite: Permission.

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: A&S 10006 and ENG 10000, or equivalent.

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.

11007 Business Computations II (3)

This course is designed to prepare students for an introductory statistics course. It includes topics from elementary algebra to probability theory. Prerequisite: BMRT 11006 or equivalent.

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 permission 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.

21003 Introduction to Business Statistics (3)

Basic decision making statistics for business management. Emphasis is on probability theory, statistical inference, and decision making under uncertainty. Prerequisite: High school algebra or permission of full-time BMRT faculty.

21005 Purchasing and Materials Management (3)

Practical approach to the management, control, and operation of the purchasing and material acquisition function in the American business system. Prerequisite: BMRT 11000 or permission 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 permission 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: Permission 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 permission 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 permission 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. Prerequisite: None.

21021 Market Assessment and Planning for the Business Venture (3)

Project based course covering the basics of market research. The development and implementation of a comprehensive market plan is emphasized. Prerequisite: BMRT 21020.

21022 Management of the New Business Venture (3)

Implementation and use of plans developed in previous courses to include market and finance plans, basics of labor relations, compensation, insurance, and government regulations. Prerequisites: BMRT 21020, 21021, 21023, or permission.

21023 Financing the Business Venture (3)

Sources of capital, basics of various private and public loan programs. Development and use of financial plan. Basics of cash flow and statement analysis. Prerequisite: BMRT 21020.

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. Prerequisite: BMRT 11000, ECON 22060, or permission of BMRT faculty.

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 permission 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 permission 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 permission 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 permission 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 permission 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 permission of BMRT faculty.

21092 Internship in Management Technology (1-3)

Students participate in a supervised educational experience. Each credit hour requires a minimum of 7 hours work without pay or 10 hours work with pay per week for 15 weeks. Prerequisite: Permission of full-time BMRT faculty.

21095 Special Topics (1-3)

(repeated registration permitted) Special topics in business technology announced when scheduled. Prerequisite: Permission 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. Prerequisite: Permission of full-time BMRT faculty.

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

Provides an introduction to conflict management processes such as collaborative problem-solving, strategic planning, negotiation, mediation, arbitration, and alternative dispute resolution in business, law, government, and education. Prerequisite: None.

11002 Approaches to Conflict Management (3)

Explores the different styles and applied uses of conflict management. Classes will include guest lectures by practitioners in the field. Prerequisite: CACM 11001 or permission.

22020 Conflict Theory (3)

Examines the thought of conflict theorists such as Coser, Kriesberg, and Deutsch, whose works provide an underpinning to conflict management. Prerequisite: CACM 11001.

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 or permission.

32020 Strategic Planning (3)

Course provides training in strategic planning, including assessing the current environment, developing goals and objectives, and establishing a time line for action. Prerequisite: Junior standing or permission.

33030 Theories of Conflict Management (3)

Current conflict theorists will be reviewed to gain a theoretical base to the study of conflict management. Prerequisite: CACM 11001 or permission.

34040 Negotiation (3)

In-depth training in the theory and practice of negotiation. Prerequisite: CACM 11001 or permission.

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. Prerequisites: Junior standing and permission.

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 Independent Study (3)

Well-defined problem area within levels and categories of the particular change system identified by the students and faculty adviser for investigation. Prerequisite: Junior standing or permission.

43030 Practicum in Mediation (3)

Intensive study of the theory and process of mediation; designed to enable students to make use of the communication and interviewing skills needed by mediators. Students can work with Student Mediation Service as well. Prerequisite: CACM 11001 or permission.

40436 Conflict and Cooperation in World Politics (3)

(cross-listed with POL 40436) Elementary game theory is used to investigate interstate conflict and cooperation in world politics. Topics include arms races, arms control, free trade and peace, free trade and imperialism, and hegemonic security and economic regimes. Prerequisite: CACM 11002 or permission.

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 permission. This course may be used to satisfy the writing-intensive course graduation 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 11660-1 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. This course may be used to satisfy the Liberal Education Requirements.

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: High school algebra or equivalent. This course may be used to satisfy the Liberal Education Requirements.

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.

10053 Inorganic and Organic Laboratory (1)

Laboratory with experiments covering material from CHEM 10050, 10052, and 10054. Prerequisite: CHEM 10050; corequisite CHEM 10052. This course may be used to satisfy the Liberal Education Requirements.

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: High school algebra or equivalent. This course may be used to satisfy the Liberal Education Requirements.

10060 General Chemistry I (4)

Chemistry for science majors. Emphasizes formulas, equations, stoichiometry, bonding, structure, and states of matter. Four hours lecture weekly. Prerequisite: 1 1/2 years high school algebra or equivalent.

10061 General Chemistry II (4)

Second semester for science majors. Emphasizes kinetics, equilibrium, pH, solubility principles, chemistry of selected elements, and nuclear chemistry. Four hours lecture weekly. Prerequisite: CHEM 10060.

10062 General Chemistry I Lab (1)

Laboratory covering pertinent aspects of CHEM 10060. Three hours weekly. Pre- or corequisite: CHEM 10060.

10063 General Chemistry II Lab (1)

Laboratory covering pertinent aspects of CHEM 10061, including qualitative analysis. Prerequisite: CHEM 10062; Pre- or corequisite: CHEM 10061.

10960 Honors General Chemistry (5)

Rigorous general chemistry course for qualified students. Stoichiometry, equilibrium, thermodynamics, kinetics, bonding, and structure. Four hours lecture, one 3-hour laboratory weekly. Prerequisite: Permission.

10961 Honors General Chemistry (5)

A continuation of CHEM 10960. Prerequisite: CHEM 10960.

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. Lecture 3 hours weekly, lab 3 hours weekly; offered only at the Salem Campus. Prerequisite: None.

20095 Special Topics (1-3)

(repeated registration permitted) Selected topics in chemistry. Prerequisite: Permission.

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. Four hours lecture weekly. Prerequisite: CHEM 10063 or 10053 and permission.

20112 Elementary Quantitative Lab (2)

Laboratory practice of methods discussed in 20111. Six hours laboratory weekly. Pre- or corequisite: CHEM 20111.

20284 Physiological Chemistry (5)

Chemistry and metabolism of carbohydrates, lipids, nucleic acids, and proteins. Application of basic biochemical techniques to constituents of cells and body fluids. Four hours lecture and 3 hours laboratory weekly. Prerequisites: CHEM 10052 or 10054 or 20481 or 30481 and chemistry laboratory experience in high school or college (such as CHEM 10053).

20481 Basic Organic Chemistry (4)

Survey of the preparations and reactions of organic compounds with emphasis on practical applications. Four hours lecture weekly. Prerequisite: CHEM 10060, 10061 or permission.

20482 Basic Organic Chemistry (2)

Continuation of CHEM 20481 emphasizing topics of special interest, in particular naturally occurring molecules. Two hours lecture weekly. Prerequisite: CHEM 20481 or 30481.

*Courses offered only at Regional Campuses.

30111 Quantitative Analysis I (4)

Theory and application of volumetric methods of analysis: acid-base, gravimetric, complexation, redox; spectroscopic, electroanalytical, and chromatographic methods of analyses. Four hours lecture weekly. Prerequisite: CHEM 30476.

30112 Quantitative Analysis I Lab (2)

Laboratory practice of methods for chemical analysis discussed in 30111. Six hours laboratory weekly. Pre- or corequisite: CHEM 30111. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

30113 Quantitative Analysis II (4)

Theory of chemical instrumentation and advanced applications of instrumental methods. Two hours lecture, 6 hours laboratory weekly. Prerequisite: CHEM 30112.

30284 Introductory Biological Chemistry (4)

Chemistry and metabolism of biochemically important compounds; nature of enzyme action; clinical aspects of biochemistry. Laboratory emphasizes quantitative biochemical techniques. Prerequisite: CHEM 20481 or 30481.

30475 Organic Chemistry Lab (2)

Practical experience in synthetic methods and separation techniques. Spectroscopy applied to organic chemical problems. Multistep synthesis. Six hours weekly. Prerequisite: CHEM 10063; corequisite: CHEM 20481 or 30481.

30476 Organic Chemistry Lab (2)

See CHEM 30475. Prerequisite: CHEM 30475. Pre- or corequisite: CHEM 20482 or 30482.

30481 Organic Chemistry (4)

Functional group chemistry from structural, mechanistic, and synthetic viewpoints. Introductory stereochemistry, structure-reactivity relations, and selected reactions of difunctional compounds. Four hours lecture weekly. Prerequisite: CHEM 10061.

30482 Organic Chemistry (2)

Continuation of CHEM 30481. Prerequisite: CHEM 30481.

40000 Chemical Information (2)

Access to chemical documents using indexes, formulating search strategies, citation mapping, and manipulation of computer files are treated via lectures, readings, and library problems. Prerequisite: CHEM 30482.

40001 Industrial Chemistry (2)

Survey of the chemical and chemical-process industries, their organization and operations. Study of product case histories, specific chemicals, and processes. Preparation for industrial employment. Prerequisite: CHEM 30482.

40093 Variable Title Workshop in Chemistry (1-6)

Prerequisite: Permission.

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 laboratory weekly. Prerequisite: CHEM 40555.

40114 Electroanalytical Chemistry (3)

The physical basis of electrochemistry; instrumentation and applications in chemical analysis. Polarography, coulometry, voltametry, and ion selective electrodes. Three hours laboratory weekly. Prerequisite: CHEM 40555.

40195 Special Topics in Chemistry (1-3)

(repeated registration permitted) Selected topics in chemistry. Prerequisite: Permission.

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 20481 or 30481; ILS or permission.

40247 Principles of Biochemistry (4)

Chemistry and metabolism of biologically important compounds, enzymology, metabolic regulation, and bioenergetics. Four hours lecture weekly. Prerequisites: CHEM 20481 or 30481 and CHEM 40555 or 40567 or permission.

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 or permission.

40295 Special Topics in Chemistry (1-3)

See CHEM 40195. Prerequisite: Permission.

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.

40362 Intermediate Inorganic Chemistry (2)

See CHEM 40361. Prerequisite: CHEM 40361.

40364 Intermediate Inorganic Chemistry Lab (1)

A laboratory 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 or permission.

40395 Special Topics in Chemistry (1-3)

See CHEM 40195. Prerequisite: Permission.

40476 Physical Techniques of Organic Chemistry (2)

Strategies of structural inference from electronic, infrared, NMR and mass spectrometric data, through lectures and problem solving. Prerequisite: CHEM 30482 or permission.

40477 Physical Techniques of Organic Chemistry Lab (2)

Practical application of spectroscopic (NMR, MS, IR, UV) and chromatographic (GC, TLC, column chromatography) techniques in structural elucidation and purification of organic molecules. Prerequisite: CHEM 40476 or permission.

40481 Intermediate Organic Chemistry (2)

Relationship between reactions of organic compounds and their structures. Electrical distribution and bulk effects. Stability and reactivity. Student seminar presentations. Prerequisites: CHEM 30482 and 40556.

40495 Special Topics in Chemistry (1-3)

See CHEM 40195. Prerequisite: Permission.

40555 Elementary Physical Chemistry (3)

Fundamental concepts of physical chemistry with applications to problems of current chemical interest. These courses are to be taken by professional students in chemistry in their junior year. Prerequisites: PHY 23102, MATH 22005, CHEM 10062.

40556 Elementary Physical Chemistry (3)

Fundamental concepts of physical chemistry with applications to problems of current chemical interest. These courses are to be taken by professional students in chemistry in their junior year. Prerequisite: CHEM 40555.

40557 Physical Chemistry Lab (2)

Experiments in various areas of physical chemistry, including interpretation and reporting of results, correlation of data with theory, and an introduction to computer treatment of data. "IP" grade permissible. Pre- or corequisite: CHEM 40555 or 40567.

40558 Physical Chemistry Lab (2)

See CHEM 40557. "IP" grade permissible. Prerequisite: CHEM 40557.

40567 Basic Concepts of Physical Chemistry (4)

Traditional aspects of physical chemistry with minimal calculus treatment. Applications to the health sciences emphasized. Four hours lecture weekly. Prerequisites: CHEM 10062; PHY 13002, MATH 12002.

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 hours 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 Chemistry (1-3)

See CHEM 40195. Prerequisite: Permission.

40795 Current Topics in Chemical Education (1-3)

Recent advances in chemical research, instrumentation, and theory important to chemical educators. "S/U" grading. Prerequisite: Permission.

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 6 hour, 40000-level elective requirement for the B.S. degree. "IP" grade allowed. A grade of S or U awarded. Prerequisite: 2.50 GPA in chemistry and/or permission.

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. This course may be used to satisfy the Liberal Education Requirements.

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.

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.

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 permission.

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 ART 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 ART 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 course graduation 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.

Cytotechnology**43010 *Introduction to Cytotechnology (1)***

An introduction to the profession of cytotechnology and a survey of basic cell structure, microscopy, collection, and histological processing techniques. Prerequisite: Professional study in Cytotechnology.

43011 *Cytologic Preparation Techniques (1)*

The procedures and principles of staining, mounting, and cover slipping. Quality control, safety, and record keeping procedures will be introduced. Prerequisite: Professional study in Cytotechnology.

43020 *Cytopathology of the Female Reproductive System: Theory (4)*

The anatomy, physiology, cytology, and histology of the female reproductive system emphasizing changes in cellular morphology associated with endocrinological, benign, premalignant, and malignant conditions. Prerequisite: Professional study in Cytotechnology.

43021 *Cytopathology of the Female Reproductive System: Application (4)*

Laboratory study of known and unknown pathologies of the female reproductive system, correlating theoretical considerations with microscopic observations. Pre- or corequisite: CLS 43020.

43022 *Cytopathology of the Respiratory System: Theory (2)*

The anatomy, physiology, cytology, and histology of the respiratory system emphasizing the changes observed in various pathological conditions with discussion of their underlying causes. Prerequisite: Professional study in Cytotechnology.

43023 *Cytopathology of the Respiratory System: Application (1)*

Laboratory studies of known and unknown pathologies of the respiratory system, correlating theoretical considerations with microscopic observations. Pre- or corequisite: CLS 43022.

43024 *Cytopathology of Body Fluids: Theory and Application (2)*

The anatomy and cytology of serous and synovial cavities, the central nervous system, and the lymphatic system comparing normal and pathological states. Prerequisite: Professional study in Cytotechnology.

43025 *Cytopathology of the Gastrointestinal Tract: Theory and Application (2)*

The anatomy, physiology, histology, and cytology of the G-I tract emphasizing the changes observed in various pathological conditions with discussion of their underlying causes. Prerequisite: Professional study in Cytotechnology.

43026 *Cytopathology of the Uro-genital System: Theory and Application*

(3)

The anatomy, physiology, histology, and cytology of the Uro-Genital System emphasizing the changes observed in various pathological conditions with discussion of their underlying causes. Prerequisite: Professional study in Cytotechnology.

43027 Cytopathology of the Breast: Theory and Application (2)

The anatomy, physiology, histology, and cytology of the breast emphasizing the changes observed in various pathological conditions with discussion of their underlying causes. Prerequisite: Professional study in Cytotechnology.

43028 Cytopathology of Other Body Systems (2)

Theory and procedures relating to a variety of topics including pregnancy, radiation therapy, cytogenetics, and the principles of fine needle aspiration biopsies. Prerequisite: Professional study in Cytotechnology.

43029 Cytopathology and Diagnostic Microscopy (8)

Intensive laboratory prescreening and screening of both gynecological and nongynecological specimens followed by clinical correlation studies with a registered cytotechnologist or pathologist. Prerequisites: CLS 43010, 43011.

43095 Special Topics in Cytotechnology (1-4)

(repeatable for a total of 4 hours) Topical consideration of special techniques encountered in cytotechnology affording the student the opportunity for individual research efforts. Prerequisites: CLS 43010, 43011.

Medical Technology

49010 Clinical Microbiology: Theory (4)

Theoretical consideration of laboratory isolation, cultivation, identification, and characterization of pathogenic microorganisms. Letter grades and "IP." Prerequisite: Professional study in Medical Technology.

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: Professional study in Medical Technology.

49012 Clinical Immunology: Theory (1)

Theoretical considerations of laboratory practices involving quantitation and detection of antigens and antibodies and the significance of these findings in pathological states. Letter grades and "IP." Prerequisite: Professional study in Medical Technology.

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: Professional study in Medical Technology.

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: Professional study in Medical Technology.

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: Professional study in Medical Technology.

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: Professional study in Medical Technology.

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: Professional study in Medical Technology.

49022 Urinalysis: Theory (1)

Theoretical considerations of the physiological activities of the renal system together with laboratory principles of analysis of urine and other body fluids. Letter grades and "IP." Prerequisite: Professional study in Medical Technology.

49023 Urinalysis: Applications (1)

Applied and practical considerations of laboratory practices in urine and other body fluid analysis as aids in diagnosis of disease. Letter grades and "IP." Prerequisite: Professional study in Medical Technology.

49030 Immunohematology: Theory (2)

Theoretical consideration of laboratory 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: Professional study in Medical Technology.

49031 Immunohematology: Applications (2)

Applied and practical consideration of laboratory methods for the administration of blood and its components. Letter grades and "IP." Prerequisite: Professional study in Medical Technology.

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: Professional study in Medical Technology.

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: Professional study in Medical Technology.

49034 Clinical Hematology: Applications (2)

Applied and practical consideration of laboratory methods and procedures in identification and enumeration of normal and abnormal formed elements of blood. Letter grades and "IP." Prerequisite: Professional study in Medical Technology.

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: Professional study in Medical Technology.

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: Professional study in Medical Technology.

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 Theory and Practice of Oral Discourse (3)

An inquiry into the nature and function of oral communication in immediate person-to-person situations where interaction with the audience is possible. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

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.

25454 Intercollegiate Forensics I (1-2)

(repeatable for a total of 24 hours) Practicum in intercollegiate forensics for freshmen, sophomores, and beginning forensic students. "S/U" grading. Prerequisite: Permission.

25464 Argumentation (4)

Introduction to principles of oral and written argumentation. Prerequisite: COMM 15000 or equivalent.

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: Education majors only.

25863 Business and Professional Speaking (3)

Fundamentals of public speaking, conference speaking, group leadership, and human relations as applied to business and industrial needs. Recommended for business administration students. Prerequisite: None.

25902 Communication Process (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 persuasion. Prerequisite: None.

26000 Criticism of Public Discourse (3)

A critical examination of selected public speeches on a variety of historic and contemporary issues, emphasizing methods of evaluating public oral communication and the heritage of speechmaking in free societies. Prerequisite: COMM 15000 or permission. This course may be used to satisfy the Liberal Education Requirements.

30000 Communication Inquiry (3)

Introduction of materials and methods for communication research. Students should complete this course before attempting other upper-division courses. Prerequisite: COMM 25902.

35252 Theories of Rhetorical Discourse (4)

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 or equivalent.

35454 Intercollegiate Forensics II (1-2)

(repeatable for a total of 20 hours) Advanced practicum in intercollegiate forensics for juniors and seniors with forensics experience. Maximum of 4 hours may apply to speech major. "S/U" grading. Prerequisite: Permission.

35458 Parliamentary Procedure (2)

Principles and forms of parliamentary action governing conduct of meetings. Practice in group action. Prerequisite: None.

35550 Discussion (3)

Principles of reflective thinking applied to various forms of group discussion; e.g., committees, ad hoc and continuing groups, and panels with an audience. Prerequisite: None.

35852 Intercultural/International Communication (3)

Theory and application of communication between people of different cultures and different national systems. Prerequisite: None.

35864 Organizational Communication (3)

Application of communication theory to industrial and organizational settings. Communication structures and methods in organizations. Prerequisite: None.

40001 Advanced Interpersonal Communication (3)

Advanced treatment of interpersonal communication theory and research. Interpersonal principles are applied to group and organizational contexts. Prerequisite: COMM 20001.

45007 Speech in a Free Society (4)

Speech and the maturing individual, freedom of speech, nature and responsibilities, socio-legal-rhetorical issues. Prerequisite: None. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

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. "SU" grades and "IP." Prerequisite: Controlled.

45093 Variable Title Workshop in Communication (1-5)

(No more than three semester hours of 45093 may be counted as part of the 21 UD hours required in the rhetoric and communication major.) Prerequisite: None.

45095 Special Topics (2-4)

Offered when unusual resources permit a topic different from existing courses. Topic will be announced when scheduled. Prerequisite: None.

45154 Rhetorical Speaking and Criticism (3)

Standards of criticism in public discourse and methods for their application in persuasive speaking. Prerequisite: COMM 26000. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

45196 Independent Study: Rhetoric and Communication (1-6)

(repeatable for a total of 6 hours) Readings and/or research on problems approved by division coordinator in consultation with students' adviser and project director. "SU" grades and "IP." Prerequisites: Speech major and permission.

45459 Argumentation Theory (3)

Topical investigation of selected theoretical and practical aspects of argumentation. Prerequisite: COMM 25464 or permission.

45780 Co-curricular Speech Programs (3)

Principles and methods of coaching and directing co-curricular speech activities. Consideration of educational aims and typical problems in forensics, theatre, and other speech programs. Prerequisite: SEED 32272 or permission.

45851 Advanced Address (3)

Audience polling, verbal interaction, and critical analysis and debriefing are used to encourage excellence in extemporaneous speaking. Speeches are videotaped for self-critique by students. Prerequisite: Controlled and corequisite: COMM 35252.

45860 Interviewing and Field Study (3)

Principles of interviewing and examination of the major types of interviews. Interviewing applications in field research discussed and opportunity provided to conduct field research. Prerequisite: COMM 30000 or equivalent approved course.

45892 Organizational Communication and Development (3-10)

Theory and application of diagnosing communication problems in an organization and the intervention process. Prerequisite: Permission.

45902 Theories of Persuasion (3)

An examination of theories of persuasion, persuasion variables, principles of effective persuasion, and persuasion in interpersonal, small group, organizational, and telecommunications contexts. Prerequisites: Controlled; COMM 25902; Pre- or corequisite: COMM 30000.

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: Controlled; Pre- or corequisite: COMM 30000. This course may be used to satisfy the writing-intensive course graduation 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. Pre- or corequisite: COMM 30000.

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.

*Courses offered only at Regional Campuses.

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 3D-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.

10051 Introduction to Computer Science (4)

A broad introduction to the discipline of computer science. A high-level coverage of various aspects of computers, including algorithm design, problem solving, operating system concepts, architecture, and programming languages. Prerequisites: MATH 11011 or 12001, or 2 years of high school algebra.

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, or 2 years of high school algebra.

23021 Intermediate Programming and Applications (3)

Advanced programming techniques including object-oriented software design, recursion, basic data structures including linked lists, pointers, searching, and sorting. Prerequisite: CS 10051 or 10061, or permission.

23031 Computers in Architecture (3)

Use of computers by architects in problems of design, information retrieval, simulation, management, and technical applications. Prerequisite: Sophomore architecture major.

31011 Discrete Mathematics (3)

(cross-listed with MATH 31011) Discrete mathematical techniques and structures including finite set theory, graph theory, propositional calculus, combinatorics, and discrete probability. Formal methodology and proof techniques. Prerequisites: MATH 12002 and 21001 (concurrent registration in MATH 21001 allowed).

33001 Data Structures (3)

Introduction to computer data representation: stacks, queues, deques, sequential and linked allocation, trees, graphs. Efficient algorithms for manipulation of data structures. Prerequisite: CS 23021 and CS 10051.

33003 Computer Organization and Assembly Language (3)

Introduction to structure and organization of digital computers: representation, manipulation, and flow of information in binary form, and introduction to the CPU and assembly language. Prerequisite: CS 23021.

33004 C Programming (3)

Structured programming concepts in C including lexical elements, data types, control structures, expressions, arrays, pointers, records, functions, advanced data structures, and standard library functions (no credit toward Computer Science majors). Prerequisite: High-level programming knowledge or permission.

33005 Symbolic Programming Languages (3)

An introduction to programming languages such as Lisp and Prolog which are used in symbolic programming in such areas as artificial intelligence and computer algebra. Prerequisite: CS 23021.

33006 Social and Ethical Issues in Computing (3)

Social issues, including historical and social context, professional responsibilities, risks and liabilities, and intellectual property. Prerequisite: CS 33001 (concurrent registration is permitted) This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

33095 Selected Computer Languages (2)

(repeated registration permitted for different languages) A language like PL/1, ALGOL, ADA, different assembly languages is selected and listed in the Schedule of Classes. Prerequisites: CS 23021 or ADMS 24002 and permission.

33201 Microcomputer Systems and Local Networks (3)

Considers architecture, organization, and uses of microcomputers. Typical microprocessors and microcomputer hardware and software are discussed. Students will gain hands-on experience with a microcomputer. Prerequisite: CS 33003; PHY 12411 recommended.

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. Prerequisites: CS 31011 or MATH 31011.

42201 Numerical Computing I (3)

(cross-listed with MATH 42201) Numerical algorithms, recursion formulas, error analysis, interpolation, least squares approximation, data reduction, numerical linear algebra, solution of nonlinear equations, methods implemented using algorithmic programming language. Prerequisites: CS 10061 and MATH 12003 and 21001.

42202 Numerical Computing II (3)

(cross-listed with MATH 42202) Difference operators, difference equations, numerical integration and differentiation, extrapolation methods. Numerical solution of initial, boundary, and eigenvalue problems for ordinary and partial differential equations. Prerequisites: MATH 42044 and CS/MATH 42201. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

43006 Object-oriented Programming (3)

Introduction to the concepts, techniques, and languages related to object-oriented programming flexibility, maintainability, modularity, and reusability. Prerequisite: CS 33001.

43007 Logic Programming (3)

Predicate calculus, SLD-resolution, unification, and-or tree, logical data structures, recursion, cuts, negation, difference-lists, dictionaries, Meta-interpreters, parallelism. Applications in compilers and AI. Prerequisites: CS 33001 and CS 33005.

43101 Structure of Programming Languages (3)

A study of major concepts in modern programming languages, such as syntax, semantics, data types, concurrency, various programming paradigms, and design and implementation issues. Prerequisites: CS 33001 and 33005.

43111 Structure of Compilers (3)

Techniques used to write and modify compilers including translation, parsing tables, loading, storage allocation, symbol tables, object code, optimization, error diagnostics, and overall design. Prerequisites: CS 33001, 33003, and 43101.

43201 Operating Systems (3)

Introduction to operating systems, interrupt handling, process control, asynchronous concurrent processes, real and virtual memory management, I/O and file systems. Prerequisites: CS 33001 and 33003.

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 43201.

43301 Parallel Programming (3)

Programming concepts for SIMD (Single Instruction Multiple Data) and MIMD (Multiple Instruction Multiple Data) parallel computers. Prerequisites: CS 33001 and CS 45101.

43901 Software Engineering Projects (3)

(repeated registration permitted with permission) An introduction to software development techniques including experience in team programming a large project. Prerequisite: CS 33001 or permission.

44201 Artificial Intelligence (3)

Examines goals, problems, concepts, and methods of artificial intelligence, the LISP programming language, heuristic versus algorithmic methods, natural language comprehension, theorem proving. Prerequisites: CS 33001 and CS 33005 or permission.

45101 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 33003.

45111 Principles of Customized VLSI Design (3)

Introduction to the design, implementation, and realization of VLSI systems. Requires designing parts of a custom designed chip using interactive tools. Prerequisite: CS 45101.

45201 Computer Communications Networks (3)

Provides a comprehensive treatment of the analysis and design of computer networks: data communications techniques, network architecture, OSI models and protocols, LANs, routing techniques, and congestion control. Prerequisite: CS 45101.

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: CS 31011, 33001, and MATH 12003.

46201 Introduction to Theory of Automata, Formal Languages, Computation (3)

A study of alphabets, strings, languages; regular languages and expressions, deterministic and nondeterministic finite automata, context-free grammars and languages, pushdown automata, Turing machines, and complexity theory. Prerequisites: MATH 12003 and CS 31011.

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.

49995 Selected Topics in Computer Science and Its Applications (1-4)
(repeated registration permitted) Various special courses will be announced in the *Schedule of Classes* under this course number with different section numbers. Prerequisite: Permission of instructor.

49996 Individual Study (1-4)
Prerequisite: Permission of instructor.

49998 Research (1-15)
Prerequisite: Permission.

COMPUTER TECHNOLOGY (COMT)*

11000 Introduction to Computer Systems (3)
Study of basic concepts of computer systems including hardware, software, and data communications. Laboratory experiences in word processing, spreadsheet, operating systems, and electronic mail. Prerequisite: None.

11001 C/C++ Programming (3)
Laboratory course introducing concepts of software development, structured program design techniques, modular design, testing and debugging, simple and complex data types, language syntax and semantics. Prerequisite or corequisite: MATH 11005 or Equivalent.

11002 Visual Database Development (3)
Laboratory course introducing concepts of systems using database management tools and modular and visual programming techniques emphasizing data types, record structures, and relational databases. Prerequisite or corequisite: MATH 11005 or Permission.

11003 Selected Programming Languages (2-4)
Laboratory 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 11001 or COMT 11002.

11009 Operating Systems (3)
Lab course covering disk operating system functions and features; writing command programs; backup procedures; file and directories management; system configuration/optimization; hardware/software installation procedures. Prerequisite: COMT 11000 or permission.

11011 Spreadsheet Applications (1)
Laboratory course using electronic spreadsheet software to build and manage spreadsheets. Business case studies. Functions through database and macros. Prerequisite: None.

12000 Introduction to Computer Systems II (3)
The study of basic concepts of computer systems, emphasizing software and data communications. Laboratory experiences in presentation software, Internet, database management, and software suites. Prerequisite: COMT 11000 or permission.

21002 Networking (4)
Laboratory course introducing networking in LAN and WAN environments. Topics include network protocol, configuration, design, installation, administration, management, and security. Prerequisite: COMT 11009 or permission.

21004 Advanced C/C++ Programming (4)
Laboratory course using C/C++ dealing with abstract data types and objects, module abstraction, object-oriented design, file organization and access, and introductory systems programming concepts. Prerequisite: COMT 11001.

21005 Advanced Visual Database Development (4)
Laboratory course covering advanced concepts of systems using database management tools and modular and visual programming techniques emphasizing the development of full-scale, multiuser information systems. Prerequisite: COMT 11002 or permission.

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 11001 or 11002.

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. Credits earned not applicable to the A.A.B. degree in computer technology. Prerequisites: MATH 19001, 12001, or equivalent.

21009 Seminar in Computer Technology (3)
Capstone course for COMT students encompassing critical reading, writing, and discussion applying the current theories of information systems technologies to on-the-job experiences. Prerequisite: Permission.

21010 Workgroup Productivity Software (3)
Research project-oriented course emphasizing workgroup methodologies for project management, problem definition, data retrieval and analysis, conclusions and recommendations. Laboratory experiences utilizing application productivity tools. Prerequisite: COMT 11000 or permission.

21092 Computer Practicum (2)
(cross-listed with MATH 21092) Supervised work experience in a computer installation. "S/U" grading. Prerequisite: COMT 11001 or 11002.

21095 Special Topics in Computer Technology (1-4)
Topics announced when scheduled. Prerequisite: Permission.

21096 Individual Investigation in Computer Technology (1-4)

Individual study in computer field. Open to computer technology majors. Prerequisite: Permission.

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.

20092 Field Experience I: Middle Childhood (1)

Course augments from an experiential perspective knowledge of the early adolescence period of development. Placement in school settings (45 hours involvement). Concurrent with F&CS ST. 41095. "S/U" grades with "IP" permissible.

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 permitted) Topics of special interest to students who desire to increase their knowledge in counseling and related areas. Kent faculty and experts from other institutions and agencies. Topics will be announced in the *Schedule of Classes* booklet. Prerequisite: None.

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: Permission.

CRIMINAL JUSTICE STUDIES (CJST)**12000 Introduction to Criminal Justice (3)**

Historical development and operational aspects of the contemporary criminal justice system with emphasis on emerging trends in the concept and practices of the component agencies. Prerequisite: None.

18000 Introduction to Paralegal Studies (3)

(cross-listed with LEGT 18000) An overview of the legal system and the role of a paralegal professional. Includes legal terminology, types of laws, research, litigation, interviewing, and office management. Prerequisite: None.

22100 Basic Interviewing (3)

Foundation of basic interviewing principles including communication models, question format, distortions, topic control, inhibitors, facilitators, listening, types of interviews, and practical exercises. Prerequisite: CJST 12000 or permission.

22300 Police Role (3)

Systematic analysis of the police role. An examination of the related research with an emphasis on divergent perspective and development of conceptual models. Prerequisite: CJST 12000 or permission.

22301 The Investigative Process (3)

An examination of established investigative processes, techniques employed in conducting a systematic investigation and legal implications. Prerequisite: CJST 12000.

22302 Private Policing (3)

Basic concepts in contract (private) policing and security work. Emphasis on policies, standards, methods, and procedures. Overview of legal aspects of private policing. Prerequisites: CJST 12000 and permission.

24311 Youth and the Justice System (3)

Analysis of situations involving youths which demand intervention by a juvenile justice or service agency. Prerequisite: CJST 12000 or permission.

25092 Field Placement (1-6)

Observational experience under the direction of supervising faculty in a criminal justice agency. "IP" grade permissible. Prerequisites: Six hours of CJST including 12000 and permission.

26701 Corrections (3)

Course topics include history of corrections, punishment, community corrections, correctional institutions, correctional administration, issues in corrections, and future trends of corrections. Prerequisite: CJST 12000 or permission.

26702 Criminology (3)

Examines crime from the legal and social viewpoints; including extent, patterns, and theoretical explanations of criminal behavior. Prerequisite: CJST 12000 or permission.

26704 Law and Society (3)

General treatment of the legal system with special emphasis on its origin, structure, and functional consequences on issues and problems in modern society. Prerequisite: None.

26792 Survey of Contractual Criminal Justice Services (3)

Overview of contractual agencies within criminal justice, including volunteerism, private policing, quasi-court services, and contractual and cognate correctional agencies. Prerequisite: CJST 12000 or permission.

27091 Special Topics (2 or 3)

(repeatable for a total of 6 hours) Intensive analysis of issues significant and current in the field which are not covered in regular courses. "IP" grade permissible. Prerequisite: CJST 12000 or permission.

27311 Victimology (3)

Patterns of victim-offender relationship and process of victimization. Role of victims in criminal process. Problems of adjustment to victimization and issues in victim compensation. Prerequisite: CJST 12000 or permission.

28001 Legal Research and Writing (3)

(cross-listed with LEGT 18001) In-depth analysis of the legal research process, development of legal writing skills; opportunities to utilize research and writing skills are integrated into the course. Prerequisite: CJST 18000 or permission.

28003 Family Law and Procedure (3)

(cross-listed with LEGT 18003) Designed to acquaint the student with family law substance and practice. Included: definitions, terminology, topical areas, and the philosophy underlying family law practice. Prerequisite: CJST 18000 or permission.

28004 Principles and Practice of Litigation (3)

(cross-listed with LEGT 28004) Introduction to the rules of civil procedure, statutes of limitation, and discovery. Includes the role of the legal assistant in preparing for litigation. Prerequisite: CJST 18000.

28007 Estate and Probate Administration (3)

(cross-listed with LEGT 28007) A study of legal principles applicable to wills, organization and jurisdiction of probate court, estate administration in probate, and tax considerations in estate administration. Prerequisite: CJST 18000.

32200 Police and Community (3)

An examination of the rights of individuals, citizen involvement, the police as members of the community, and the development, implementation, and evaluation of related programs. Prerequisite: Nine hours of CJST courses including 12000 and 22300 or permission.

32400 Criminal Justice Research Methods (3)

Scientific approaches to the study of criminal justice. Survey of methods and designs used in criminal justice research; uses of research in criminal justice. Exercises included. Prerequisite: Nine hours of CJST courses including 12000 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

32500 Crisis Intervention (3)

Crisis intervention situations in criminal justice are considered. The service role of criminal justice personnel, community resources, and skill development are also considered. Prerequisite: Nine hours of CJST including 12000 or permission.

33200 Criminal Law (3)

Developmental backgrounds and principles of criminal law; structure, functions of criminal law; rules of criminal liability and procedural requisites in criminal proof. Case analysis included. Prerequisite: Nine hours CJST including 12000 or permission.

33300 Development of Justice in America (3)

Course focuses on the evolution of the criminal justice process from its establishment in the United States to the present. Prerequisite: Nine hours of CJST including 12000 or permission.

34200 Criminal Procedures and Evidence (3)

This course focuses on the use of evidence and the legal procedures followed in the processing of criminal cases. Case analysis and writing assignments required. Prerequisite: Nine hours of CJST courses including CJST 12000 or CJST 18000.

36703 Juvenile Delinquency (3)

Social and personal factors in juvenile delinquency; operation of juvenile justice system; prevention and control of delinquency. Prerequisites: Nine CJST hours including 12000 and 26702, or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

36792 Internship in Paralegal (3-12)

Work experience under direction of supervising faculty member in the following entities: private law firms, legal service/legal aid offices, law departments or corporations, and government agencies. "IP" grade permissible. Prerequisites: CJST 18000, 28001, and 28004.

37091 Seminar in Critical Issues in Criminal Justice (1-3)

Intense analysis of issues significant and current in criminal justice field which are not covered in regular courses. "IP" grade permissible. Prerequisite: Nine hours of CJST including 12000 or permission.

37311 Minorities in Criminal Justice (3)

Focus on role of social and ethnic minorities as victims, offenders, and participants in the criminal justice process. Prerequisite: Nine hours of CJST including 12000 or permission.

37411 Women in Crime and Justice (3)

Observation of women as a significant group in crime and their role in the development and operation of the criminal justice system. Prerequisite: Nine hours of CJST including 12000 or permission.

38003 Administrative Law and Process (3)

Substantive and procedural aspects of administrative law. Topics include the regulation of public utility, transportation agencies, employment, food and drugs, and environment. Prerequisite: Nine hours of CJST courses including CJST 18000 or permission.

38005 Tort Law (3)

Focuses on tort and personal injury law. Topics include intentional injuries to person and property, negligence, strict liability, product liability, defenses and immunity, and ethics. Prerequisites: CJST 18000 and 28001.

38006 Applied Legal Research and Litigation (3)

Case analysis and preparation of argumentative memorandum. Includes writing of factual memoranda, file summaries, and advocacy letters. Prerequisites: CJST 18000 and 28001.

38007 Human Service Agencies and the Law (3)

Designed to acquaint the student with the substance and procedure of law pertaining to human service agencies. Included: definitions, terminology, topical areas, and legal ethics. Prerequisite: Nine semester hours including CJST 12000, or permission.

44400 Criminal Justice Administration (3)

Identification of administrative and management functions, leadership, management styles, and supervision of personnel in criminal justice organizations. Prerequisite: Twelve hours of CJST including 12000 and 22300 or permission.

44411 Varieties of Police Work (3)

Analysis of police practices and functions at the municipal, state, and federal level, including private security. Examination of emerging trends in policing will be considered. Prerequisite: Twelve hours of CJST including 12000 and 22300 or permission.

45093 Variable Title Workshop in Criminal Justice Studies (1-6)

Prerequisite: Permission.

45096 Individual Investigation (1-3)

(repeated registration permitted when topic varies) Involves an individual research project of considerable depths in a subject area not covered by regular course offerings. Prior consent of supervising faculty member is required. "IP" grade permissible. Prerequisites: Twelve hours of CJST including 12000 and 32400; 2.00 in CJST; controlled.

46701 Crime, Justice, and Substance Abuse (3)

Examination of the relationship between drug and alcohol abuse and criminal behavior. Efforts to regulate, control, prevent, and treat chemical abuse offenders are considered. Prerequisite: Twelve hours of CJST including CJST 12000.

46705 Community Corrections (3)

This course is devoted to an examination of formal and informal approaches to correctional supervision and treatment through probation, parole, and community residential treatment. Prerequisite: Twelve hours of CJST including 12000 and 26701 or permission.

46706 Juvenile Justice (3)

Focuses on operation of juvenile justice system and critical contemporary issues. Diversion, status offenders, legal rights of juveniles, justice system management. Prerequisite: Twelve hours of CJST including 12000 and 26701 or permission.

46707 Correctional Institutions (3)

A thorough examination of the correctional institution, including the structure and organization, personnel, inmate social world, and examination of the issues in contemporary correctional institutions. Prerequisite: Twelve hours of CJST including 12000 and 26701 or permission.

46708 Treatment Methods (3)

Various methods of treatment are applied to corrections field. Focus is on specific techniques in community and institutional correctional settings. Direct observation utilized when possible. Prerequisite: Twelve hours of CJST including 12000 and 26701 or permission.

46792 Internship (3-12)

Work experience under direction of supervising faculty member in private, federal, state, or local criminal justice agency or law agency. "IP" grade permissible. Prerequisites: Nine hours of CJST including 12000; 2.00 in CJST and overall; junior standing; controlled.

47111 Civil Law and Procedure (3)

Substantive and procedural aspects of civil law with particular emphasis on civil actions arising out of breaches of criminal law. Prerequisite: Twelve hours of CJST courses including 12000 or 18000.

47211 Court Functions (3)

Analysis of the structure, functions, and critical role of incumbents in the criminal court. Prerequisite: Twelve hours of CJST including 12000 or permission.

47311 Comparative Criminal Justice (3)

A systematic comparison of the developmental backgrounds, structure, and functioning of the major systems of criminal justice in the modern world. Prerequisite: Twelve hours of CJST including 12000 or permission.

48200 Quantitative Methods in Criminal Justice (3)

Approaches to problem finding in criminal justice, models of research design and techniques of data collection and analysis; issues and uses of criminal justice research. Exercises included. Prerequisite: Twelve hours of CJST including 12000 and 32400 or permission.

CRITICAL LANGUAGES (CRIT)

This is a program primarily of self-instruction in important languages of the world not offered in the regular language departments. For most languages, it involves the use of programmed, typed instruction, and tutorial sessions with native language tutors. Some languages may be offered with more formally structured classroom instruction at departmental discretion.

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

All Critical Language courses may be used to satisfy the Liberal Education Requirements.

GENERAL

10095 Special Topics in Elementary Critical Languages (4)
(repeated registration permitted) Elementary levels of a modern critical language. Includes listening, speaking, reading, and writing. Emphasis placed on oral/aural skills. Course may be classroom or self-instruction. Prerequisite: Permission.

20092 Practicum in Critical Languages (1-3)
This practicum is intended to allow students the option of working with the program coordinator to develop a language immersion project to enhance language skills in real-life situations. Projects may be highly individualized. Prerequisites: "C" or better in Elementary Crit II and permission.

20095 Special Topics in Intermediate Critical Languages (3)
(repeated registration permitted) Modern standard critical language. Continues emphasis on all four language skills; increasing emphasis on reading and writing. Course may be classroom or self-instructional. Prerequisite: Permission.

30093 Variable Title Workshop in Critical Languages and Literatures (2-4)
Selected topics for in-depth study in a critical language. Prerequisite: Permission.

30095 Special Topics (1-3)
(repeated registration permissible) Selected topics in a Critical Language. Prerequisite: Permission.

40095 Special Topics: Critical Languages and Literatures (3)
Selected topics for in-depth study in a critical language. Repeated registration permitted when content varies. Prerequisite: CRIT 30095 or permission.

ARABIC

12201 Elementary Arabic I (4)
Introduction to modern standard Arabic. Includes all four language skills: listening, speaking, reading, and writing; extra emphasis is placed on oral/aural skills. Prerequisite: None.

12202 Elementary Arabic II (4)
Modern standard Arabic. Continues development of all four language skills; extra emphasis is placed on oral/aural skills. Prerequisite: CRIT 12201 or equivalent.

22203 Intermediate Arabic I (3)
Modern standard Arabic. Continues development of all four language skills; increasing emphasis on reading/writing. Prerequisite: CRIT 12202 or equivalent.

22204 Intermediate Arabic II (3)
Modern standard Arabic. Continues development of all four language skills; increasing emphasis on reading/writing. Prerequisite: CRIT 22203 or equivalent.

CHINESE

15101 Elementary Chinese I (4)
An introduction to modern standard Mandarin Chinese. This course includes all four language skills: listening, speaking, reading, and writing. The course uses both Chinese characters and Pin Yin Romanization. Prerequisite: None.

15102 Elementary Chinese II (4)
Modern standard Mandarin Chinese. Continues development of all four language skills; extra emphasis is placed on oral/aural skills. Prerequisite: CRIT 15101 or equivalent.

25103 Intermediate Chinese I (3)
Modern standard Mandarin Chinese. Continues development of all four language skills; increasing emphasis on reading/writing skills. Prerequisite: CRIT 15102 or equivalent.

25104 Intermediate Chinese II (3)
Modern standard Mandarin Chinese. Continues study of all four language skills; increasing emphasis on reading and writing. Prerequisite: CRIT 25103 or equivalent.

CZECH

16601 Elementary Czech I (4)
Introduction to modern standard Czech: conversation; and reading and writing. Prerequisite: None.

16602 Elementary Czech II (4)
Modern standard Czech: conversation; and reading and writing. Prerequisite: CRIT 16601 or equivalent.

26603 Intermediate Czech I (3)
Modern standard Czech: conversation; and reading and writing. Prerequisite: CRIT 16602 or equivalent.

26604 Intermediate Czech II (3)

Modern spoken Czech: conversation; and reading and writing. Prerequisite: CRIT 26603 or equivalent.

ESTONIAN*16501 Elementary Estonian I (4)*

Introduction to modern standard Estonian: conversation; and reading and writing. Prerequisite: None.

16502 Elementary Estonian II (4)

Modern standard Estonian: conversation; and reading and writing. Prerequisite: CRIT 16501 or equivalent.

26503 Intermediate Estonian I (3)

Modern standard Estonian: conversation; and reading and writing. Prerequisite: CRIT 16502 or equivalent.

26504 Intermediate Estonian II (3)

Modern standard Estonian: conversation; and reading and writing. Prerequisite: CRIT 26503 or equivalent.

36593 Estonian Civilization Workshop (2)

Eight-day intensive lecture-discussion summer course taught in Estonian. Second registration in subsequent summer session to maximum of 4 hours credit permitted. Prerequisite: CRIT 26504 or equivalent.

FINNISH*16401 Elementary Finnish I (4)*

Introduction to modern standard Finnish: conversation; and reading and writing. Prerequisite: None.

16402 Elementary Finnish II (4)

Modern standard Finnish: conversation; and reading and writing. Prerequisite: CRIT 16401 or equivalent.

26403 Intermediate Finnish I (3)

Modern standard Finnish: conversation; and reading and writing. Prerequisite: CRIT 16402 or equivalent.

26404 Intermediate Finnish II (3)

Modern standard Finnish: conversation; and reading and writing. Prerequisite: CRIT 26403 or equivalent.

HINDI*14201 Elementary Hindi I (4)*

Introduction to modern standard Hindi. Includes all four language skills: listening, speaking, reading, and writing; extra emphasis is placed on oral/aural skills. Prerequisite: None.

14202 Elementary Hindi II (4)

Modern standard Hindi. Continues development of all four language skills; extra emphasis is placed on oral/aural skills. Prerequisite: CRIT 14201 or equivalent.

24203 Intermediate Hindi I (3)

Modern standard Hindi. Continues development of all four language skills; increasing emphasis on reading/writing. Prerequisite: CRIT 14202 or equivalent.

24204 Intermediate Hindi II (3)

Modern standard Hindi. Continues development of all four language skills; increasing emphasis on reading/writing. Prerequisite: CRIT 24203 or equivalent.

HUNGARIAN*16801 Elementary Hungarian I (4)*

Introduction to modern standard Hungarian: conversation; and reading and writing. Prerequisite: None.

16802 Elementary Hungarian II (4)

Modern standard Hungarian: conversation; and reading and writing. Prerequisite: CRIT 16801 or equivalent.

26803 Intermediate Hungarian I (3)

Modern standard Hungarian: conversation; and reading and writing. Prerequisite: CRIT 16802 or equivalent.

26804 Intermediate Hungarian II (3)

Modern standard Hungarian: conversation; and reading and writing. Prerequisite: CRIT 26803 or equivalent.

JAPANESE*15201 Elementary Japanese I (4)*

Introduction to modern standard Japanese. Includes all four language skills: listening, speaking, reading, and writing; extra emphasis is placed on oral/aural skills. Katakana, Hiragana, and Kanji characters are taught. Prerequisite: None.

15202 Elementary Japanese II (4)

Modern standard Japanese. Continues development of all four language skills; extra emphasis is placed on oral/aural skills. Katakana, Hiragana, and Kanji characters are taught. Prerequisite: CRIT 15201 or equivalent.

25203 Intermediate Japanese I (3)

Modern standard Japanese. Continues study of Katakana, Hiragana, and Kanji, with an increasing emphasis on reading/writing skills. Prerequisite: CRIT 15202 or equivalent.

25204 Intermediate Japanese II (3)

Modern standard Japanese. Continues study of Katakana, Hiragana, and Kanji. Increasing emphasis on reading/writing. Prerequisite: CRIT 25203 or equivalent.

KOREAN*15301 Elementary Korean I (4)*

Introduction to modern standard Korean. Includes all four language skills: listening, speaking, reading, and writing; extra emphasis is placed on oral/aural skills. Prerequisite: None.

15302 Elementary Korean II (4)

Modern standard Korean. Continues development of all four language skills; extra emphasis is placed on oral/aural skills. Prerequisite: CRIT 15301 or equivalent.

25303 Intermediate Korean I (3)

Modern standard Korean. Continues development of all four language skills; increasing emphasis on reading/writing. Prerequisite: CRIT 15302 or equivalent.

25304 Intermediate Korean II (3)

Modern standard Korean. Continues development of all four language skills; increasing emphasis on reading/writing. Prerequisite: CRIT 25303 or equivalent.

LATVIAN*16141 Elementary Latvian I (4)*

Introduction to modern standard Latvian: conversation; and reading and writing. Prerequisite: None.

16142 Elementary Latvian II (4)

Modern standard Latvian: conversation; and reading and writing. Prerequisite: CRIT 16141 or equivalent.

26143 Intermediate Latvian I (3)

Modern standard Latvian: conversation; and reading and writing. Prerequisite: CRIT 16142 or equivalent.

26144 Intermediate Latvian II (3)

Modern standard Latvian: conversation; and reading and writing. Prerequisite: CRIT 26143 or equivalent.

LITHUANIAN*16101 Elementary Lithuanian I (4)*

Introduction to modern standard Lithuanian: conversation; and reading and writing. Prerequisite: None.

16102 Elementary Lithuanian II (4)

Modern standard Lithuanian: conversation; and reading and writing. Prerequisite: CRIT 16101 or equivalent.

26103 Intermediate Lithuanian I (3)

Modern standard Lithuanian: conversation; and reading and writing. Prerequisite: CRIT 16102 or equivalent.

26104 Intermediate Lithuanian II (3)

Modern standard Lithuanian: conversation; and reading and writing. Prerequisite: CRIT 26103 or equivalent.

36193 Lithuanian Civilization Workshop (2)

(repeatable for a total of 4 hours) Two-week intensive lecture-discussion summer course taught in Lithuanian. Prerequisite: CRIT 26104 or equivalent.

PERSIAN*14101 Elementary Persian I (4)*

Introduction to modern standard Persian: conversation; and reading and writing. Prerequisite: None.

14102 Elementary Persian II (4)

Modern standard Persian: conversation; and reading and writing. Prerequisite: CRIT 14101 or equivalent.

24103 Intermediate Persian I (3)

Modern standard Persian: conversation; and reading and writing. Prerequisite: CRIT 14102 or equivalent.

24104 Intermediate Persian II (3)

Modern standard Persian: conversation; and reading and writing. Prerequisite: CRIT 24103 or equivalent.

POLISH*16201 Elementary Polish I (4)*

Introduction to modern standard Polish: conversation; and reading and writing. Prerequisite: None.

16202 Elementary Polish II (4)

Modern standard Polish: conversation; and reading and writing. Prerequisite: CRIT 16201 or equivalent.

26203 Intermediate Polish I (3)

Modern standard Polish: conversation; and reading and writing. Prerequisite: CRIT 16202 or equivalent.

26204 Intermediate Polish II (3)

Modern standard Polish: conversation; and reading and writing. Prerequisite: CRIT 26203 or equivalent.

ROMANIAN*16301 Elementary Romanian I (4)*

Introduction to modern standard Romanian: conversation; and reading and writing. Prerequisite: None.

16302 Elementary Romanian II (4)

Modern standard Romanian: conversation; and reading and writing. Prerequisite: CRIT 16301 or equivalent.

26303 Intermediate Romanian I (3)

Modern standard Romanian: conversation; and reading and writing. Prerequisite: CRIT 16302 or equivalent.

26304 Intermediate Romanian II (3)

Modern standard Romanian: conversation; and reading and writing. Prerequisite: CRIT 26303 or equivalent.

SERBOCROATIAN*16701 Elementary Serbocroatian I (4)*

Introduction to modern standard Serbocroatian: conversation; and reading and writing. Prerequisite: None.

16702 Elementary Serbocroatian II (4)

Modern standard Serbocroatian: conversation; and reading and writing. Prerequisite: CRIT 16701 or equivalent.

26703 Intermediate Serbocroatian I (3)

Modern standard Serbocroatian: conversation; and reading and writing. Prerequisite: CRIT 16702 or equivalent.

26704 Intermediate Serbocroatian II (3)

Modern standard Serbocroatian: conversation; and reading and writing. Prerequisite: CRIT 26703 or equivalent.

SLOVAK*16111 Elementary Slovak I (4)*

Introduction to modern standard Slovak: conversation; and reading and writing. Prerequisite: None.

16112 Elementary Slovak II (4)

Modern standard Slovak: conversation; and reading and writing. Prerequisite: CRIT 16111 or equivalent.

26113 Intermediate Slovak I (3)

Modern standard Slovak: conversation; and reading and writing. Prerequisite: CRIT 16112 or equivalent.

26114 Intermediate Slovak II (3)

Modern standard Slovak: conversation; and reading and writing. Prerequisite: CRIT 26113 or equivalent.

SLOVENIAN*16131 Elementary Slovenian I (4)*

Introduction to modern standard Slovenian: conversation; and reading and writing. Prerequisite: None.

16132 Elementary Slovenian II (4)

Modern standard Slovenian: conversation; and reading and writing. Prerequisite: CRIT 16131 or equivalent.

26133 Intermediate Slovenian I (3)

Modern standard Slovenian: conversation; and reading and writing. Prerequisite: CRIT 16132 or equivalent.

26134 Intermediate Slovenian II (3)

Modern standard Slovenian: conversation; and reading and writing. Prerequisite: CRIT 26133 or equivalent.

UKRAINIAN*16121 Elementary Ukrainian I (4)*

Introduction to modern standard Ukrainian: conversation; and reading and writing. Prerequisite: None.

16122 Elementary Ukrainian II (4)

Modern standard Ukrainian: conversation; and reading and writing. Prerequisite: CRIT 16121 or equivalent.

26123 Intermediate Ukrainian I (3)

Modern standard Ukrainian: conversation; and reading and writing. Prerequisite: CRIT 16122 or equivalent.

26124 Intermediate Ukrainian II (3)

Modern standard Ukrainian: conversation; and reading and writing. Prerequisite: CRIT 26123 or equivalent.

YORUBA*13201 Elementary Yoruba I (4)*

Introduction to modern standard Yoruba: conversation; and reading and writing. Prerequisite: None.

13202 Elementary Yoruba II (4)

Modern standard Yoruba: conversation; and reading and writing. Prerequisite: CRIT 13201 or equivalent.

23203 Intermediate Yoruba I (3)

Modern standard Yoruba: conversation; and reading and writing. Prerequisite: CRIT 13202 or equivalent.

23204 Intermediate Yoruba II (3)

Modern standard Yoruba: conversation; and reading and writing. Prerequisite: CRIT 23203 or equivalent.

CURRICULUM AND INSTRUCTION (C&I)

20000 Approaches to Teaching (3)

General strategies and skills of instruction with emphasis on curriculum design, instructional planning, learner diversity, decision making, interpersonal communication, questioning, and classroom management. This course includes 30 field/clinical hours. Prerequisite: Sophomore standing and completion of Preprofessional Block.

40093 Variable Title Workshop in Curriculum and Instruction (1-5)

Variable topic workshop designed to respond to curriculum trends and issues, and specialized needs. "IP" grade permissible. Prerequisite: Permission.

47095 Special Topics in Curriculum and Instruction (1-5)

Letter grades and "IP" permissible. Prerequisite: Permission.

47096 Individual Investigation in Curriculum and Instruction (1-5)

Prerequisite: Permission.

47330 Reading & 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 teaching students who struggle as readers and writers. Prerequisite: Sophomore Inquiry Seminar.

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.

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.

17049 Fundamentals of Ballet and Modern Dance (2)

Introduction to intensive exploration of ballet and modern dance technique for nonmajors with special emphasis on alignment, body awareness, and movement vocabulary. Prerequisite: None.

17050 Introduction to Dance (1)

Overview of modern dance as a performing art. Specifically, focusing on preparation, basic knowledge, and career choices. Prerequisite: Dance major/minor.

17051 Modern Dance Technique I-A (3)

(repeatable for a total of 12 hours) Development of skill acquisition in basic technique, understanding, and appreciation for the creative nature of dance through exposure to improvisational experiences. Prerequisite: Dance major/minor.

17052 Ballet I-A (2)

(repeatable for a total of 8 hours) Ballet techniques: Pre-barre; beginning barre and beginning center work. Prerequisite: Dance major/minor.

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 DAN 17052. Prerequisite: Dance major/minor or permission.

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. Prerequisite: Dance major or minor and DAN 17051 or permission.

17152 Ballet I-B (2)

(repeatable for a total of 8 hours) Continuation of ballet techniques studied in DAN 17052 - Ballet I-A. Prerequisite: Dance major or minor and DAN 17052 or permission.

27057 Dance for Children (3)

(repeatable for a total of 6 credit hours) The theory and practice of children's dance in the pre-school, elementary/middle schools, private studio, and recreation settings. Prerequisite: Dance major/minor, Early Childhood Major, or Education Major.

27070 Introduction to Jazz Styles A (2)

Development of basic jazz dance skills. Students must be at 20000-level technique in modern or ballet. Prerequisite: DAN 27071 or 27072.

27071 Modern Dance Technique II-A (3)

Beginning modern dance styles emphasizing body placement and introducing elementary modern dance techniques. Prerequisite: DAN 17051.

27072 Ballet II-A (2)

Ballet technique: Barre and beginning center work. Prerequisites: Dance major; DAN 17052.

27074 Dance Composition I: Exploration (2)

Movement exploration and improvisation. To be taken simultaneously with DAN 27071. Prerequisite: DAN 17051 or permission.

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.

27170 Introduction to Jazz Styles B (2)

Continued development of basic jazz dance skills. Prerequisite: DAN 27070.

27171 Modern Dance Technique II-B (3)

(repeatable for a total of 12 credit hours) Beginning modern dance styles emphasizing body placement and elementary modern dance techniques. Prerequisite: DAN 27071.

27172 Ballet II-B (2)

Beginning ballet technique: Barre and center work. Prerequisite: DAN 27072.

27174 Dance Composition II: Elements of Structure (2)

Basic principles of dance composition with attention to design, thematic material, structure, and form. Prerequisite: DAN 27074.

37053 Principles of Dance Mechanics II (2)

(repeatable for a total of 16 credit hours) Continuation of DAN 17053. Prerequisite: DAN 17053.

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.

37067 Ballet III-A (2)

Continuation of DAN 27172. Prerequisite: DAN 27172.

37068 Modern Dance Technique III-A (3)

(repeatable for a total of 12 hours) Exploration of modern dance techniques on intermediate level with emphasis on complex movement phrases. Prerequisite: DAN 27171.

37070 Dance Composition III: Form and Function (2)

Applying principles of form and structure in the development of solo, duet, and trio compositions. Prerequisite: DAN 27174.

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: One activity course.

37167 Ballet III-B (2)

Intermediate ballet. Continuation of DAN 37067. Prerequisite: DAN 37067.

37168 Modern Dance Technique III-B (3)

(repeatable for a total of 12 hours) Continued exploration of modern dance techniques on an intermediate level with an emphasis on complex movement phrasing. Prerequisite: DAN 37068.

37170 Dance Composition IV: Small Group (2)

A continuation of DAN 37070 focusing on development of dynamic relationships in terms of quartet and quintet dance works. Performance in end of semester workshop is required. Prerequisite: DAN 37070.

37192 Dance Practicum (1)

(repeatable for a total of 4 hours) Practical experience in cocurriculum dance activities under faculty supervision. "S/U" grading. Prerequisite: Permission.

37271 Dance Ensemble (1)

(repeatable for a total of 8 credit hours) Participation in rehearsal, preparation, and performance of public dance concerts in an established dance ensemble. Prerequisite: Technique level 20000 or above/by audition only.

47054 Modern Dance Technique IV-A (3)

Advanced technique integrating previously learned modern dance techniques and developing advanced movement phrasing. Prerequisite: DAN 37168.

47055 Ballet IV-A (2)

A continuation of DAN 37167 with increasing clarity and control of movements. Prerequisite: DAN 37167.

47063 Dance History (4)

History of dance from primitive to present day. Prerequisite: Dance major/minor. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

47070 Jazz Style-A (2)

Jazz style for students with advanced dance technique. Prerequisite: DAN 27170.

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: Permission. SEE CATALOG.

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.

47155 Ballet IV-B (2)

A continuation of DAN 47055 with increasing clarity and dynamic expression. Prerequisite: DAN 47055.

47156 Dance Production (3)

Study of elements involved in planning and implementing a concert. Experiential work in technical and management components. Prerequisite: Dance major/minor.

47170 Jazz Style-B (2)

Continuation of DAN 47070. Prerequisite: DAN 47070.

47192 Internship in Dance (1)

Teaching apprenticeship in basic dance technique. Elective course for senior dance majors. Repeatable. Prerequisite: Permission.

47193 Variable Title Workshop in Dance (1-3)

Selected topics of interest relating to dance. Prerequisite: Permission.

47196 Individual Investigation in Dance (1-3)

(repeated registration not to exceed 6 hours) Individual projects for dance majors. "IP" grade permissible. Prerequisites: Junior standing and permission.

EARLY CHILDHOOD EDUCATION (ECED)*10120 Introduction to Early Childhood Services (1)*

Orientation to the field of early childhood education: historical and present day programs and services for young children 0-8. Prerequisite: None.

20163 Understanding Young Children: Typical and Atypical Pathways (5)

Growth and development of young children from birth to age eight as it occurs along both typical and atypical pathways. Prerequisite: PSYC 11762.

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: Concurrent registration with ECED Block II and field experience.

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. Prerequisite: Concurrent with EC Block II and field experience. Special Fee: \$10.00 cr. hr.—subject to change.

30144 Expressive Arts and Social Studies in the Primary Grades (3)

Objectives, resources, curriculum development, methods of teaching social studies and expressive arts at kindergarten and primary levels; emphasis on integrated curriculum and professional collaboration. Prerequisites: ECED 30134; concurrent with Block III and field experience. Special Fee: \$10.00 cr. hr.—subject to change.

30147 Teaching Mathematics and Science in Preschool (3)

Instructional psychology and materials for effective teaching of mathematics and science in preschool settings with a theoretical emphasis on cognitive development. Prerequisite: Concurrent with Block II and field experience.

30164 Preschool Education (3)

Integrated curriculum utilizing principles of developmentally appropriate practice in settings for children under 5. Field experience two mornings a week. Prerequisites: Concurrent with ECED Block II and field experience.

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 early childhood faculty members and may include experts from outside agencies and other institutions. Prerequisite: Permission.

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. Prerequisite: Concurrent with ECED Block III courses and field experience.

40110 Education in Kindergarten (3)

Objectives, curriculum, equipment, evaluation of current practices; emphasis on understanding and teaching kindergarten child. Prerequisite: Senior standing.

40114 Teaching Science in the Early Years (3)

This course examines methods of teaching the processes of science. Attention is given to methods, equipment, safety, and planning. Prerequisite: ECED 30147. Concurrent with Block III courses and field experience.

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: EDPF 39525.

40126 Developmental Reading and Writing: Early Years (3)

Explores the development of literacy learning in the primary grades; focuses on the integration of reading and writing throughout the primary curriculum. Concurrent registration with ECED Block V and ECED 40138. Prerequisites: ECED 40105. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

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. Prerequisites: ECED 30123, 30134, 30144; concurrent with ECED 40110, 40126, 40151.

40139 Student Teaching—Kindergarten (6)

Student teaching in kindergarten, full day for eight weeks. Prerequisites: Completion of all methods courses; faculty approval; concurrent with ECED 40140.

40140 Education in the Primary Grades (3)

Senior-level course to synthesize propositions about primary education, human development and learning, and the child into a professional view of teaching and curriculum development. This course contains 12 field/clinical hours. Prerequisite: Concurrent with ECED 40138, 40139.

40142 Home-School-Community Relations (3)

Approaches to parent and community involvement in the education and welfare of children. Understanding the role of community agencies and organizations. Prerequisites: Advanced standing and permission.

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. Prerequisites: EDPF 28911 and permission.

40146 Teaching with Microcomputers: Early Years (3)

Developing competency in teaching with microcomputers in prekindergarten through grade three. Includes laboratory experience in computerized lessons and programming in Logo. Prerequisite: ITEC 47427 or permission of instructor.

40147 Teaching Mathematics: Early Years (3)

Instructional psychology and materials for effective teaching of mathematics in Grades K-3 with a theoretical emphasis on cognitive development. Prerequisite: "C" or better in MATH 14001; 14002. Concurrent with Block III courses and field experience.

40151 Guidance of Young Children (3)

Principles and practices of appropriate guidance for young children, intervention strategies, resources, and materials for guidance. Prerequisite: Senior standing.

40153 Organization and Supervision of Early Childhood Centers (3)

Basic guidelines for establishing and supervising full-day early childhood centers for infants, preschool, and school age children. Prerequisites: Senior standing and permission of instructor.

40165 Integrated Application of Preschool Curriculum (3)

Advanced integrated preschool curriculum utilizing principles of developmentally appropriate practice focusing on infant, toddler, and preschool age children. Prerequisite: ECED 30164; concurrent with ECED 40137, Internship in Preschool.

40192 Internship in Preschool (6-12)

Internship in preschool settings, full-day for sixteen weeks. Taken concurrently with ECED 40165. Prerequisite: ECED 30164.

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 adviser. Prerequisite: Permission.

40292 Internship in Kindergarten/Primary (6)

Internship in grades K-3, full day for sixteen weeks. Prerequisite: Concurrent with Block V courses.

EARLY CHILDHOOD EDUCATION TECHNOLOGY (ECET)***20000 Infant/Toddler Developmental Care (3)**

In addition to scheduled classroom activities on campus, students will be expected to participate in several observations of children under three in a child care setting. Prerequisites: PSYC 11762.

21005 Child Guidance (3)

The development of guidance and classroom management strategies for young children. Course develops skills in observing behavior to enhance planning for growth and development of young children. Prerequisite: Concurrent with ECET 22150.

21010 Early Childhood Curriculum I (3)

This course introduces the student to prekindergarten practices, observation skills, and curriculum content. Prerequisite: ECED 10120.

21092 Integrated Practicum (3)

Observation and participation with children in actual classrooms, integrating classroom experiences with units and weekly on-campus seminar. Prerequisites: ECED 10120; ECET 21010; EDPF 19525; concurrent with ECET 22000 and 29525.

22000 Early Childhood Curriculum II (3)

Involves planning, implementing, and evaluating developmentally appropriate content and methodology for infants/toddlers, and preprimary age children. Prerequisites: ECED 10120 and ECET 21010.

22100 Organization of Program and Parent Involvement (3)

The organization and supervision of early childhood programs. The relationship between the education/care of young children and parent programming. Prerequisite: ECED 10120, ECET 21010 prior to or concurrent with ECET 22100.

22150 Student Teaching (1-6)

Student will spend twenty hours per week at an approved preschool center under the supervision of an ECED faculty member and attend a seminar on campus weekly. Prerequisite: Departmental permission.

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.

12070 Development of the American Economy (3)

Development of American economic institutions. Prerequisite: May not be taken as elective for credit by students in the College of Business Administration after the freshman year or by other students after the sophomore year.

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 equivalent placement (ACT score of 18 or above and three years of high school mathematics). This course may be used to satisfy the Liberal Education Requirements.

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.

32025 Money, Credit, and Banking (3)

Organization of our money, credit, and banking system; principles and problems of monetary policy. 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.

32060 Economics of Retirement (3)

Examines economic issues and problems facing individuals upon retirement. Emphasis on financial planning and understanding the economic forces in society that impact senior citizens. Topics covered include financial planning for retirement, federal income taxes, insurance, health care programs, investment principles and strategies, and planning for estate transfer. Designed for individuals approaching retirement, or for students who are planning careers in the service professions working with the retired population. Does not count toward Economics major or minor. Prerequisite: ECON 22060.

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, principal-agent problems, and 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.

32084 Economics of 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, ADMS 34056, ECON 32040, 32041, or permission.

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, 32041, or permission.

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 to 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.

42073 Comparative Economic Systems (3)

Comparisons of economic systems and their theories: West Europe, East Europe and Russia, other continents, and the United States. Critique of Marxian theory and Russian Communism. Prerequisites: ECON 22060 and 22061. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

42074 The Soviet Economy (3)

Soviet economic system, its organization, institutions, and management. Marxian economic theories and their critiques. Prerequisites: ECON 22060 and 22061.

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. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

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 twentieth century. Prerequisites: ECON 22060 and 22061, or permission 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 twentieth century, especially emphasizing theories of Classical School, Marginalists, Marx and Neo-Classicalists. Prerequisite: Twelve (12) semester hours of economics or permission.

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. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

42191 Senior Seminar in Economics (3)

Advanced investigation of selected topics in economic analysis and issues in economic policy. Prerequisites: Twelve (12) hours of economics and permission of instructor. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

42291 Variable Content Seminar in Economics (1-4)

(repeated registration permitted when topic varies; repeatable for a total of 12 hours) Various special seminars will be announced in the *Schedule of Classes* under this course number. Prerequisite: Permission.

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" permissible. Prerequisite: Economics major; junior standing; permission.

42293 Variable Topic Workshop in Economics (1-6)

(repeated registration permitted when topic varies; repeatable for a total of 18 hours) Various special workshops will be announced in the *Schedule of Classes* under this course number. "S/U" grading. Prerequisite: Permission.

42295 Special Topics in Economics (3)

(repeated registration permitted when topic varies; repeatable for a total of 9 hours) Various special topics will be announced in the *Schedule of Classes* under this course number. Prerequisite: Permission.

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" permissible. Prerequisite: Senior Economics major; permission.

42297 Variable Topic Colloquium in Economics (1-3)

(repeated registration permitted when topic varies; repeatable for a total of 9 hours) Various special colloquia will be announced in the *Schedule of Classes* under this number. Prerequisite: Permission.

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" permissible. Prerequisite: Senior Economics major; permission.

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" permissible. Prerequisite: Senior Economics major; permission.

EDUCATION (EDUC)**42357 Student Teaching (5)**

"S/U" grade and "IP" permissible. See adviser. Prerequisite: Permission; co-requisite 49525; Adm. Prof. Educ.

42358 Student Teaching (4)

"S/U" grade and "IP" permissible. See adviser. Prerequisite: Permission; co-requisite 49525; Adm. Prof. Educ.

EDUCATIONAL ADMINISTRATION (EDAD)**40093 Variable Title Workshop in Edad (1-5)**

Prerequisite: None.

EDUCATIONAL PSYCHOLOGY AND FOUNDATIONS (EDPF)**19525 Inquiry Into the Profession (4)**

Inquiry into field of education and teaching as a profession. Initial preparation of student portfolios. First course of four for education majors; 1 lab hour included. Use of teaching/learning technology. Prerequisite: Admission to Pre-Education as major or minor.

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.

28911 Human Development and Learning (2)

Factors and patterns in child and adolescent development and learning, with implications of theories and principles for instruction in various settings. To be taken concurrently with EDPF 29515 and 29592. Prerequisites: Sophomore standing; admitted to College of Education or other teacher education major or minor.

29510 School and Society (3)

The social foundations of education with emphases on the role of the school, the school and the community, and the profession of teaching. Prerequisite: Sophomore standing.

29515 Human Diversity in Education (2)

Socio-cultural patterns related to race, gender, culture, class, health, and disability with instructional implication for sensitivity to culturally based differences. To be taken concurrently with EDPF 28911 and 29592. Prerequisites: Sophomore standing; admitted to College of Education or other teacher education major or minor.

29525 Inquiry Into Teaching and Learning (3)

Inquiry into individual differences and instruction based on analysis of critical incidents in classroom interaction; nature of inclusive, democratic classrooms. Second of four courses. Use of teaching/learning technology. Prerequisite: EDPF 19525.

29592 Preprofessional Practicum (2)

Participation of education students in an extended field experience. To be taken concurrently with EDPF 28911 and 29515. This course includes 90 field/clinical hours. Prerequisites: Sophomore standing; admitted to College of Education or other teacher education major or minor.

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.

39525 Inquiry Into Schooling (3)

Issues-based inquiry into historical/philosophical/ sociological foundations of education; emphasis on analysis of educational aims to schooling in society. Third course of four. Use of teaching/learning technologies. Prerequisite: EDPF 29525.

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: Permission.

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. Prerequisite: Permission.

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 permission of instructor.

49565 Education in American Society (3)

Development of those skills and knowledge which can help future teachers analyze the relationship between education and society through study and activities which focus on philosophical, historical, comparative, and sociological aspects of the educational process. Prerequisite: Admission to professional education.

49570 Social Foundations of Multi-Cultural Education (3)

Analysis of historical, social, and ideological forces which relate to current educational policies and practices in multicultural education. School and non-school education programs will be analyzed. Prerequisite: Junior standing.

ELECTRICAL/ELECTRONIC AND RELATED ENGINEERING TECHNOLOGIES (EERT)*

12000 Electrical Fundamentals 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 19001 or equivalent.

12001 Electrical Fundamentals 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. Prerequisite: EERT 12000. Corequisite: MATH 19002 or equivalent.

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: MERT 12000.

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.

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: Permission

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. Prerequisite: EERT 12010.

22003 Technical Computing (3)

An introduction to digital computer systems, flowchart techniques, programming using a scientific high-level language with applications. Number system conversions, binary codes, error detection, and correction. Boolean algebra. Corequisite: MATH 19001 or equivalent.

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 or permission.

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.

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.

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.

22095 Special Topics (1-3)

Special topics in Electrical/Electronic Engineering Technology. Repeated registration permitted. Prerequisite: Permission.

ELEMENTARY EDUCATION (ELED)**31120 Introduction to Teaching the Language Arts (3)**

Introduction to language arts instruction with emphasis on interrelatedness of language arts, methods, and materials. This course includes 24 field/clinical hours. Prerequisite: Admission to professional education. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

31121 Developmental Reading in the Elementary School (3)

This course emphasizes the application of knowledge about the processes of reading and learning to the development of effective elementary reading programs. This course includes 16 field/clinical hours. Prerequisites: ELED 31120 and admission to professional education. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

31123 Social Studies in Elementary School (3)

Developmental approach to teaching of social studies in elementary school with emphasis on recent trends, methods, materials, and evaluation. This course includes 60 field/clinical hours. Prerequisites: EDPF 28911, 29510; C&I 20000; advanced standing.

31125 Mathematics for Elementary Teachers (3)

Objectives, programs, methods of teaching and learning meanings, relations, and applications of mathematics. This course includes 50 field/clinical hours. Prerequisites: EDPF 28911, 29510; C&I 20000, ITEC 27400; MATH 14001, 14002; elementary education majors must attain a grade of "C" or better in MATH 14001, 14002; advanced standing.

40093 Variable Title Workshop in Elementary Education (1-4)

Various topics designed to respond to issues, trends, and specialized needs of elementary schools. Prerequisite: Permission.

41120 Meeting Individual Needs in Reading (3)

Field-based focus on the use of formal and informal techniques as decision-making strategies in reading with emphasis on techniques for skill development with diverse readers in the classroom. This course includes 40 field/clinical hours. Prerequisites: ELED 31120, 31121 and admission to professional education. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

41121 Seminar in Elementary Education (2)

(repeatable for a total of 4 hours) Similar type course taken concurrently with ELED 41137 and 41138, student teaching. It entails the study of learning and teaching theory; provides opportunity for discussion of problems encountered in student teaching; introduces topics closely associated with teaching. This course includes 20 field/clinical hours. Prerequisite: All professional elementary education courses listed for program.

41127 Evaluation of Instruction in the Elementary School (2)

Principles, methods, and techniques of evaluating student learning and instructional program. This course includes 20 field/clinical hours. Prerequisites: Senior standing and advanced standing.

41136 Elementary Pupil Adjustment and Guidance (2)

Objectives, approaches, and resources for individual and group guidance through curriculum. Prerequisite: Teaching experience or permission.

41137 Elementary Student Teaching (5)

All day field experience in elementary school for eight weeks. "IP" grade permissible. Prerequisites: Admission to elementary education program; admission to professional education; and, completion of all professional education courses listed for the program.

41138 Elementary Student Teaching (5)

All day field experience in the elementary school for eight weeks. "IP" grade permissible. Prerequisite: Admission to elementary education program; admission to professional education; and, completion of all professional elementary education courses listed for the program.

41157 Teaching with Microcomputers: Elementary Classroom (3)

In-depth study of instructional use of microcomputers in the elementary school classroom. BASIC and LOGO will be used in developing and modifying instructional software and courseware. Prerequisite: None.

41192 Field Work Practicum (1-4)

Designed to meet the individual needs of education students who require additional field/clinical experiences prior to student teaching. This course includes 120 field/clinical hours. Prerequisites: Permission and junior or senior standing.

41195 Special Topics in Elementary Education (2-4)

Prerequisites: Permission and senior standing.

41196 Individual Project in Elementary Education (2-4)

To be arranged. Prerequisite: Permission.

ENGLISH (ENG)

For placement in College English courses see "Arts and Sciences — English Composition Requirement — Placement."

10000 Introduction to College English (3)

Examination of the sentence and the paragraph; grammar, usage, and mechanics; creating better sentences; structure of the paragraph. Prerequisite: Test score.

10001 College English I (3)

Basic expository essay: emphasis on selection and organization of material, rhetorical patterns, clear and effective expression. Grammar and mechanics needed. Prerequisite: Successful completion of ENG 10000 or test score. This course may be used to satisfy the Liberal Education Requirements.

10002 College English II (3)

Composition course with literature as the focus, but with continued emphasis on writing better essays. Critical and research writing. Prerequisite: Successful completion of ENG 10001 or test scores. This course may be used to satisfy the Liberal Education Requirements.

10100 Introduction to College English for Foreign Students (3)

Instruction in standard written and spoken English for nonnative students. Focus is on grammar and usage, sentence structure, idiomatic structure, and diction. Prerequisite: Test score.

10101 College English I for Foreign Students (3)

Basic expository essay for nonnative students. Emphasis on selection and organization of material, rhetorical patterns, clear and effective expression. Grammar and mechanics as needed. Prerequisite: Successful completion of ENG 10100 or test score.

Students who earn "A" or "B" in ENG 10001 are allowed to take lower-division (20000-level) English courses while also taking ENG 10002. Any undergraduate English course may be taken after ENG 10002 has been completed satisfactorily with the exception of 40000-level courses, which require junior standing.

20001 Business Writing (3)

Analysis and practical application of effective principles of written communication in letters, memos, and reports. Prerequisite: Freshman sequence.

20002 Technical Writing (3)

Study of principles appropriate to writing about technical subjects with extensive practice in the writing of technical reports and papers. Prerequisite: Completion of Freshman English requirement.

20003 Intermediate Expository Writing (3)

A continuation of the first-year writing sequence for those wanting to develop their writing abilities further. Approaches vary from instructor to instructor. Prerequisite: ENG 10002 or equivalent.

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: ENG 10002 or equivalent.

21001 Introduction to Ethnic Literature of the United States (3)

Study of selected ethnic American writers; may include works by African, Asian, Hispanic, Jewish, and Native Americans, and other groups. Prerequisite: ENG 10002 or equivalent.

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 10002 or equivalent.

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 10002 or equivalent. This course may be used to satisfy the Liberal Education Requirements.

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 10002 or equivalent. This course may be used to satisfy the Liberal Education Requirements.

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 10002 or equivalent. This course may be used to satisfy the Liberal Education Requirements.

22073 Major Modern Writers: British and United States (3)

Introduction to British and United States writers of the twentieth century; study of their works in their literary and cultural contexts. Prerequisite: ENG 10002 or equivalent. This course may be used to satisfy the Liberal Education Requirements.

25001 Literature in English I (3)

British literature or combination of British and US 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: ENG 10002 or equivalent.

25002 Literature in English II (3)

British and US 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: ENG 10002 or equivalent.

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: ENG 10002 or equivalent.

26095 Sophomore Special Topics (3)

Study in depth of a particular writer, theme, or literary movement, such as literature and film, Gothic novels. Prerequisite: ENG 10002 or equivalent.

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 10002 or equivalent. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

30064 Argumentative Prose Writing (3)

Practice in writing argumentative essays, with emphasis on discussion of student work. Prerequisite: Freshman sequence.

30065 Expository Prose Writing (3)

Practice in prose composition with emphasis on exposition and discussion of student work. Prerequisite: Freshman sequence.

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 or equivalent.

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

Instruction in and practice of writing poetry with specific models and discussion of student work on a weekly basis. Prerequisite: ENG 20021 or equivalent.

30070 Poetry Writing II

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 or permission.

31001 Fundamental English Grammar (3)

Study of grammatical structures and matters of usage and style in edited U.S. English. Prerequisite: ENG 10002 or equivalent.

31002 History of the English Language (3)

Study of the development of the English language from the Indo-European period to the present. Prerequisite: ENG 10002 or equivalent.

31003 Linguistics (3)

Survey of language structure with emphasis on understanding of what we "know" when we "know" language. Prerequisite: ENG 10002 or equivalent.

31095 Special Topics in Linguistics (3)

Study of specific topics in linguistics such as sociolinguistics, phonetics, and phonology, or bi- and multi-lingualism. Prerequisite: ENG 10002 or equivalent.

32001 Children's Literature (3)

Survey of children's literature from Mother Goose rhymes and picture books through modern realistic fiction. Prerequisite: ENG 10002 or equivalent.

32002 Literature for Young Adults (3)

Study of literature appropriate to young adults. Prerequisite: ENG 10002 or equivalent.

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. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

33002 U.S. Literature From 1865 to 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. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

33003 U.S. Literature From 1945 to 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. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

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. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34001 British Literature to 1500 (3)

British literary themes, genres, and authors studied in their historical and cultural contexts. Selections from Anglo-Saxon and Middle English literature. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34002 British Literature From 1500 to 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. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34003 British Literature From 1660 to 1800 (3)

British literary themes, genres, and authors studied in their historical and cultural contexts. Selections from Restoration, Augustan, and early Romantic literature. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34004 British Literature From 1800 to 1900 (3)

British literary themes, genres, and authors studied in their historical and cultural contexts. Selections from Romantic and Victorian literature. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34005 British Literature From 1900 to Present (3)

British literary themes, genres, and authors studied in their historical and cultural contexts. Selections from modern and post-modern literature. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34011 World Literature in English (3)

An examination of selected writings in English by third world, post-colonial, or other writers in English, excluding British and U.S. authors. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

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. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

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. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34055 Shakespeare (3)

Study of plays representing Shakespeare's entire career, including *Henry IV* part I and II, *The Merchant of Venice*, *Measure for Measure*, *Hamlet*, *Othello*, and the *Tempest*. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34065 Chaucer (3)

Close study of Chaucer's poetry including *Canterbury Tales*, *Troilus and Criseyde*, and selected lyric poems. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

34095 Special Topics: Major Author Studies (3)

Intensive study of one or more authors from the English speaking world. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

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. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

35201 The Bible As Literature (3)

Study of Bible as a great book subject to literary criticism and as a main document of Western culture. Old and New Testaments read. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

36001 Literary Criticism (3)

Examination of principal works and theories of major critics. Contemporary critical methodologies include reader response analysis, semiotics, and cultural criticism. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39095 Special Topics in Literary History (3)

Study of selected topics in literary history such as multiculturalism, canon formation, colonial literature. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39195 Special Topics in Drama (3)

Study of selected topics in drama such as comedy and tragedy; realism and non-realism; political, religious, period drama. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39295 Special Topics in Poetry (3)

Study of selected topics in poetry such as poetic form, historical and cultural contexts, and artistic movements. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39395 Special Topics in Fiction (3)

Study of selected topics in fiction such as the auto-biographical novel, the novella, and the short story. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39495 Special Topics in Comparative Literature (3)

Study of selected topics in comparative literature such as movements and genres in world literature, the interrelationships of the arts. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39595 Special Topics in Literary Criticism (3)

Study of selected topics in literary criticism such as reader response criticism, psychoanalytic methodologies, or Marxist approaches. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39695 Special Topics in Ethnic Literature of the U.S. (3)

Study of selected topics in ethnic literature such as the literature of one ethnic group, race, and ethnicity in U.S. culture. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39795 Special Topics in Women's Literature (3)

Study of selected topics in women's literature organized around literary, historical, and theoretical issues. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39895 Special Topics in Rhetoric, Composition, and Writing (3)

Study of selected topics in the rhetorical nature of language and literate practices such as the historical study of political, literary, and professional discourse. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

39995 Special Topics Cultural Studies (3)

Study of selected topics in cultural studies organized around a particular mode or methodology of cultural analysis. This course may be repeated when topic varies. Prerequisite: ENG 30001 and ENG 25001 or 25002 or permission.

40010 Writing Portfolio (2)

Directed practice in constructing a portfolio of original writing, which may be creative, expository, technical, or preprofessional in nature. "IP" grade is permissible. Prerequisites: Junior standing; 3.00 average in writing courses; and permission.

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. Prerequisite: Junior standing.

41096 Individual Investigation (1-3)

Open to advanced undergraduate students in English. Only three hours of individual investigation count toward the English major. Prerequisites: Permission of instructor and department and Junior standing.

46201 Nineteenth-Century European Literature (3)

Major European writers of the nineteenth century; romanticism, realism, naturalism, symbolism, and related movements. Prerequisite: Junior standing.

46203 Twentieth-Century European Literature (3)

Major European writers of the twentieth century; modernism, post-modernism, 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. Prerequisite: (1) ENG 30001 + ENG 25001 or 25002 or (2) permission. This course may be used to satisfy the writing intensive course graduation requirement with approval of major department.

49095 Senior Special Topics (3)

Intensive study of topics that will vary each semester. Prerequisite: (1) ENG 30001 + ENG 25001 or 25002 or (2) permission.

ENVIRONMENTAL MANAGEMENT TECHNOLOGY (EMGT)**11000 Introduction to Environmental Risks Issues (3)*

Survey course in environmental risk issues including health and safety, regulatory compliance, and related environmental technologies. Lecture 3 hours weekly. Prerequisite: None.

12010 Safety in the Workplace (3)

Discussion and application of OSHA standards in the work place, including methods of compliance, recordkeeping, program development and maintenance, and safety equipment. Lecture 2 hours, laboratory 3 hours weekly. Prerequisite: None.

20010 Environmental Sampling and Problem Analysis I (4)

Course involves sampling and analysis of water, air, soil, and waste with attention to quality control and quality assurance methods. Lecture 3 hours, laboratory 3 hours weekly. Prerequisites: EMGT 11000 and 12010.

20011 Environmental Sampling and Problem Analysis II (4)

Course involves sampling, analysis, and handling of nonhazardous wastes and wastewater, including site remediation and waste minimization and waste management technologies. Lecture 3 hours, laboratory 3 hours weekly. Prerequisite: EMGT 20010.

20050 Hazardous Substances and Hazardous Waste Management (3)

An introduction to hazardous substance and hazardous waste management including identification and characterization of such substances. Handling and disposal techniques will be covered also. Lecture 3 hours weekly. Prerequisite: EMGT 20010; Corequisite: EMGT 20011.

21092 Practicum in Environmental Management Technology I (3)

This off-campus work experience is integrated with academic coursework giving students an opportunity to apply concepts to practical situations within the field of environmental technology. Prerequisites: EMGT 11000 and 12010; BSCI 10181 and 10182; and CHEM 10050 and 10052 and 10053.

22092 Practicum in Environmental Management Technology II (3)

This off-campus work experience is integrated with academic coursework giving students an opportunity to apply concepts to practical situations within the field of environmental technology. Prerequisite: EMGT 21092.

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 or permission.

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. Prerequisite: ENVT 20092, permission, or corequisite with ENVT 20092.

22095 Special Topics in Environmental Technology (3)

(repeatable for a total of 6 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: Permission.

22096 Individual Investigation in Environmental Technology (1-3)

Independent research of environmental technology topic supervised by an Environmental Technology faculty member. Prerequisite: Permission.

*Courses offered only at Regional Campuses.

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: As appropriate.

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: As appropriate.

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: As appropriate.

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: As appropriate.

FAMILY AND CONSUMER STUDIES (FCS)

General and Consumer Studies

11011 Introduction to Family and Consumer Studies (1)

Exploration of the program options in the School of Family and Consumer Studies. Prerequisite: None.

25512 Management of Family Resources (3)

Management as applied to families and professionals. Prerequisite: FCS 24011.

31012 Presentation Techniques (3)

Experience in presentation techniques related to families and consumers with emphasis on lecture demonstration, radio and television presentations, multimedia use, promotional materials. Prerequisite: Junior standing.

35511 Consumer Issues in Today's Society (3)

Study of characteristics of consumer families and the influence of economic, social, and legal trends on consumer issues and problems. Prerequisite: None.

36011 Household Equipment (3)

Principles in selection, operation, and use of household equipment related to safety, noise control, energy availability, economic, and environmental concerns. Prerequisite: None.

41092 Practicum in Professional Consumer Services (2-4)

Directed professional field experiences in private and/or public sectors of economy. Prerequisite: Permission.

41093 Variable Title Workshop in Family and Consumer Studies (1-3)

Workshop setting dealing with a topic or topics in family and consumer studies. Learning experiences are provided in a wide range of areas. Workshops are graded "S/U" only. Prerequisite: None.

41095 Special Topics in Family and Consumer Studies (1-4)

Discussion of a major topic within a specific field of family and consumer studies. Prerequisite: None.

41096 Individual Investigation (1-3)

Independent study in one of the following areas: home economics education, nutrition and food; individual/family studies and gerontology; interior design; and management and family economics. Prerequisite: Written permission from instructor.

45513 Home Management Laboratory (3)

Management analysis of different family environments. Prerequisites: FCS 23020, 25512.

45514 The Consumer in Today's Society (2)

Study of current and future role of consumer families relevant to consumption, alternatives, and priorities. Prerequisite: Three hours of economics, consumer or family economics, or permission.

Individual and Family Studies and Gerontology

14027 Introduction to Individual/Family Studies and Gerontology (2)

Introduction to the human services related to individual/family studies and gerontology, the career opportunities available, and the skills required to succeed in the field. Prerequisite: None.

14029 Introduction to Gerontology (2)

An interdisciplinary approach to the aging process. Experiences with older members of the community are included. Prerequisite: None.

24011 The Family (3)

Principles, attitudes, values involved in interpersonal relationships, marriage, and family living. Open to men and women, majors and nonmajors. Prerequisite: None.

24012 Child Development (3)

General development of the child from prenatal through middle childhood. Directed observations required. Prerequisite: FCS 24011 or permission.

24026 Special Topics in Individual and Family Studies (3)

Discussion of a major topic in individual and family studies which is pertinent to the particular needs of the student group. Prerequisite: FCS 24011 or permission.

34013 Development in Infancy (3)

Study of genetic influences, prenatal development and birth, and the developmental characteristics of the infant and toddler. Parents are included. A laboratory experience with infants and toddlers and interaction with parents are provided. Prerequisites: FCS 14027 and 24012.

34017 Child Care Participation (3)

Study of child care and development in a laboratory setting. Observation, record keeping, and participation in a laboratory nursery are required. Prerequisites: FCS 14027, 24011, 24012, and BSCI 20020.

34030 Adult Development and Aging (3)

Examines human development in young adulthood, middle age, and aging. Prerequisites: FCS 14027 and 24011. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

44018 Professional Development in Individual / Family Studies and Gerontology (3)

Preparation of students for professional work experiences as well as providing an opportunity to discuss recent developments in the fields of family studies and gerontology. Prerequisites: FCS 14027, 24011, and senior standing.

44020 Adolescent Development (3)

Study of adolescent development with emphasis on forces related to adolescent behavior in the family and society. Evaluation of current research. Prerequisites: FCS 14027, 24012, and BSCI 30010.

44021 Family Rehabilitation (3)

Evaluation of research and theoretical models in the area of family rehabilitation. Focus on strategies for assisting families in coping with a variety of critical issues over the life cycle. Prerequisites: FCS 14027 and 24011.

44022 Changing Roles of Men and Women (3)

A study of roles of men and women, past, present, and future. Prerequisite: FCS 24011 or SOC 12050.

44023 Building Family Strengths (3)

The Building Family Strengths Model builds upon family life potential; based on extensive research emphasizing identified family strengths. Prerequisites: FCS 14027 and 24011.

44028 Parent-Child Relationships (3)

Study of parent-child relationships across the life span and within various contexts. Emphasis on the process of socialization and determinants of parent-child relationships based on current research. Prerequisites: FCS 14027, 24011, 24012, and 34017.

44092 Practicum in Individual/Family Studies and Gerontology (3-10)

(repeatable for a total of 20 credit hours) Observation and participation in services offered by family, child-care, and older adult agencies. One class discussion per week. Practicums are graded "S/U" only. Prerequisites: Majors only, FCS 14027 and 44018, and senior standing with an overall GPA of 2.50.

Interior Design

14501 Studio Problems in Interior Design I (4)

Studio problems in interior design is a course for the beginning student whose interest is in interior space design. Prerequisite: TECH 11083. Special Fee: \$8.75/cr. hr.—subject to change.

24502 Studio Problems in Interior Design II (4)

Special problems dealing with design of residential and related spaces, traffic flow, placement of furnishings, emphasis on color and textural experience and lighting of space. Practical, integrated approach. Prerequisite: Interior Design majors only, FCS 14501. Special Fee: \$8.75/cr. hr.—subject to change.

24510 Textiles in the Built Environment (2)

A concise background in textile science is established followed by an in-depth discussion of the selection and application of textiles by interior designers and architects. Prerequisite: Interior Design majors only.

24511 Housing in Today's Society (3)

Relationships of well-being of individuals and families in the life cycle for a well-planned residence. Evaluation of housing, planning, financing, and modern technological developments. Prerequisite: None. Special Fee: \$10.00/cr. hr.—subject to change.

24513 Survey History of Interiors (4)

Chronological study of housing and furnishings from ancient civilizations to present, emphasizing cultural and social forces that contributed to evolution of various styles. Prerequisite: None. NOT OPEN TO INTERIOR DESIGN MAJORS.

34503 Studio Problems in Interior Design III (4)

Special problems concerning design of small to moderate size commercial interior space. Prerequisite: FCS 24502. Special Fee: \$10.00/cr. hr.—subject to change.

34504 Studio Problems in Interior Design IV (4)

Introduction to large scale planning. Prerequisite: ARCH 12024, FCS 34503, PHY 13001 may be taken concurrently. Special Fee: \$10.00/cr. hr.—subject to change.

34512 Home Furnishings (3)

Practical and aesthetic study of interiors. Selection and arrangement of furnishings. Prerequisite: None. Special Fee: \$2.33/cr. hr.—subject to change.

34515 Computer Aided Design for Interior Designers (3)

Introduction to application of computer drawing and drafting techniques used in interior design. Study of two-dimensional and three-dimensional techniques as well as symbol libraries. Prerequisites: FCS 34503 and 34522.

34522 Methods and Materials for Interior Design (3)

Information regarding the manufacture, construction, and composition of the materials used in furnishings and surface materials in interior design. Proper methods and installation procedures required in the use of materials for interior furnishing products. Prerequisite: FCS 24510, concurrently with FCS 34503.

44505 Studio Problems in Interior Design V (2)

Introduction to principles of historic design focusing on hands-on and on-site design techniques. FOR INTERIOR DESIGN MAJORS ONLY. Prerequisites: FCS 34504, 34524, concurrently with FCS 34525. Special Fee: \$17.50/cr. hr.—subject to change.

44506 Studio Problems in Interior Design VI (4)

Special problems concerning the design of large-scale commercial environments. Prerequisites: TECH 31015, FCS 44505, concurrently with ARCH 44514. Special Fee: \$10.00/cr. hr.—subject to change.

44507 Studio Problems in Interior Design VII (4)

This course will provide the opportunity for a senior design thesis. Problems will be selected by the students and will represent their own area of interest. Prerequisites: FCS 44506, ARCH 44514. Special Fee: \$10.00/cr. hr.—subject to change.

44512 Historic Furnishing Textiles (2)

Designed to acclimate students to historic textiles created primarily for use in interior architecture. Focus is on aesthetics, design, and construction. A comprehensive adaptive reuse or restoration project is required. Prerequisites: FCS 24524 and 24525.

44523 Interior Design Professional Practice (2)

A study of the business and professional practices of interior designers. Prerequisite: FCS 34504.

44524 Anglo-American Domestic Interiors, Early Colonial Period (3)

An in-depth study of the Anglo-American interior and domestic furnishings with concentration on the preservation and contemporary usage of both interior architectural spaces and domestic objects. Prerequisite: FCS 44512.

44525 Lighting Application in Interior Spaces (3)

Design application of lighting technology for various interior spaces. Field trips to study lighting installations. Prerequisite: FCS 34503. Special Fee: \$17.00/cr. hr.—subject to change.

44526 Lighting Design in Historic Spaces (3)

Overview of historic lighting forms and techniques with an emphasis on Anglo-American design, eighteenth-twentieth centuries. Focus of course will be application of modern techniques to historic design problems. Prerequisites: FCS 44505, 44525, ARCH 44514. Special Fee: \$17.00/cr. hr.—subject to change.

44527 Study Tours (1-10)

A series of study tours for in-depth, firsthand experiences of historic sites, markets, manufacturing facilities, and attendance at product seminars. Prerequisite: Junior/senior standing.

44534 History of Interiors to 1600 (4)

A chronological study of housing and furnishings from civilization to the fifteenth century. Prerequisites: FCS 34504, ART 22006 and 22007 or ARCH 20001 and 20002; permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

44535 History of Interiors—1600 to Present (4)

A chronological study of housing and furnishings from the Renaissance to the Victorian Period—sixteenth to nineteenth centuries and twentieth century. Prerequisite: FCS 44534.

44592 Interior Design Practicum (2-10)

(repeatable for a total of 10 hours) Practical experience in a furniture store, department store, design studio, architect's office, or design-related agency, directed by a qualified professional. Students' initial registration must be 4 hours, not to exceed 10 credit hours. Practicums are graded "S/U" only. Prerequisites: FCS 34504, 44523, MKTG 35010.

Nutrition and Food*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 I (5)

Introduction to quantity food production. Includes work simplification, equipment usage, safety, sanitation, recipe and yield analysis. Salads, soups, sauces, vegetable, milk, cheese and egg preparation. Prerequisite: Majors or permission.

13024 Careers in Hospitality Food Service (2)

In-depth study of the career possibilities and opportunities in the hospitality and food service industry: including the aptitudes, skills, and knowledge needed to be successful. Prerequisite: None. Special Fee: \$5.00/cr. hr.—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.) Prerequisites: FCS 23511. Special Fee: \$5.75/cr. hr.—subject to change.

23023 Techniques of Food Production II (4)

Quantity food production. Includes equipment usage, safety, sanitation, baked goods, meat, fish, seafood, and poultry. Prerequisite: FCS 13022 and 13023.

23511 Nutrition Related to Health (3)

Essentials of nutrition as they relate to the health and well being of individuals and families. 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 Food Service Cost Control and Analysis (5)

Prepares students to analyze and control costs encountered in a food service operation. Includes math drills, simulations, and computer applications. Prerequisites: ADMS 24053, ACCT 23020, and FCS 13023.

33028 Hospitality Food Service Purchasing (3)

Emphasis on the selection of purchasing of food for quantity production. Stresses identifying, grading, and quality standards of food. Prerequisites: FCS 23023.

33029 Catering and Banquet Preparation and Service (5)

Combines theoretical and practical applications of planning, merchandising, costing, producing, and serving catered meals. Prerequisite: FCS 33026. Special Fee: \$5.00/cr. hr.—subject to change.

33512 Nutrition (3)

Functions, sources, and interactions of essential nutrients. Nutritional needs of family members, methods of meeting these needs, sources of reliable nutrition information. Prerequisites: CHEM 10060, 10061, and 20481. CHEM 10050 and 10052 accepted for nonnutrition majors.

33522 Applied Nutrition (3)

Application of nutrition principles including nutrition assessment, charting of medical records, interviewing, counseling, nutrition education, food exchange lists, nutrition surveys and dietary standards. Nutrition and Dietetics majors only or permission. Prerequisite: FCS 23511 and completed Social Science LER.

43013 Experimental Methods in Nutrition (3)

Students will gain laboratory experience in the biochemical methods of assessing nutrition status and the identification of nutrition-related conditions. Principles of experimental design and data analysis and techniques of scientific writing will be applied. Prerequisite: FCS 33512. Special Fee: \$6.66/cr. hr.—subject to change. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

43016 Cultural Aspects of Food, Nutrition, and Health (3)

Cultural overview of racial, ethnic, and religious population groups residing in the United States and the impact on food habits, nutritional and health status, and counseling concerns. Prerequisite: FCS 23511.

43027 Management Operations in the Hospitality Industry (5)

Explores marketing and management principles applicable to the hospitality industry through case analysis. Emphasis is upon innovative approaches and applications to problem solving of current issues in the industry. Prerequisite: FCS 33026 and ADMS 34163. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

43030 Food Service Systems Management (3)

The study of food service systems management, including menu planning and evaluation, recipe development, purchasing, equipment, financial management, marketing, and human resources. Prerequisite: FCS 23012.

43031 Layout and Design of Food Service Operations (3)

Emphasizes food service equipment, selection, and maintenance. Develops skills in kitchen layout and design as it applies to productivity. Prerequisites: FCS 13023, 23023, or equivalent.

43032 Food Production and Service Management (3)

The application of management principles in food production and service systems, including production management, quality control, distribution and service and physical facilities. A laboratory is included in the course.

43092 Practicum in Food Service Management (5-10)

Provides application of theory for the students to apply the principles of planning, organizing, and directing a food service operation. Practicums are graded "S/U" only. Prerequisites: Majors only and permission.

43513 Advanced Nutrition (3)

Mechanisms through which nutrients meet the human biological needs. Fundamental concepts underlying applied human nutrition. Evaluation and interpretation of research findings. Prerequisites: FCS 33512, BSCI 30030, and CHEM 30284.

43514 Clinical Dietetics (5)

Application of the principles of normal nutrition to diet in disease, effect of pathological conditions on nutritional needs. Prerequisites: FCS 33522 and 43513.

43515 Community Nutrition (3)

Introduction to nutrition problems and practices in the community. Study of legislation, philosophies, management strategies, and agencies affecting nutritional care. Prerequisites: FCS 33522 and 43513.

43518 Maternal and Child Nutrition (3)

Nutrition requirements and problems: pregnancy, lactation, childhood, and adolescence. Prerequisite: FCS 33512 or equivalent.

43520 Nutrition for Fitness (3)

This course will explore the relationship between nutrition, health, and exercise. Dietary change for improved health and fitness will be discussed as well as the impact of diet and exercise on body composition and weight. Prerequisite: FCS 33512.

43521 Food Choices for Prescribed Dietary Modification (2)

Adapting adequate normal diet in terms of food choices to accommodate prescribed food restriction or bodily dysfunction. Not open to dietetic majors. Prerequisite: FCS 23511 or equivalent.

43523 Nutrition and Dietetics: Professional Practice (1)

Development of professional awareness. Evaluation of professional growth and formulation of plans for continued growth. Prerequisite: Open to Nutrition majors only upon completion of junior-level courses.

FASHION DESIGN AND MERCHANDISING (FD&M)**10010 Fashion Fundamentals (3)**

Introduction to the global fashion industry. Analysis of the business of fashion; how it is conceived, marketed, and sold. Overview of important resources, companies, and personnel who impact the industry. Prerequisite: Prefashion major. Special Fee: \$18.33/cr. hr.—subject to change.

10020 Fashion Visuals (3)

The study of color and two and three dimensional design, as it applies to the fashion industry. Prerequisite: Prefashion major.

10030 Fashion Fabrics (3)

Study of fiber properties, yarn systems, fabric structures, finishes and coloration as related to aesthetics, quality, performance, product end use and care. Prerequisite: Prefashion major. Special Fee: \$11.66/cr. hr.—subject to change.

10120 Introduction to Fashion Drawing (2)

Introduction to drawing the fashion figure and fabric rendering. Drawings completed in black and white. Completion of a portfolio. Pre- or corequisite: FD&M 10020.

10263 Fashion Retailing (3)

Study of retailing organizations and structures within the fashion industry. Analysis of functional area of operation and responsibilities in contemporary fashion retail institutions. Prerequisite: FD&M 10010.

15043 Workroom Techniques (2)

Introduction to basic construction skills using apparel workroom methods and industrial sewing equipment. Prerequisite: None. Special Fee: \$12.50/cr. hr.—subject to change.

20011 History of Costume I (3)

Chronological study and research of historic costume from the origin of clothing through the French revolutionary era, as studied and applied to contemporary fashion. Available as an honors course. Prerequisite: Pre- or corequisite: HIST 11050 or 11051 or ART 22006 or 22007.

20012 History of Costume II (3)

The study of historic costume/designers of the nineteenth and twentieth centuries and their influence on contemporary fashion. Available as an honors course. Prerequisite or corequisite: HIST 11050 or 11051 or ART 22006 or 22007.

20121 Fashion Drawing I (3)

Continued study of design illustration techniques as applied to the fashion figure and fabric rendering. Completion of Fashion Drawing I portfolio. Prerequisite: FD&M 10120. Special Fee: \$3.75/cr. hr.—subject to change.

20122 Fashion Drawing II (3)

Advanced study and development of the fashion figure through live model drawing. Continued study of grouping fashion figures and rendering techniques. Completion of portfolio. Prerequisite: FD&M 20121.

20141 Flat Pattern/Draping I (3)

Development of basic and torso muslin and slopers. Patternmaking and construction techniques for bodice, sleeve, collar, and skirt variations. Prerequisite: FD&M 15043 or competency exam. Special Fee: \$21.75/cr. hr.—subject to change.

20142 Flat Pattern/Draping II (3)

Development of pant muslin and sloper. Draping, bodice contouring, and one-piece sleeve variations. Students work as a design team to produce a line of casual sportswear. Prerequisite: FD&M 20141; corequisite: FD&M 20122. Special Fee: \$21.75/cr. hr.—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. Prerequisite FD&M 10263.

30083 Professional Seminar (3)

Professional development strategies for fashion and related careers. Emphasis is on verbal and written communication skills. Prerequisite: FD&M junior standing. Special Fee: \$6.66/cr. hr.—subject to change. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

30121 Fashion Design I (3)

Study of the fashion industry, its regions and markets. Research and theoretical development of a fashion line. Continued development of drawing and rendering skills. Prerequisites: FD&M 20122, 20142; corequisite: FD&M 30141.

30122 Fashion Design II (3)

Research and theoretical development of fashion lines for specialized markets. Continued development of drawing and rendering skills. Corequisite: FD&M 30142.

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: FD&M junior standing.

30133 Fashion Fabric Application (2)

Theory and practice in the selection of fabrics and appropriate construction techniques for various apparel categories. Prerequisite: FD&M 20142. Special Fee: \$12.50/cr. hr.—subject to change.

30141 Fashion Studio I (3)

Advanced patternmaking and construction techniques are used to create original garments designed in Fashion Design I. Prerequisite: FD&M 20142; corequisite: FD&M 30121. Special Fee: \$11.75/cr. hr.—subject to change.

30142 Fashion Studio II (3)

Advanced patternmaking and construction techniques are used to create original garments designed in Fashion Design II. Prerequisite: FD&M 30141; corequisite: FD&M 30122. Special Fee: \$11.75/cr. hr.—subject to change.

30261 Store Operations (3)

The supervision, organization, and operations management of fashion retail institutions. Prerequisites: FD&M 20260 and ACCT 23020.

30272 Merchandise Planning and Control (3)

Application of quantitative concepts, terms, formats, and calculations used in various retail planning models and strategies. Prerequisite: FD&M 20260. Special Fee: \$5.00/cr. hr.—subject to change.

35013 Fashion Accessories (3)

The merchandising, promotion, and sales of accessories. Materials, production, and resources are examined by category. Prerequisite: FD&M junior standing.

35063 Visual Merchandising and Display (3)

Theory and practice of merchandise presentation for the purpose of promotion and sales. Prerequisite: FD&M junior standing.

35125 Textile Applied Design (3)

Techniques used in the creation of original designs for printed fabrics. Prerequisite: FD&M 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.

40121 Fashion Portfolio I (2)

Develop a professional design portfolio which will emphasize indepth individual investigation of specific apparel markets, target customers, and various illustrative techniques. Prerequisites: FD&M 30122, 30142; corequisite: FD&M 40141.

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: FD&M 40121; corequisite: FD&M 40142.

40141 Fashion Studio III (3)

Development of patternwork, specification sheets, and muslins for original line. Faculty critiques. Prerequisites: FD&M 30122, 30142; corequisite: FD&M 40121. Special Fee: \$12.50/cr. hr.—subject to change.

40142 Fashion Studio IV (3)

Construction and completion of garments for original line. Faculty critiques. Prerequisite: FD&M 40141; corequisite: FD&M 40122. Special Fee: \$12.50/cr. hr.—subject to change.

40213 Fashion Marketing and Consumer Motivation (3)

Examination of fashion producers/retailers' roles in marketing communications. Analysis of consumer motivation to develop sales strategies in relationship to marketing strategies. Prerequisite: MKTG 35010.

40260 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. Pre- or corequisite: FD&M 40213.

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: FD&M 30272.

45011 Fashion Forecasting and Promotion (3)

Identifying trends to develop fashion forecasts. Interrelationships of forecasting, promotion, public relations, and the media. Prerequisite: None.

45013 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: Permission. Special Fee: Actual Cost Basis.

45035 Historic Textiles (3)

Identification and analysis of textile fabrics as the reflection of culture. Prerequisite or corequisite: HIST 11050 or 11051 or ART 22006 or 22007. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

45092 Internship (3)

Supervised practical experience in the fashion industry. Eligibility requirements available from the School of Fashion Design and Merchandising Field Studies Coordinator. Prerequisites: FD&M senior standing; permission.

45093 Variable Title Workshop—FD&M (1-3)

(repeatable for a total of 6 hours) Grading is "S/U". Prerequisite: Permission. Special Fee: Actual Cost Basis.

45095 Special Topics (1-3)

Variable content relevant to the field of fashion. Prerequisite: Permission.

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: Permission.

45145 Tailoring (3)

Traditional and contemporary techniques for constructing tailored garments. Prerequisites: FD&M 30122, 30142. Special Fee: \$5.00/cr.hr.—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.

45270 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: FD&M 10263 and 20260. Special Fee: \$5.00/cr. hr.—subject to change.

FINANCE (FIN)**20093 Variable Title Workshop in Finance (2)**

Prerequisite: Permission of instructor.

26059 Personal Asset Management (3)

Description, evaluation, and selection of investment alternatives (stocks, bonds, real estate, etc.) for individuals. Business majors will not receive credit for this course. Prerequisite: None.

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. Business majors will not receive credit for this course. Prerequisite: None.

NOTE 1: Registration in any 30000 or 40000 level finance course is restricted to the following groups:

- a. Officially declared upper-division business administration majors.*
- b. Officially declared nonbusiness majors with a minimum 60 semester hours completed and a minimum 2.00 cumulative grade point average. Registration priority is extended to those majors that specifically require 30000 and 40000 level finance courses.*
- c. Officially declared prebusiness majors (with a minimum 60 semester hours completed and a minimum 2.25 cumulative grade point average) registering for upper division business courses.*

NOTE 2: Admission to all 30000 or 40000 level courses requires completion of all prerequisites and appropriate academic status.

36053 Business Finance (3)

Analysis of financial decisions in business enterprise and interface of firm with capital markets. Prerequisites: ACCT 23020 and ECON 22060 and 22061.

36054 Intermediate Business Finance (3)

Treatment of uncertainty in business financial analysis. Overview of investment markets, financial institutions, and international financial environment. Prerequisite: FIN 36053.

36058 The Financial System (3)

Analysis of financial markets and institutions emphasizing current issues, regulatory aspects, and management concerns. Prerequisite: FIN 36053. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

36059 Investments (3)

Discussion of factors determining value of investment securities with attention to economic, regulatory, and global influences. Prerequisite: 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: Junior standing.

36062 Real Estate Appraisal (3)

Basic course in real estate appraisal stressing techniques of appraisal and concepts and theory underlying methodology. Prerequisites: FIN 36053 and 36061.

36064 Real Estate Brokerage (3)

Principles and practices of real estate, brokerage, real estate laws, contractual instruments, valuation, financing and markets in commercial and residential real estate. Prerequisite: FIN 36061.

36071 Critical Issues in Law Management (3)

Introduction to the law of agency and business organizations. In-depth examination of partnerships and corporations, securities law, employment law, and the multinational corporation areas. Prerequisite: FIN 36074.

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: FIN 36074.

36073 Real Estate Law (3)

An examination of the laws and legal concepts that apply most directly to the real estate business. Major topics: real property, mortgages, zoning leases, eminent domain with emphasis on Ohio law. Prerequisite: FIN 36074.

36074 Legal and Regulatory 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, environmental and international issues. Prerequisite: Junior standing.

36080 Property and Liability Insurance (3)

Fundamental concepts of risk management and management of insurance contracts. Regulatory environment of insurers and legal environment of insurance contracts will be examined. Analysis of major property and liability contracts. Prerequisite: Junior standing.

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: ECON 22060 and 22061.

36082 Life Insurance (3)

Life and health insurance uses and applications (family and business financial needs); legal and regulatory environment of the industry. Retirement planning, pension and health care issues. Prerequisites: Junior standing.

36084 Business Risk Management (3)

Development of business consumers insurance and risk management programs. Study of corporate risk manager's viewpoint re: recognition, analysis, and treatment of risk. Legal and regulatory environment of firm at risk and the insurance industry. Prerequisite: FIN 36053; see notes 1 and 2.

40093 Variable Title Workshop in Finance (1-6)

Prerequisite: see notes 1 and 2.

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: FIN 36053. see notes 1 and 2.

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: FIN 36059 or permission.

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: 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: FIN 36054 and ADMS 24055.

46061 Real Estate Finance (3)

Analysis of factors determining real estate value; decision making from viewpoint of investor regarding returns and risks. Institutional and individual perspectives addressed. Prerequisites: FIN 36053 and 36061 or permission; see notes 1 and 2.

46062 Real Estate Investment (3)

Analysis of factors determining real estate value; decision making from viewpoint of the investor regarding returns and risks. Institutional and individual perspectives addressed. Prerequisites: FIN 36053 and 36061, or permission.

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: FIN 36053 and senior standing.

46066 Corporate Real Estate (3)

This course examines the management of the corporation's real property assets. Issues that the corporate real estate manager confronts include acquisition, financing, disposition, and management. Prerequisites: FIN 36053 and 36061; see notes 1 and 2.

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: 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: FIN 36058.

46069 Income Property Appraisal (3)

Theory and methodology for the valuation of income-producing real estate. Methods include direct capitalization, mortgage-equity analysis, residual analysis, and discounted cash flow. Prerequisites: FIN 36053, 36061; see current catalog notes 1 and 2.

46091 Finance Seminar (3)

Seminar integrating entire field of finance. Elective for finance majors. Prerequisite: Controlled; see notes 1 and 2.

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: Controlled; see notes 1 and 2.

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: Controlled admission.

46195 Real Estate Special Topics (3)

Deals with special topics in real estate. Senior elective for Real Estate majors. Prerequisites: FIN 36061, 36062, and 46061.

46292 Real Estate Internship (3)

Study of activities related to concurrent on-the-job experience with cooperating firms in real estate brokerage, appraisal, finance, management, or development. "S/U" grade. Prerequisite: Controlled registration; FIN 36061 and permission; senior Real Estate majors only; see current catalog notes 1 and 2.

46295 Finance Special Topics (3)

Deal with special topics in Finance. New subjects not covered in other existing courses. Prerequisites: FIN 36053 and senior standing.

FINE AND PROFESSIONAL ARTS (FPA)**20000 Performing Arts I (3)**

An inter-arts 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 in modern foreign language courses see "Arts and Sciences — Foreign Language Requirement — Placement."

13201 Elementary French I (4)

An introduction to the French language in the context of Francophone cultures. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

13202 Elementary French II (4)

A continuation of the introduction to the French language in the context of Francophone cultures. Prerequisite: FR 13201 or equivalent. This course may be used to satisfy the Liberal Education Requirements.

23201 Intermediate French I (3)

Continued development of speaking, listening, reading, and writing skills using a variety of cultural materials. Prerequisite: FR 13202 or equivalent.

23202 Intermediate French II (3)

Continuation of FR 23201; credit may be given for FR 23202 or for FR 23206, but not for both. Prerequisite: FR 23201 or equivalent.

23206 French Reading for Comprehension (3)

Further develops skills and techniques for understanding written French; conducted in English. Credit not applicable toward French major or minor. Students may obtain credit in FR 23202 or 23206, but not both. 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 appropriate score on MLA Level II exam.

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. Prerequisites: FR 23207 or equivalent.

23209 Field Study (2-6)

(repeatable for a total of 6 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: One year of college language or equivalent.

23212 Studies in Grammar (4)

This course provides a comprehensive grammar review for students who need to improve their skills prior to taking advanced language courses. Prerequisite: FR 23202.

33095 Selected Topics in French (3)

(repeatable for a total of 9 hours) Topic to be announced in the *Schedule of Classes*. Prerequisite: FR 33211 or permission.

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 or equivalent.

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 or equivalent.

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 or permission.

33231 Translation Practice: French (1)

Translation practice with French texts using principles and techniques learned in the lecture class. To be taken concurrently with MCLS 30230. 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 concept of language for special purposes and emphasizes the use of special vocabulary in conversations in business and other settings. Prerequisite: FR 33211 or 33212.

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 or permission.

33335 Introduction to French Theatre (3)

Evolution of French dramatic literature from the Middle Ages to the present. Readings of representative works with lectures, analyses. In French. Prerequisite: FR 33212 or permission. This course may be used to satisfy the writing-intensive course graduation 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, analyses. In French. Prerequisite: FR 33212 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

33337 Introduction to the French Novel (3)

Evolution of French novel from seventeenth century to present. Readings of representative major works, lectures, analyses. In French. Prerequisite: FR 33212 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

33421 French Civilization (3)

A survey of French history and culture from its beginnings to World War II. Taught in French. Prerequisite: FR 33212 or permission.

43091 French Seminar (3)

Topic to be announced. Prerequisite: One course from FR 33335, 33336, 33337.

43093 Variable Title Workshop in French (1-6)

Workshops individually designed to provide instruction and training in specific areas of French studies. Prerequisite: Departmental permission.

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: Six hours upper-division French literature; permission.

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 hours from 30000-level French courses.

43230 Advanced Translation Practice: French (3)

Practice course that emphasizes skill-building in foreign language-to-English translation of a selection of texts in business, technology, medicine, and law. Prerequisite: FR 33231.

43240 Business and Special Texts: French (3)

Survey of the typical text types of business in the foreign culture and language. Practice sessions focus on reading and understanding specialized texts, on translation, and on composition of selected foreign language special texts. Prerequisite: FR 33240.

43333 Old French Literature (3)

Studies in the epic, romance, lyric, and drama traditions from 1100 through 1549. Prerequisite: Six semester hours from 33330-level.

43352 Montaigne and Rabelais (3)

Thematic and stylistic study of the essays of Montaigne or the novels of Rabelais. Prerequisite: Six semester hours from 33330-level.

43354 Classical French Drama (3)

Study of the dramatic techniques of Corneille and Racine. Prerequisite: Six semester hours from the 33330-level.

43356 Moliere (3)

Study and appraisal of Moliere's major comedies; Moliere's contributions to the comedy as a genre. Prerequisite: Six semester hours from the 33330-level.

43358 Classicism Outside the Drama (3)

Study of one of several major nondramatic classical authors: Descartes, Pascal, Bossuet, La Rochefoucauld, La Fontaine, Boileau, Mme. de Sevigne, Mme. de LaFayette. Prerequisite: Six semester hours from the 33330-level.

43360 Voltaire and Encyclopedists (3)

Studies in eighteenth-century French literature. Prerequisite: Six semester hours from the 33330-level.

43362 Rousseau and Preromanticism (3)

Study of significant preromantic works and of their influence. Writers studied include, for example, Rousseau, Bernardin de Saint-Pierre, Retif de la Bretonne. Prerequisite: Six semester hours from the 33330-level.

43363 Eighteenth-Century French Novel (3)

Development of French novel during the eighteenth century. Reading of selected novelistic works by Prevost, Voltaire, Diderot, Rousseau, and others. Prerequisite: Six semester hours from the 33330-level.

43364 French Romanticism (3)

Comprehensive review of the romantic movement, with detailed study of representative romantic poems, novels, or plays. Prerequisite: Six semester hours from the 33330-level.

43365 Nineteenth-Century French Theatre (3)

Development of French theatre during the nineteenth century. Reading of selected romantic, realist, and symbolist plays. Prerequisite: Six semester hours from the 33330-level.

43366 Studies in Nineteenth-Century Novel (3)

Study of selected topics relevant to the literature, history, and theory of the nineteenth-century novel. Prerequisite: Six semester hours from the 33330-level.

43368 The Twentieth-Century French Novel (3)

Studies of selected twentieth century French novels, with detailed study of the novel of one or several major writers or movements. Prerequisite: Six semester hours from the 33330-level.

43370 The Twentieth Century French Theatre (3)

Studies in French drama since 1900. Prerequisite: Six semester hours from the 33330-level.

43374 La Pleiade (3)

Study of Ronsard and his principal supporters in the movement to launch a classical revival in French literature. Prerequisite: Six semester hours from the 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.

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.

20977 *Survey of Geography (1)*

Introduces geography as a professional discipline; presents faculty and their research interests. "S/U" grading. Prerequisite: Geography major or minor.

21062 *Physical Geography (3)*

World survey of development and distribution of all facets of physical environment, including atmosphere, weather and climate, vegetation, soils, and landforms, emphasizing man's use. Prerequisite: None.

22061 *Human Geography (3)*

Geographic study of humanity's varied ideologies, technologies, social institutions, and resources, and interactions among them. Prerequisite: None.

27063 *World Geography (3)*

Examination and comparison of geographic conditions in different regions of the world. Stresses inter-relationships between people and resources within and between regions and countries. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

27064 *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.

29160 *Introduction to Maps and Map Analysis (3)*

The map as a means to convey environmental information is stressed; basic techniques for map reading and analysis are introduced. Prerequisite: GEOG 10160 or geography major status.

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.

32080 *Political Geography (3)*

Spatial aspects of political behavior as manifested in boundary changes, the sizes of states, interstate relations, and spatial organization. Prerequisite: None.

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 *Urban Geography (3)*

Spatial structure of urban systems, interaction patterns between cities, internal structure of the city. Land use, transportation, residential, and commercial patterns. Prerequisite: None.

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)*

Study of the physical and human geography of Africa, especially of the areas south of the Sahara. Prerequisite: None.

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.

37066 *Geography of Europe (3)*

Examination of the cultural, economic, political, and physical geography of western and eastern Europe (excluding the former USSR). Prerequisite: None.

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.

37079 *Geography of South Asia (3)*

Physical and human geography of India, Pakistan, Bangladesh, Sri Lanka, Nepal, and Bhutan. Prerequisite: None.

*Courses offered only at Regional Campuses.

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.

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.

39002 Statistical Methods in Geography (3)

Probability theory, spatial statistics, application of theoretical curves to geographic distributions, estimation procedures, and testing of hypotheses. Spatial sampling, methods of areal association, regression analysis. Prerequisite: MATH 11011.

39080 Computer Applications in Geography (3)

Overview of the technology and methods for processing geographic data with personal computers. Entry, detection, analysis, and display of patterns of geographic phenomena and processes using computer-mapping software packages. Prerequisite: At least 6 hours of geography.

39161 Introduction to Cartography (3)

Map making from compilation through reproduction; development of skills in drafting, generalization, symbolization, design; familiarization with relief representation, statistical maps, and map projections. Prerequisites: GEOG 29160, MATH 10041, or permission. Must take GEOG 39162 concurrently.

39162 Introduction to Cartography Laboratory (1)

Practical experience in map making. Actual map compilation design, drafting, and reproduction is stressed. Prerequisite: GEOG 39161 concurrently. Special Fee: \$25.00—subject to change.

40093 Variable Title Workshop in Geography (1-6)

Prerequisite: Permission.

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 presentation of results. Prerequisite: At least 24 hours in geography or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

40195 Special Topics in Geography (1-3)

Prerequisite: Permission.

40996 Individual Investigation in Geography (1-3)

Individual undergraduate investigation or research on specific geographical problems. "IP" grade permissible. Prerequisite: Permission.

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 or permission.

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.

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: An introductory geography course or permission of the instructor.

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 or permission.

41082 Geography of Soils (3)

An edaphological approach to soils including morphology, formation, classification, geographical distribution, and utilization. Field work required. Prerequisite: GEOG 21062 or permission.

41265 Urban Climatology (3)

A study of the urban atmosphere through historical and current literature and field projects. Elements studied include temperature, radiation, moisture, wind, and pollution. Prerequisite: GEOG 31062 or permission.

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 or permission.

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 27064 or permission.

44010 Advanced Economic Geography (3)

Geographic analysis of economic growth models, territorial production complexes, input-output models, and regional distinctions in the global economy. Prerequisite: GEOG 34070 or permission.

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.

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 or permission.

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 or permission.

46070 Urban and Regional Planning (3)

Analysis of geographical aspects of planning for cities and regions. Prerequisite: GEOG 36065 or permission.

46092 Internship in Urban, Regional, and Environmental Planning and Applied Geography (6)

Preprofessional work experience in local, regional, and environmental planning agencies and in business designed to utilize and develop academic skills. Prerequisite: Controlled registration; admission competitive based on student's skills and interests and on number of positions available.

49006 Spatial Programming (3)

Introduces the student to a variety of computer programming environments suitable for analysis of spatial problems. Prerequisite: Basic Statistics, GEOG 39002, or permission.

49080 Principles of Geographical Information Systems (3)

Study of the principles of development, analysis, management and application of geographical information systems (GIS), using available GIS software packages. Prerequisite: GEOG 39080 or permission.

49162 Advanced Cartography (3)

Study of the design and production of complex maps. Symbolization, composition, and color utilization. Prerequisites: GEOG 39161, must take GEOG 49163 concurrently.

49163 Advanced Cartography Lab (1)

Practical experience in the techniques of production and reproduction of maps. Prerequisite: Must take GEOG 49162 concurrently. Special Fee: \$35.00—subject to change.

49165 Computer Cartography (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 or permission.

49198 Research in Cartography and Gis (1-3)

(repeated registration permitted) Individual research on a topic in cartography or GIS under the direction of any faculty member. "IP" grade permissible. Prerequisite: Permission.

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. Prerequisite: Must take GEOG 49210 concurrently.

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: Permission.

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 major or permission.

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 fifteen students. Students pay for own board and laboratory fee to University. Special fee on actual cost basis. Prerequisite: Permission.

49890 Applied Geography (3)

Detailed investigation of application of geographic techniques and knowledge toward problem solving in the "real world." Prerequisite: Ten undergraduate geography 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.

11041 Earth Dynamics Lab (1)

Laboratory study of minerals, rocks, aerial photos, topographic maps, and geologic maps. Pre- or corequisite: GEOL 11040. This course may be used to satisfy the Liberal Education Requirements.

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.

11043 Earth History Lab (1)

Laboratory study of fossils, sedimentary rocks, and geologic maps in the framework of interpreting earth history. Pre- or corequisite: GEOL 11042. This course may be used to satisfy the Liberal Education Requirements.

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. Lecture 3 hours weekly. Prerequisite: GEOL 11041 or permission.

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. Lecture 3 hours weekly. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

21080 Oceanography (3)

Introduction to geological, physical, chemical, and biological nature of the oceans. Lecture 3 hours weekly. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

23063 Mineralogy (4)

Occurrence, associations, characteristics, crystallography and crystal chemistry of common minerals. Laboratory identification emphasizing physical properties. Lecture 3 hours, laboratory 2 hours weekly. Required field trip. Prerequisites: GEOL 11040, 11041; pre- or corequisite: CHEM 10060 or permission.

31070 Petrology (4)

Occurrence and origin of igneous, sedimentary, and metamorphic rocks. Laboratory identification, description, and classification of hand specimens. Lecture 3 hours, laboratory 2 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 3 hours, laboratory 2 hours weekly. Required field trip. Prerequisites: GEOL 31070 and MATH 12001.

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 3 hours, laboratory 2 hours weekly. Trigonometry recommended. Prerequisites: GEOL 11040 and 11041 or permission.

34061 Invertebrate Paleontology (4)

Concepts applied to study of commonly preserved invertebrate organisms; identification of common North American fossils. Lecture 3 hours, laboratory 2 hours weekly. Required field trip. Prerequisites: GEOL 11042, 11043, and either BSCI 20560 or 10181. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

40093 Variable Title Workshop in Geology (1-8)

Workshop and/or training program focused on a specific professional or disciplinary topic. Prerequisite: Permission.

40095 Selected Topics in Geology (3)

Selected topics presented by visiting professors or one-time offerings presented by regular faculty. Prerequisite: Twenty hours of geology courses or permission.

40096 Individual Investigation in Geology (1-3)

Directed field, laboratory, and/or library research. Written report required. Open on permission of faculty member directing work. Only 3 hours will be applied toward baccalaureate degree. Does not count toward Geology major. "IP" grade permissible. Prerequisite: Permission.

41025 General Geophysics (3)

Physics of earth, seismology, geomagnetism, heat flow, radioactivity, geochronology, geotectonic models. Required field trip. Prerequisites: GEOL 31070, 31080; 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, 31080, or permission.

41077 Geology of the National Parks of North America (3)

Introduction to geology of principal national parks, monuments, and seashores of United States and Canada, emphasizing basic geologic principles. Does not satisfy requirements of Geology major. Prerequisite: Junior standing.

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. Special fee on actual cost basis. Prerequisites: GEOL 31070, 31080.

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. Lecture 3 hours weekly. Prerequisite: Permission.

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. Lecture 3 hours weekly. Required field trip. Prerequisite: Permission.

42067 Introductory Hydrogeology (3)

Occurrence of ground water in geologic materials; emphasizing utilization, conservation, and management of ground water resources. Lecture 2 hours, laboratory 2 hours weekly. Prerequisites: MATH 12001, 12002; GEOL 31070 and 32066; or permission.

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, CHEM 10060, 10061, 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. Lecture 3 hours weekly. Prerequisites: 10 hours of Chemistry.

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 3 hours and laboratory 2 hours weekly. Prerequisite: Geology Majors with 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, MATH 12002, one year college chemistry or permission.

43066 Optical Petrography (3)

Theory of optical crystallography and the microscopic examination and identification of igneous, sedimentary, and metamorphic rocks in thin section. Lecture 2 hours, laboratory 2 hours weekly. Prerequisite: GEOL 31070.

44070 Principles of Stratigraphy (4)

Basic concepts of physical stratigraphy and stratigraphic practice. Required 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 in Geology.

GERMAN (GER)

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

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. This course may be used to satisfy the Liberal Education Requirements.

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 or equivalent. This course may be used to satisfy the Liberal Education Requirements.

21201 Intermediate German I (3)

Continued development of speaking, listening, reading, and writing skills using a variety of cultural materials. Prerequisite: GER 11202 or equivalent.

21202 Intermediate German II (3)

Continuation of GER 21201. Prerequisite: GER 21201 or equivalent.

21213 Business German (3)

An introduction to the language used in German business and economics. Investigation and discussion of major aspects of the German economy without teaching business-economics theory. Prerequisite: GER 21202.

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 or permission.

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 or permission.

31095 Special Topics (1-3)

Topic announced in *Schedule of Classes*. May be repeated when content varies. Prerequisite: Junior standing or permission.

31207 German Conversation (2)

Practice in conversational German. Corequisite: GER 21202.

31211 Composition and Conversation (3)

Grammar review and practice in composition and conversation. Prerequisite: GER 31207 or permission.

31215 German Phonetics and Diction (3)

Study of the German sound system with special emphasis on pronunciation and intonation. Application of the international phonetic alphabet to German. Prerequisite: GER 31207.

31231 Translation Practice: German (1)

Translation practice with German texts using principles and techniques learned in the lecture class. To be taken concurrently with MCLS 30230. 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 concept of language for special purposes and emphasizes the use of special vocabulary in conversations in business and other settings. Prerequisite: GER 31211.

31303 Modern Writers (3)

Readings and critical analysis of modern German literature. Prerequisite: GER 21202 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

31334 Nineteenth-century German Prose (3)

Reading and critical analysis of major works of fiction. Prerequisite: GER 31303 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

31335 Nineteenth-century German Drama and Lyric (3)

Reading and critical analysis of major plays and poems. Prerequisite: GER 31303 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

31337 Twentieth-century German Prose (3)

Reading and critical analysis of major prose works from 1890 to the present. Prerequisite: GER 31303 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

31338 Twentieth-century German Drama and Lyric (3)

Reading and critical analysis of major plays and representative lyric poetry from 1890 to the present. Prerequisite: GER 31303 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

31421 German Civilization (4)

A survey of German history and intellectual life. Prerequisite: GER 31303 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

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 or permission.

41095 Special Topics (1-4)

(repeated registration permitted when content varies). Topic announced in *Schedule of Classes*. Prerequisite: Senior standing or permission.

41096 Individual Investigation (1-3)

Independent investigation of problems in German language or literature. "IP" grade permissible. Prerequisites: Six hours of upper-division German and permission of the department chairperson.

41211 Advanced Composition and Conversation (3)

A continuation of GER 31211. Prerequisite: GER 31211 or permission.

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: GER 31421.

41230 Advanced Translation Practice: German (3)

Practice course that emphasizes skill-building in foreign language-to-English translation of a selection of texts in business, technology, medicine, and law. Prerequisite: GER 31231.

41240 Business and Special Texts: German (3)

Survey of the typical text types of business in the foreign culture and language. Practice sessions focus on reading and understanding specialized texts, on translation, and on composition of selected foreign language special texts. Prerequisite: GER 31240.

41330 Twentieth-century German Authors (3)

A survey of the major movements and authors from 1890 to the present. Prerequisite: Six hours of upper-division German literature courses.

41331 History of German Literature (4)

History of the development of German literature from 750 to the present. Prerequisite: Six hours of upper-division German literature courses.

41365 Classical German Literature (3)

Reading and critical analysis of major works of the Classical Age with emphasis on Goethe. Prerequisite: Six hours of upper-division German literature courses. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

41399 Research Project in German Literature (3)

Thesis or other independent study. "IP" grade permissible. Prerequisite: Six hours at the 40000-level.

GREEK (GRE)

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

The Modern Greek language sequence (GRE 14205/6, 24208/9) is offered on a two-year rotation. Students are advised to contact the Department of Modern and Classical Language Studies early in their career for the specific schedule.

14201 Elementary Classical Greek I (4)

An introduction to the classical Greek language in the context of ancient Greek culture. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

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 or equivalent. This course may be used to satisfy the Liberal Education Requirements.

14205 Elementary Modern Greek I (4)

An introduction to the modern Greek language in the context of Greek culture. Prerequisite: None. This course may be used to satisfy the Liberal Education Requirements.

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 or equivalent. This course may be used to satisfy the Liberal Education Requirements.

24201 Intermediate Classical Greek I: Readings (3)

Excerpts from Classical Greek literature with emphasis on translation into English. Prerequisite: GRE 14202 or equivalent.

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 or equivalent.

24208 Intermediate Modern Greek I (3)

Continued development of speaking, listening, reading, and writing skills using a variety of cultural materials. Prerequisite: GRE 14206 or equivalent.

24209 Intermediate Modern Greek II (3)

Advanced readings in prose and poetry, emphasizing such twentieth-century Demotic authors as Nikos Kazantzakis, Elias Venezis, George Seferis, and Constantine Cavafy. Prerequisite: GRE 24208 or equivalent.

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: 11 hours of Greek.

34351 New Testament in Greek (3)

Selected New Testament readings in the original language, including the Gospels and the letters of Paul. Prerequisite: GRE 24201 or equivalent.

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 14202.

34371 Homer (3)

Selections from the Iliad or Odyssey studied from literary and grammatical standpoint. Prerequisite: GRE 34351 or 34370.

40393 Variable Title Workshop (1-6)

Workshops individually designed to provide instruction and training in specific areas of Greek studies. Prerequisite: Department permission.

44096 Individual Investigation (1-3)

Investigation of problems in Greek literature or linguistics. "IP" grade permissible. Prerequisite: Departmental permission.

44352 Greek Drama (3)

Selections from Aeschylus, Sophocles, or Euripides with discussion of Greek dramatic technique and influence. Prerequisite: GRE 34350 or permission.

