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Course Descriptions

HORT  26021 Cooperative Work Experience in Landscape Management (3)
Cooperative work program through which the skills necessary to perform professionally in this occupation will be acquired. This course offered only at the Salem Campus. Requires a minimum of 30 hours per week of work experience. Not more than 9 credit hours in this or a combination of other work experience will be allowed. S/U grading; IP grade permissible. Prerequisite: corequisite: HORT 26020.

26030 Turf Grass Management (3)
Basic principles of turf management. This course covers turf equipment and the safe use of equipment commonly found in the turf industry. Lecture two hours; lab three hours weekly; course offered only at the Salem Campus. Prerequisites: BSCI 16001, and HORT 16001 and CHEM 16001. Corequisite: HORT 26031.

HORT  26031 Cooperative Work Experience in Turf Grass Management (3)
Cooperative work program through which the skills necessary to perform professionally in this occupation will be acquired. This course offered only at the Salem Campus. Requires a minimum of 30 hours per week of work experience. Not more than 9 credit hours in this or a combination of other work experience classes will be allowed. S/U grading; IP grade permissible. Pre/corequisite: HORT 26030.

HOSPITALITY MANAGEMENT (HM)

13022 Sanitation and Safety Principles and Practices (3)
Safety and sanitation practices pertinent to food service. Emphasis is on laws, food microbiology, storage practices and accident prevention. Prerequisite: none.

13023 Techniques of Food Production 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 Introduction to Hospitality Management (2)
Career opportunities and the scope, development and history of the hospitality industry. Introduction to management in the hospitality industry including food service, lodging and tourism. Prerequisite: none. Special fee: $5/credit hour—subject to change.

23012 Food Study (3)
Principles of food preparation and quality evaluation with consideration of nutritive value and retention. One hour of lecture and four hours of lab. (Note: nutrition and dietetics majors should take CHEM 10060, 10061 and 20481; students in other majors should take CHEM 10050 and 10052 as prerequisites for this course.) Prerequisite: NUTR 23511. Special fee: $11/credit hour—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: HM 13022 and 13023.

23030 Lodging Operations (3)
This course provides students with an introduction to lodging, resort operations and management. Skills needed to succeed in the field and career opportunities are emphasized. Prerequisite: none.

33020 Legal Issues in the Hospitality Industry (3)
Overview and analysis of legal issues of concern to the hospitality operation. Topics include: employment law; food and beverage liabilities; patron civil rights, local, state, and federal regulations; and franchising. Prerequisite: junior standing.

33026 Hospitality Cost Control and Analysis (5)
Prepares students to analyze and control costs encountered in hospitality operations. Includes computer applications, math drills and simulations. Prerequisites: M&IS 24053, ACCT 23020, HM 13023; pre/corequisite: HM 23023; or permission.

33028 Hospitality Purchasing (3)
Emphasis on the selection of food, goods and services for the management of hospitality organizations. Emphasis is placed on product identification, grading and quality standards. Prerequisite: HM 23023.

33029 Catering and Banquet Preparation and Service (5)
Combines theoretical and practical applications of planning, merchandising, costing, producing and serving catered meals. Prerequisite: HM 33026. Special fee: $5/credit hour—subject to change.

33035 Hospitality Service Quality Management (3)
The unique issues associated with managing guest satisfaction will be explored. The delivery of quality services and recovery from service failure in hospitality organizations will be studied from a human resource and organizational perspective. Prerequisite: M&IS 24163.

33036 Club Management (3)
Introduction to private club management and operations. Strategic planning, marketing, human resources, service excellence, legal issues and financial management will be emphasized within the context of food and beverage, golf and recreation. Prerequisite: junior standing.

41093 Variable Topic Workshop in Hospitality Management (1-3)
Workshop setting dealing with a topic or topics in hospitality management. Learning experiences are provided in a wide range of areas. S/U grading. Prerequisite: none.

41095 Special Topics in Hospitality Management (1-4)
Discussion of a major topic within a specific field of hospitality management. Prerequisite: none.

41096 Individual Investigation (1-3)
Independent study in hospitality management. Prerequisite: written permission from instructor.

43025 Hospitality Marketing (3)
Application of marketing principles, practices and theories relevant to hospitality organizations. Case studies drawn from the hospitality industry are incorporated. Prerequisite: HM 23023, M&IS 24163, and MKTG 25010.

43027 Hospitality Human Resource Management (3)
Application of human resource management principles, practices, theories and legal issues relevant to hospitality organizations. Hospitality management-focused case studies will be incorporated. Prerequisite: HM 33026, M&IS 34180. This course may be used to satisfy the writing-intensive 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: HM 23012 or permission.

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: HM 13023, 23023 or equivalent.
Course Descriptions

HUMAN DEVELOPMENT AND FAMILY STUDIES (HDFS)

14027 Introduction to Human Development and Family Studies (2)
Introduction to human services related to human development and family studies, the career opportunities available and the skills required to succeed in the field. Prerequisite: none.

24011 Interpersonal Relationships and Families (3)
(Cross-listed with SOC 24011) Exploration of the sociological nature of families across the life span, focusing on structure, diversity and life-course processes, such as dating, mate selection, cohabitation, marriage, parenthood, divorce, remarriage, singleness, widowhood, parent-child interactions, sexual orientation, inequality and difference. Prerequisite: none. This course may be used to satisfy the diversity requirement.

24012 Child Development (3)
General development of the child from prenatal through middle childhood. Prerequisite: HDFS 24011 or permission.

24013 Early Adolescence (3)
Examines the fundamental transitions, social contexts and psychosocial processes involved in human development from ages 10 through 15. Implications for working with this age group within schools, human services agencies and youth development programs. Prerequisite: none.

24014 Practicum/Hospitality Management (3-6)
Supervised professional experience in the hospitality industry including operations such as restaurants, hotels, clubs, health care, theme parks and food distribution. Bimonthly seminars course assignments are included. Repeatable for a total of 6 credits. Prerequisites: majors only with junior or senior standing and permission of instructor.

24015 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. Prerequisite: HM 23012, 43030.

24016 Management of Family Resources (3)
Management as applied to individuals, families and human service professionals. Prerequisite: HDFS 24011.

24017 Development in Infancy (3)
Study of genetic influences, prenatal development and birth, and the developmental characteristics of the infant and toddler. Prerequisites: HDFS 14027 and 24012.

24018 Development in Early Childhood (3)
Study of the developmental characteristics of children ages 2 through 6 years old. Prerequisite: HDFS 14027 or permission.

24019 Development in Middle Childhood (3)
Study of the developmental characteristics of children ages 6 through 12 years old. Prerequisite: HDFS 14027 or permission.

24020 Adolescent Development (3)
Study of adolescent development with emphasis on forces related to adolescent behavior in the family and society. Evaluation of current research. Prerequisite: human development and family studies majors only or permission.

24021 Family Intervention Across the Lifespan (3)
Evaluation of research and theoretical models in the area of family intervention. Focus on strategies for assisting families in coping with a variety of critical issues over the family life cycle. Prerequisite: human development and family studies majors only or permission.

HUMAN SERVICES TECHNOLOGY (HST)*

34031 Cultural Diversity: Implications for the Helping Professions (3)
This class is designed to enhance the competence and success of students planning to work in human services. Learning how different cultural backgrounds influence the perceptions and behaviors of clients in the human service setting is emphasized. Prerequisite: none.

41095 Special Topics in Human Development and Family Studies (1-4)
Discussion of a major topic within human development or family studies. Prerequisite: none.

41096 Individual Investigation (1-3)
Independent study in human development and family studies. Prerequisite: written permission from instructor.

41097 Variable Topic Workshop: Human Development and Family Studies (1-4)
Workshop setting dealing with a topic or topics in human development and family studies. Learning experiences are provided in a wide range of areas. S/U grading. Prerequisite: none.

41098 Special Problems in Human Development and Family Studies (1-4)
Study of genetic influences, prenatal development and birth, and the developmental characteristics of the infant and toddler. Prerequisites: HDFS 14027 and 24012.

42012 Child Development (3)
General development of the child from prenatal through middle childhood. Prerequisite: HDFS 24011 or permission.

42013 Early Adolescence (3)
Examines the fundamental transitions, social contexts and psychosocial processes involved in human development from ages 10 through 15. Implications for working with this age group within schools, human services agencies and youth development programs. Prerequisite: none.

42014 Practicum/Hospitality Management (3-6)
Supervised professional experience in the hospitality industry including operations such as restaurants, hotels, clubs, health care, theme parks and food distribution. Bimonthly seminars course assignments are included. Repeatable for a total of 6 credits. Prerequisites: majors only with junior or senior standing and permission of instructor.

42015 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. Prerequisite: HM 23012, 43030.

42016 Management of Family Resources (3)
Management as applied to individuals, families and human service professionals. Prerequisite: HDFS 24011.

42017 Development in Infancy (3)
Study of genetic influences, prenatal development and birth, and the developmental characteristics of the infant and toddler. Prerequisites: HDFS 14027 and 24012.

42018 Development in Early Childhood (3)
Study of the developmental characteristics of children ages 2 through 6 years old. Prerequisite: HDFS 14027 or permission.

42019 Development in Middle Childhood (3)
Study of the developmental characteristics of children ages 6 through 12 years old. Prerequisite: HDFS 14027 or permission.

42020 Adolescent Development (3)
Study of adolescent development with emphasis on forces related to adolescent behavior in the family and society. Evaluation of current research. Prerequisite: human development and family studies majors only or permission.

42021 Family Intervention Across the Lifespan (3)
Evaluation of research and theoretical models in the area of family intervention. Focus on strategies for assisting families in coping with a variety of critical issues over the family life cycle. Prerequisite: human development and family studies majors only or permission.

42022 Changing Roles of Men and Women (3)
A study of roles of men and women—past, present and future. Prerequisite: human development and family studies majors only or permission or SOC 12050.

42023 Building Family Strengths (3)
The Building Family Strengths Model builds upon family life potential; based on extensive research emphasizing identified family strengths. Prerequisite: human development and family studies majors only or permission.

42024 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. Prerequisite: human development and family studies majors only or permission.

42025 Family Policy (3)
Understanding federal, state and local policy issues affecting families. Role of family life educator in promoting a family-friendly perspective in policy making. Prerequisite: GERG 44030.

42026 Family Life Education Methodology (3)
Developing teaching methods and techniques for family life education and the study of family life education content areas. Prerequisite: GERG 44030.

42027 Practicum in Human Development and Family Studies (3-10)
(Repeatable for a total of 20 credit hours) Observation and participation in child, family and social service agencies. One class discussion per week. S/U grading. Prerequisites: human development and family studies majors only, HDFS 44016, and senior standing with an overall GPA of 2.50.
21000  Dynamics of Helping Relationship for Human Services Technologist (3)
The dynamics of helping relationship in human services agencies. Skill development in listening and provision of assistance to clients is emphasized. Prerequisite: HST 11001. Corequisites: HST 21001 and HST 21092.

21001  Assessment of Client Needs (3)
An introduction to the evaluation of client needs and assessment of client condition. Prerequisite: HED 21050. Corequisites: HST 21000 and HST 21092.

21002  Client Advocacy and Case Management in Human Service Organizations (3)
Assessment of case management strategies with an emphasis on the role of the client advocate in the human service setting. Prerequisite: HST 21001. Corequisite: HST 21192.

21092  Internship in Human Services Technology I (3)
Supervised field experience in a human service agency (minimum of nine hours per week). Joint university-agency supervision. Prerequisite: Advisor approval. Corequisites: HST 21000 and HST 21011.

21192  Internship in Human Services Technology II (3)
Continued supervised field experience in a human services agency (minimum nine hours per week). Joint university-agency supervision. Prerequisite: HST 21092; permission. Corequisite: HST 21002.

INDUSTRIAL ENGINEERING AND RELATED TECHNOLOGIES (IERT)*

12005  Applications in Computer-Aided Design (2)
Course for training on the use of a popular, computer-aided drafting and design software. Practice with the advanced features of the software applicable to modern design in the graphics, mechanical, industrial and electronics fields. Prerequisite: none.

21096  Individual Investigation in Systems/Industrial Engineering Technology (1-4)
Independent, in-depth research of a systems/industrial engineering technology topic supervised and coordinated by an engineering technology faculty member. Prerequisite: permission.

22000  Statistical Process Control (4)
Process variability, process monitoring, statistical methods using control charts for variables and attributes; acceptance sampling plans; process capability, process adjustment, process improvement. Prerequisite: high school algebra.

22001  Motion and Time Study (3)
Motion economics, SPC, activity charts, methods improvement, use of standard database method of making studies, computerized line balancing. Prerequisite: none.

22003  Supervision and Labor Relations (5)
Practical methods and techniques for improving supervision and labor relations in industry. Personnel and performance evaluation, implementing policy, labor contracts, collective bargaining, wage and salary administration. Prerequisite: none.

22004  Facilities Engineering (2)
Principles of facilities engineering to meet production needs. Applications of material-handling devices, plant layout drawings, templates, models and FMS systems. Prerequisite: none.

22005  Production and Inventory Control (2)
Basic principles, objectives and influencing factors of production control in industrial organizations of various kinds and their effects on costs. Applied planning and scheduling. Prerequisite: sophomore standing.

22006  Economic Decision Analysis (3)
Economic decision making for industrial engineering technology with applications emphasis, estimating economic elements, interest and economic equivalence, methods of comparing alternatives and evaluating replacement alternatives. Prerequisite: none.

22007  Cooperative Work Experience (2)
(Repeatable for a total of 6 hours) University-industry work study plan in which student alternates periods of study at the university with periods of employment in industry. Prerequisite: permission.

22008  Taguchi Process Improvement (3)
Process and product improvement through reduction of variation. Design of experiments and interpretation of results. Analysis of variance, orthogonal arrays and Taguchi techniques. Prerequisite: MATH 19002 or equivalent.

2210  Computer Integrated Manufacturing (3)
Planning, developing and implementing a strategy to control and coordinate all the engineering, production and business operations within a manufacturing enterprise. Prerequisite: none.

22005  Special Topics (1-3)
Special topics in systems/industrial engineering technology. Repeated registration permitted. Prerequisite: permission.

INFORMATION ARCHITECTURE AND KNOWLEDGE MANAGEMENT (IAKM)

41096  Individual Investigation in Information Architecture, Information Use or Knowledge Management (1-3)
Research or individual investigation for baccalaureate-level students at or above the junior level. IP grade permissible. Prerequisites: permission of instructor and graduate standing.

INFORMATION TECHNOLOGY FOR ADMINISTRATIVE PROFESSIONALS (ITAP)

16605  Introduction to Operating Systems and Networking Technology (3)
(Cross-listed with COMT 11005) Lab-oriented survey of desktop/network OS essentials, including file/disk management, system tools utilization, resource sharing and introductory network concepts. Prerequisite: none.

16620  Word Processing I (3)
Builds expertise in creating business documents applying the basic features of popular word processing software. Emphasis on hands-on experience. Lecture two hours, laboratory two hours. Prerequisite: ability to keyboard 30+ wpm for three minutes with three or fewer errors or permission.

16621  Word Processing II (3)
Design and create documents by using advanced features of word processing software. Lecture two hours, laboratory two hours. Prerequisite: ITAP 26620 or permission.

16625  Business Presentations (3)
Development and production of professional computer-projected presentation materials using popular software. Includes use of graphic design techniques, color, layout, design principles and transparencies. Lecture one hour, laboratory two hours. Prerequisite: none.

16636  Data Management for Administrative Professionals (3)
Introduction to the role of data and its management and evolution to information and knowledge in business environments. Prerequisite: none.

16639  Database Applications (3)
Concepts, terminology and use of current database software to manage and retrieve business information. Emphasis on hands-on experiences. Lecture two hours, laboratory two hours. Prerequisite: none.
16649    Database Applications for Medical Billing (1)
Overview database course designed for medical billing professionals as they add, query and create forms and generate reports for medical environments. Thirty-minute lecture and one-hour laboratory weekly. Prerequisite: COMT 11000 or permission. Open to Medical Billing Certificate or MBIT (IPG) ATS-A degree majors.

16650    Systems Studies for Medical Billing and Coding (1)
Overview course coordinated with ITAP 26651 to link knowledge of body systems with coding procedures in medical facilities. Corequisite: ITAP 26651.

16680    Computer Keyboarding (1)
Basic keyboarding course using computers for students having no previous keyboarding instruction or a speed of less than 30 wpm. To pass the course, students must keyboard above 30 wpm for three minutes with no more than three errors. Prerequisite: none.

26611    Spreadsheet Applications (3)
Use of electronic spreadsheets from beginning to advanced applications that may prepare for software certification. Lecture two hours, laboratory two hours. Prerequisite: MATH 10005 or higher or permission.

26613    Machine Transcription (3)
Basic transcription of machine dictation; application of language skills to typical and specialized office documents; and mastery of proofreading/editing procedures and techniques. Prerequisite: ITAP 16620 or permission.

26622    Desktop Publishing I (3)
Study and application of the principles of proper document design using high-end desktop publishing software for newsletters, brochures, reports, forms and other computer-based business documents. Lecture two hours, laboratory two hours. Prerequisite: ITAP 16620 or permission.

26623    Desktop Publishing II (3)
High-end layout/design and illustration software. Includes advanced documents, Web publishing, makeovers, computer graphic concepts and formatting, image editing techniques and the use of color. Lecture one hour, laboratory four hours. Prerequisite: ITAP 26622 or permission.

26635    Administrative Resource Management (3)
Explores how office professionals can apply resource management skills to the areas of space/workflow, forms/budgetary control, staff and materials/supplies. Prerequisite: none.

26636    Project Management for Administrative Professionals (1)
Provides the basic tools needed to effectively manage projects and to automate and streamline such functions as resource allocation, work scheduling and communication. Project management software is used in the course. Lecture one-half hour, laboratory one hour. Prerequisite: none.

26637    Specialized Machine Transcription (3)
Transcription of machine dictation emphasizing documents related to the legal or medical professions. Includes application of language skills and mastery of proofreading/editing procedures and techniques. Prerequisite: ITAP 16620 or permission.

26638    Business Communications (3)
Theory and application of oral and written business communication with emphasis on business letters, reports, employment process, visual presentations and electronic communications. Basic word processing skills are suggested. Prerequisite: ENG 11011 or permission.

26650    Medical Billing Procedures (3)
Introductory course in the preparation of various medical documents and forms in the health care industry. Use of computers and various word processing software will be included. Lecture two hours, laboratory two hours. Prerequisite: ITAP 16680 or permission.

26651    Medical Billing Terminology (2)
Analysis of the language and terms used in medical billing environments. The medical billing context is used to frame the study of prefixes, suffixes and root words by specialty. Prerequisite: none.

26655    ICD Coding (3)
Basic medical coding using the current version of the ICD classification system and nomenclature. Prerequisite: ITAP 26651

26656    CPT Coding (3)
Introduction to coding rules for the CPT and Level II coding system, incorporating and applying ICD rules to code patient services. Prerequisite: ITAP 26655.

26691    Seminar for Administrative Professionals (2)
Refines job search strategies, integrates coursework with realistic office settings, presents interpersonal/ethical issues and provides outreach activities, emphasizing the total quality management environment. Prerequisites: permission and must have completed 45 hours toward degree.

26692    Internship for Administrative Professionals (1-3)
(Repeatable for a total of 4 hours) Supervised field experience of 10 hours per week paid or seven hours per week unpaid in a business environment functioning as an administrative professional. Prerequisites: sophomore standing, 2.00 GPA or better in the major. Permission required.

26695    Special Topics in Information Technology for Administrative Professionals (1-3)
(Repeated registration permitted) Special topics in information technology topics for administrative professionals. Prerequisite: permission.

26696    Individual Investigation: Information Technology for Administrative Professionals (1-3)
Independent, in-depth research of an ITAP topic supervised and coordinated by an ITAP faculty member. Prerequisites: 12 credit hours of ITAP courses and permission of a full-time ITAP faculty member.

INSTRUCTIONAL TECHNOLOGY (ITEC)

19525    Educational Technology (3)
Identification, evaluation, design, preparation and efficient use of education technology as instructional material in classroom relating to principles of learning/teaching. Develop classroom communication abilities through lectures, discussions, modeling, laboratory experiences, completion of comprehensive project. Prerequisite: admission to pre-education as major or minor.

37400    Introduction to Educational Media (2)
Principles and techniques in the selection and utilization of educational media in teaching/learning situations. Prerequisite: junior standing.

40903    Variable Title Workshop in Educational Media (1-4)
Variable topic workshop designed to respond to curriculum trends and issues and specialized needs. S/U grading. Prerequisite: permission.

47401    Design and Production of Educational Media (3)
Students apply effective approaches to the design and production of instructional media. The course develops skills in photography, audio and television. Prerequisite: junior standing.

47402    Organization and Administration of Educational Media Programs and Centers (3)
The planning, organizing, administering and evaluating of educational media programs and centers for schools, higher education, industry or churches. Prerequisite: ITEC 37400.

*Courses offered only at Regional Campuses.
47403 Instructional Design (3)
Enables participants to design instructional sequences based upon a systematic approach and incorporating media as integral components. Prerequisite: junior standing.

47411 Designing Visuals for Instruction (3)
Investigation of historical, cultural and aesthetic dimensions of instructional visual design. Focus on design of instructional visuals across media, including print, video and computer-based technology. Presentations, laboratory activities. Prerequisite: none.

47413 Digital Video in Education (3)
Design/production of instructional TV programming. Planning and scripting techniques. Hands-on experience with TV equipment. Students will digitize video footage, learn nonlinear editing techniques and export productions to tape/CD. Prerequisite: none.

47427 Technology and Learning (3)
Overview of technology used in education. Focuses on implementing and facilitating learner-centered curriculum with computer technology. Students develop Web-based instructional materials. Prerequisite: admission to professional education.

47430 Computer Applications in Education (3)
Preparation for use of computers effectively in a variety of educational settings. Students should have some expertise with computers. Focus on advanced applications in education. Macintosh and Windows. Prerequisite: ITEC 47427 or equivalent skills.

47495 Special Topics: Educational Media (1-5)
Specialized offering in response to emerging or selected program needs in educational media and instructional design. Prerequisite: permission.

47496 Individual Investigation in Educational Media (1-5)
Directed independent reading and/or research of special interest or need in student's program. Planned with and directed by a faculty member. Prerequisite: permission.

INTEGRATED LIFE SCIENCES (ILS)
The courses listed below have been developed for the six-year B.S./M.D. program offered in conjunction with the Northeastern Ohio Universities College of Medicine. Enrollment is limited to students admitted to that program.

21091 Integrated Life Sciences Seminar I (2 Each)
(Repeatable for a total of 4 credits) Seminar for first-year students in Kent State/NEOUCOM program to provide correlation of natural sciences, social sciences and humanities with medical sciences. S/U grading. Prerequisite: open only to first-year students admitted to B.S./M.D. program.

21092 ILS Seminar II (2)
Seminar for first-year students in Kent State/NEOUCOM program to provide correlation of natural sciences, social sciences and humanities with medical sciences. S/U grading. Prerequisite: open only to first-year students admitted to B.S./M.D. program.

30000 Professional Development in Integrated Health Studies (2)
Discussion and provision of opportunities for planning and preparing for successful practicum and internship experiences in health and human services fields. Prerequisite: IHS 10000.

44010 Research Design and Statistical Methods in the Health Professions (3)
Fundamental concepts and procedures for systematic collection, analysis and interpretation of qualitative and quantitative data in health-related fields; includes group and single-subject designs and use of parametric and nonparametric statistics. Prerequisite: PSYC 21621 or permission.

44091 Professional Seminar in Integrated Health Studies (3)
This course presents and integrates the role of scientists, practitioners and administrators in the health care and human service professions as they attempt to meet the needs of the individual in diverse environments. Current issues will be addressed. Prerequisite: 400 hours observation/ work experience in health/human service-related fields, senior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

44092 Practicum in Integrated Health Studies (3-10)
Supervised practical experience in a health care or human service organization, which allows students to apply theoretical knowledge and skills learned in their coursework. S/U grading. Prerequisite: majors only; IHS 30000; senior standing.

32591 Integrated Life Sciences Seminar III (2)
(Repeatable for a total of 4 credits) Continuation of ILS 21091. S/U grading. Prerequisite: ILS 21091 and 21092, open only to second-year students admitted to B.S./M.D. program.

32592 Integrated Life Sciences Seminar IV (2)
Continuation of ILS 32091. S/U grading. Prerequisite: ILS 21091, 21092 and 32091, open only to second-year students admitted to B.S./M.D. program.

40392 Sociological Perspectives in Public Health (3)
Sociological phenomena of public health through research/theory and field research experience consisting of participatory and nonparticipatory experiences in areas related to medical practice but not associated with traditionally legitimated medical curricula. IP grade permissible. Prerequisite: controlled (ILS B.S./M.D. Program).

40393 Practicum in Medical Psychology (3)
Community mental health through community agency field placement. Observation and participation in interviewing, crisis intervention and community consultation. Didactic exposure to community mental health theory. IP grade permissible. Prerequisite: controlled (ILS B.S./M.D. Program).

42591 Medical Sociology Practicum (3)
Application of sociological research designs and methods to problems in medical sociology through field research and report on a community health-related research problem. IP grade permissible. Prerequisite: controlled (ILS B.S./M.D. Program); corequisite of ILS 42592.

42592 Medical Sociology Research Skills (2)
Formulation of community health-related research problems, theoretical concepts, techniques of data collection and analysis. Prerequisite: controlled (ILS B.S./M.D. Program); corequisite of ILS 42592.

49993 Human Values in Medicine (1-5)
Academic credit for successful completion of offerings of Human Values in Medicine program of Northeastern Ohio Universities College of Medicine. S/U grading. Elective credits only. Prerequisite: ILS or permission.
**Course Descriptions**

**34501 Studio Problems in Interior Design (1-4)**

Introduction to large-scale planning. Prerequisite: TECH 11083. Special fee: $8.75/credit hour—subject to change.

**34502 Studio Problems in Interior Design II (1-4)**

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, ID 14501. Special fee: $8.75/credit hour—subject to change.

**34503 Studio Problems in Interior Design III (1-4)**

Special problems concerning design of small- to moderate-size commercial interior space. Prerequisite: ID 24502. Special fee: $10/credit hour—subject to change.

**34504 Studio Problems in Interior Design IV (1-4)**

Introduction to large-scale planning. Prerequisite: ARCH 10101, ID 34503, PHY 13001 may be taken concurrently. Special fee: $10/credit hour—subject to change.

**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: ID 24510, concurrently with ID 34503.

**41093 Variable Title Workshop in Interior Design (1-4)**

Workshops dealing with variable topics related to the interior design profession. Learning experiences provided in a broad spectrum of specialties. Prerequisite: admission to interior design or permission.

**41095 Special Topics in Interior Design (1-4)**

Discussion of a major topic or issue within the profession of interior design. Repeat registration permitted. Prerequisite: admission to interior design or permission.

**41096 Individual Investigation in Interior Design (1-3)**

Independent study of interior design and related topics under the guidance of a faculty member. Prerequisite: admission to interior design or permission.

**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: ID 34504, 44534, concurrently with ID 44535. Special fee: $17.50/credit hour—subject to change.

**44506 Studio Problems in Interior Design VI (4)**

Special problems concerning the design of large-scale commercial environments. Prerequisites: TECH 31015, ID 44505, concurrently with ARCH 30501. Special fee: $10/credit hour—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: ID 44506, ARCH 30501. Special fee: $10/credit hour—subject to change.

**44512 Historic Furnishing Textiles (2)**

Designed to accustom 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: ID 44534 and 44535.

**44523 Interior Design Professional Practice (2)**

A study of the business and professional practices of interior designers. Prerequisite: ID 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 or architectural spaces and domestic objects. Prerequisite: ID 44512.

**44525 Lighting Application in Interior Spaces (3)**

Design application of lighting technology for various interior spaces. Field trips to study lighting installations. Prerequisite: ID 34503. Special fee: $17/credit hour—subject to change.

**44526 Lighting Design in Historic Spaces (3)**

Overview of historic lighting forms and techniques with an emphasis on Anglo-American design, 18th to 20th centuries. Focus of course will be application of modern techniques to historic design problems. Prerequisites: ID 44505, 44525, ARCH 30501. Special fee: $17/credit hour—subject to change.

**44527 Study Tours (1-10)**

A series of study tours for in-depth, first-hand 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 15th century. Prerequisites: ID 34504, ARTH 22006 and 22007 or ARCH 10011 and 10012; permission. This course may be used to satisfy the writing-intensive 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—16th to 19th centuries—and 20th century. Prerequisite: ID 44534.

**44592 Practicum in Interior Design (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 for 4 credit hours, not to exceed 10 credit hours. S/U grading. Prerequisites: ID 34504, 44523, MKTG 25010.
ITALIAN (ITAL)

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

15201 Elementary Italian I (4)
An introduction to the Italian language in the context of Italian culture. Prerequisite: none.

15202 Elementary Italian II (4)
A continuation of the introduction to the Italian language in the context of Italian culture. Prerequisite: ITAL 15201 or equivalent.

15204 Basic Conversational Italian I (2)
Exposure to basic grammar and to current Italian useful to travelers. Not applicable to fulfillment of foreign language requirement. Prerequisite: permission.

15205 Basic Conversational Italian II (2)
Continuation of ITAL 15204. Prerequisite: ITAL 15204 or permission.

25201 Intermediate Italian I (3)
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials. Prerequisite: ITAL 15202 or equivalent.

25202 Intermediate Italian II (3)
Continuation of ITAL 25201. Prerequisite: ITAL 25201 or equivalent.

25209 Field Study (1-6)
(Repeatable for a total of 6 hours) For residence and/or field research in an Italian-speaking community. Prior to registering for this course, student must obtain departmental approval. IP grade permissible. Prerequisite: one year of college language or equivalent.

35211 Italian Composition and Conversation I (3)
Study and practice of written and oral Italian with emphasis on acquisition of written and oral proficiency in the language. Prerequisite: ITAL 25202 or permission.

35213 Italian Composition and Conversation II (3)
Advanced practice in speaking and writing the Italian language. Prerequisite: ITAL 35211.

35331 Early Italian Literature (3)
A survey of Italian literature from its medieval origins to the Baroque period. Prerequisite: ITAL 35211. This course may be used to satisfy the writing-intensive requirement with approval of major department.

35332 Recent Italian Literature (3)
This course surveys the major movements and authors from the Baroque period through the 20th century. Prerequisite: ITAL 35211. This course may be used to satisfy the writing-intensive requirement with approval of major department.

35421 Italian Civilization (3)
Lectures, readings, oral and written reports on outstanding features of the culture and civilization of Italy. Prerequisite: ITAL 25202 or permission.

35597 Colloquium (3)
Variable topic course deals with single literary theme in Italian literature or a single author. May be offered in Italian or in English translation. Prerequisite: permission.

45093 Variable Title Workshop in Italian (1-6)
Workshops individually designed to provide instruction and training in specific areas of Italian studies. S/U grading. Prerequisite: Departmental permission.

45096 Individual Investigation (1-3)
(Repeatable for a total of 6 hours) Allows the advanced, serious student to carry out research/study project on Italian literature, language or culture. Prior approval of supervising faculty member, department required. IP grade permissible. Prerequisite: ITAL 25202; junior standing; permission.

45356 Dante (3)
This course studies Dante’s Divine Comedy in its entirety (Inferno, Purgatory, and Paradise) in the original language. Prerequisite: 6 hours of Italian at the 3000 level.

JAPANESE (JAPN)

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

15101 Elementary Japanese I (4)
Introduction to modern standard Japanese in the context of Japanese culture. Prerequisite: none.

15102 Elementary Japanese II (4)
A continuation of the introduction to modern standard Japanese in the context of Japanese culture. Prerequisite: JAPN 15101 or equivalent.

25201 Intermediate Japanese I (3)
Continued development of speaking, listening, reading and writing skills, using a variety of cultural materials. Prerequisite: JAPN 15102 or equivalent.

25202 Intermediate Japanese II (3)
Continuation of JAPN 25201. Prerequisite: JAPN 25201 or equivalent.

30095 Special Topics (3)
Topic to be announced in Schedule of Classes. Prerequisite: permission.

35101 Advanced Intermediate Japanese I (4)
A continuation of the study of modern standard Japanese in the context of Japanese culture. Further development of listening, speaking, reading and writing skills, using a variety of materials. Prerequisite: JAPN 25202 or equivalent.

35102 Advanced Intermediate Japanese II (4)
Continuation of JAPN 35101. Prerequisite: JAPN 35101 or equivalent.

JOURNALISM AND MASS COMMUNICATION (JMC)

12001 Elementary Photography (2)
Introduction to fundamentals and techniques of still and motion picture photography. Terminal course for students who do not have photography requirements. Prerequisite: none. Special fee: $15/credit hour—subject to change.

20001 Media, Power and Culture (3)
Fosters critical understanding of mass media in their historical, ideological, economic and cultural contexts. Examines what forces influence media and how media influence consumers. Not open to journalism and mass communication premajors or majors. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and the diversity requirement.

20003 Introduction to Mass Communication (3)
Introduction to various fields of mass communication with a particular emphasis on evolution of new media technologies. History of technological and cultural change leading to the present media forms and consideration of new media. Prerequisites: none.

20004 Media Writing (3)
Introduces students to variety of writing skills used in various media professions and demonstrates how writing types vary by audience. Incorporates grammar skills as part of the writing process. Prerequisites: journalism and mass communication major, premajor or minor, JMC 20003 or concurrent, or permission. Special fee: $10/credit hour—subject to change.

20007 Media Information Gathering (3)
Introduction to basic methods of gathering information in various fields of mass communication. Hands-on experience with qualitative, archival and quantitative methods. Methods include interviews, online searching and surveys. Prerequisite: JMC 20003.
Course Descriptions

21001 Principles of Advertising (3)
Advertising history, purposes, techniques, media and research; analysis of functions of advertising organizations. Prerequisite: none.

22000 Photography Basics (1)
Fundamentals of b/w and color photography and digital manipulation software. Introduction of basic themes of journalistic photography including flash photography. Student furnishes 35mm or APS camera with flash. Disposable cameras not acceptable. Prerequisite: VCD 27001; journalism and mass communication major, minor or permission. Special fee: $20/credit hour—subject to change.

22001 Photography (3)
(Cross-listed with VCD 28000) Basic camera and darkroom techniques to provide a better understanding of photography as a creative and journalistic skill. Prerequisite: permission. Special fee: $18.33/credit hour—subject to change.

23001 Introduction to Graphic Communications (2 or 3)
Concepts and practices of transferring information graphically, whether it be picture or symbol, in single or multiple copies onto paper, cloth, metal, plastic, glass or other materials. Prerequisite: ENG 21011. Special fee: $15/semester—subject to change.

26001 Newswriting (3)
Theory and practice in writing basic print and electronic news and feature stories. Prerequisite: JMC 20004; 20007 (pre- or corequisite); passage of JMC grammar/spelling/punctuation test; journalism and mass communication major, minor or permission. Special fee: $10/credit hour—subject to change.

26007 Print Beat Reporting (4)
Gathering and writing news: interviewing techniques, cultivating sources, developing beats, meeting deadlines. Includes campus reporting for Daily Kent Stater. Prerequisite: JMC 26001. Special fee: $10/credit hour—subject to change.

26008 Broadcast Beat Reporting (4)
Writing news, developing sources and beats, meeting deadlines as they relate to electronic media. Includes reporting campus news for daily broadcasts. Prerequisites: JMC 26001, 22002. Special fee: $20/credit hour—subject to change.

28001 Principles of Public Relations (3)
Explores strategic role and function of public relations in business, nonprofit, public institutions and society. Covers public relations practice from development to present. Prerequisite: none.

30004 Writing for Electronic Media (2)
Application of standard writing styles and formats in the electronic media. Writing practice in commercials, continuity, promotions and introductory scriptwriting techniques. Prerequisite: JMC 20004; JMC 20007; journalism and mass communication major, minor or permission; passage of JMC grammar/spelling/punctuation test.

30030 Mass Media Research (3)
Analysis of mass media research emphasizing quantitative social science inquiry and media applications leading to practical and critical understanding of research. Prerequisite: JMC 20003, 20007; MATH 11011 or equivalent; journalism and mass communication major, minor or permission.

30034 Programming for Electronic Media (3)
Background analysis of radio, TV, cable and Internet programming and the relationship to audience needs, interests, expectations and audience measurement procedures. Prerequisite: JMC 20004; journalism and mass communication major or minor or permission; passage of JMC grammar/spelling/punctuation test.

31002 Advertising Copywriting (3)
Examination and practice in various forms of advertising copywriting and their applications. Prerequisite: JMC 20004; JMC 21001; journalism and mass communication major or minor or permission; passage of JMC grammar/spelling/punctuation test.

31003 Advertising Media Planning (3)
Analysis, selection and scheduling of advertising media. Examination of advertising research techniques and application. Prerequisite: JMC 20004; JMC 21001; journalism and mass communication major or minor or permission; passage of JMC grammar/spelling/punctuation test.

31011 Creative Advertising Strategies (3)
Advertising majors learn problem-solving techniques, which they will apply to business and creative proposals designed to promote products and/or services. Development of good, clear writing skills is a key component of the course. Prerequisites: JMC 21001, 20004.

32000 Video Basics (1)
Theoretical basis and practical application of production of video and digital media. Prerequisite: JMC 20003; journalism and mass communication major, minor or permission.

32001 Photojournalism I (3)
Production of photographs for newspapers, magazines and online news media. A laboratory course emphasizing color and black-and-white photography. Prerequisite: JMC 22001 and 20004; VCD 37000; passage of JMC grammar/spelling/punctuation test; journalism and mass communication major, minor or permission. Special fee: $18.33/credit hour—subject to change.

32002 Photojournalism II (3)
Continuation of JMC 32001. Advanced news and feature photography for newspapers, magazines and online, including a collaborative project. May be repeated once. Prerequisites: JMC 32001. Special fee: $18.33/credit hour—subject to change.

32003 Photo Technology (3)
(Cross-listed with VCD 38003) Photographic materials and processes. Emulsion sensitometry (applied as the “Zone System”), photographic lens testing, etc. Camera and hand-held exposure meter needed. Prerequisites: JMC 22001 and journalism and mass communication major or minor or permission. Special fee: $15/credit hour—subject to change.

32004 Advanced Photography (3)
(Cross-listed with VCD 38004) Use of specialized equipment, materials and techniques. Student furnishes own view camera. Special equipment furnished. Prerequisites: JMC 22001 journalism and mass communication major or minor or permission. Special fee: $15/credit hour—subject to change.

33008 Photo-Design Techniques (3)
(Cross-listed with VCD 38008) Use of unusual photographic materials and techniques in design of images for many purposes. Prerequisite: JMC 22001. Special fee: $15/credit hour—subject to change.

33024 Performance for Electronic Media (3)
Development of effective communication techniques in performance situations for electronic media. Prerequisite: JMC 20003 or permission. Special fee: $15/credit hour—subject to change.

33031 Basic Electronic Media Production (3)
Theoretical basis and practical application of program production for both audio and video situations. Two-hour lecture/discussion and two-hour laboratory weekly. Prerequisites: JMC 20003 and 22002. Special fee: $10/credit hour—subject to change.

*Courses offered only at Regional Campuses.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>33036</td>
<td>Basic Media Engineering (3)</td>
<td>Introduction to basic electronic media technology and systems, providing knowledge and vocabulary to allow communication with broadcast engineers. Overview of radio/TV operations and legal viewpoint. Preparation for SBE operators’ certification exam. Prerequisites: MATH 11011 or equivalent. JMC 26013 and journalism and mass communication major or minor.</td>
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<tr>
<td>33092</td>
<td>Radio-Television Operations (1-3)</td>
<td>Performance of assigned activities in radio or television under faculty supervision. S/U grading. May be repeated for up to 3 hours. Prerequisites: JMC 20003; sophomore standing and permission.</td>
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<tr>
<td>34038</td>
<td>Media Sales and Promotion (3)</td>
<td>Selling techniques in electronic and print media; sales policies, procedures; rate card structure, sales proposals and related promotional aspects. Prerequisite: JMC 30004 or 31003; journalism and mass communication major, minor or permission.</td>
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<tr>
<td>36000</td>
<td>Television News Producing (3)</td>
<td>Introduction to theory and practice of producing content for television news and public affairs shows: developing rundowns, field producing; writing teasers; using graphics and other production elements. Includes producing newscasts and public affairs programs for TV2. Prerequisite: JMC 26008. Special fee: $20/credit hour—subject to change.</td>
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<tr>
<td>36005</td>
<td>Copyediting (3)</td>
<td>Improving the writing of other journalists and writing headlines. Intensive review of AP Style and grammar. Prerequisite: JMC 26001. Special fee: $10/credit hour—subject to change.</td>
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<tr>
<td>38002</td>
<td>Public Relations Case Studies (3)</td>
<td>Explores the process and the practice of public relations through review and analysis of actual case studies. Students also learn PR process by planning and preparing their own case study projects for a real-world client organization. Prerequisite: JMC 20004; 28001.</td>
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<tr>
<td>40001</td>
<td>Fundamentals of Media Messages (3)</td>
<td>Working with messages for print, broadcast, electronic and new media outlets. Course may not be taken for credit or applied toward any requirements by a journalism and mass communication major. Prerequisites: none.</td>
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<tr>
<td>40002</td>
<td>Reporting for Mass Media (3)</td>
<td>Theory and practice in newswriting and reporting; news values and news judgment; lead and story development; techniques of gathering information and dealing with sources of news; writing for deadline. Prerequisite: permission; course may not be taken for credit, or applied toward any requirements by a journalism and mass communication major or minor without permission. Special fee: $10/credit hour—subject to change.</td>
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<tr>
<td>40003</td>
<td>Editing for Mass Media (3)</td>
<td>Theory and practice in copy editing, headline writing, and editing photographs and information graphics for print and online publications. Hours do not count toward degree. Prerequisite: permission. Special fee: $10/credit hour—subject to change.</td>
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<tr>
<td>40004</td>
<td>Computer Assisted Reporting (3)</td>
<td>Computer analysis of large data sets, focusing on government, court, police records for preparation of news stories; basics of online searching; software and databases. Prerequisite: JMC 26007 or 26008; permission. Special fee: $10/credit hour—subject to change.</td>
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<tr>
<td>40005</td>
<td>Feature Writing (3)</td>
<td>Researching, writing and placement of feature stories in publications. Prerequisites: JMC 26007; and 46016 for magazine majors. Special fee: $10/credit hour—subject to change.</td>
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<tr>
<td>40006</td>
<td>Law of Mass Communication (3)</td>
<td>Libel and slander; privacy, copyright, obscenity; regulation of advertising, broadcasting and corporate speech; access to government; legal problems of new media. Prerequisites: journalism and mass communication major or minor and senior standing. See your advisor for major-specific prerequisite courses. Permission needed from department.</td>
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<tr>
<td>40007</td>
<td>Reviewing the Arts (2)</td>
<td>Reviewing and criticizing of performing, visual and literary arts. Emphasis on books, film, TV and theater. Prerequisites: JMC 20004 or 26001; upper-division standing.</td>
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<tr>
<td>40008</td>
<td>History of American Mass Communication (3)</td>
<td>Evolution of the American mass communication/media from beginning to present day. Prerequisite: upper-division standing.</td>
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<td>40009</td>
<td>Comparative Media Systems (3)</td>
<td>Study of the forms, organization, scope and modes of operation of media systems in foreign lands. Also examines agents, channels and contents of international communication. Prerequisite: upper-division standing.</td>
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<tr>
<td>40010</td>
<td>Ethics and Issues in Mass Communication (3)</td>
<td>Ethical problems and issues in mass communication within a framework of basic theories, functions and social roles of the mass media. Prerequisites: journalism and mass communication major or minor and senior standing with at least 18 hours in JMC courses, including JMC 20004; or permission; passage of JMC grammar/spelling/punctuation test. This course may be used to satisfy the writing-intensive requirement with approval of major department.</td>
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<tr>
<td>40012</td>
<td>Online Journalism (3)</td>
<td>Study and evaluation of online news and news sites; reporting and writing for online news media; design, production and maintenance of an online news site; ethical, legal and economic issues related to online news. Prerequisite: JMC 26007 or 26008. Special fee: $10/credit hour—subject to change.</td>
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<td>40015</td>
<td>Media Management (3)</td>
<td>Exploring management issues unique to media organizations and the impact of those issues on the organization’s structure, economics, markets and employees. Prerequisites: journalism and mass communication major and senior standing or permission.</td>
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<td>40016</td>
<td>Law of Advertising and Public Relations (3)</td>
<td>Regulation of advertising and corporate speech, first amendment, libel and privacy and legal problems of new media. Prerequisites: 18 hours of JMC courses and advertising or public relations minor or permission.</td>
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<td>40022</td>
<td>Film As Communication (3)</td>
<td>Study of the relationship of television and theatre films to the mass audience in terms of components and effects. Prerequisite: JMC 20004, 26001 or permission.</td>
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<td>40034</td>
<td>Advanced Electronic Media Programming (2)</td>
<td>Program practices in radio, television, cable, film and new media with an emphasis on projects and written proposals regarding program strategies and tactics. Prerequisite: JMC 20004.</td>
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<td>40037</td>
<td>Scriptwriting for Video and Film (3)</td>
<td>The emphasis of the course is on writing dramatic scripts for broadcast or motion pictures. The course also includes current perspectives on market needs. Prerequisites: JMC 30004 and journalism and mass communication major or minor or permission.</td>
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40092  Internship (1)  
Experience in a professional setting under professional supervision in student’s field of specialization. S/U grading; IP grade permissible. May be repeated once. Prerequisites: varies by concentration; see advisor.

40095  Special Topics (1-3)  
Selected topics of special interest not covered in depth in existing courses; offered as resources permit. Prerequisite: permission.

40096  Individual Projects in Mass Communications (1-3)  
Individual research projects in mass communications. Letter grades and IP grade permissible. Prerequisites: upper-division standing and permission.

40099  Senior Honors Project (2-4)  
Thesis or other independent study project in mass communication. IP grades permissible. Prerequisite: open only to journalism and mass communication majors admitted to Honors College.

40192  Radio-Television Internship (1)  
Experience, under professional supervision, in a radio or television station or other industry using electronic audio or video communications. S/U grading; IP grade permissible. May be repeated once. Prerequisites: varies by concentration; see advisor.

40193  Variable Title Workshop in JMC (1-3)  
Workshop setting dealing with topics in mass communications. S/U grading. Prerequisite: permission.

40196  Independent Study in Radio and Television (1-3)  
(Repeatable for a total of 6 hours) Research and writing on topics approved by the students’ advisors and study directors. IP grade permissible. Prerequisites: upper-division standing and permission.

40295  Special Topics in Computer Laboratory (1-3)  
Selected topics of special interest not covered in depth in existing courses; offered as resources permit. Prerequisite: permission. Special fee: $10/credit hour—subject to change.

41002  Advanced Advertising Copywriting (3)  
Advanced copy writing projects in print advertising and corporate communications and execution of the entire print advertising campaigns. Prerequisites: JMC 31002 and 31003.

41004  Broadcast Copywriting (3)  
Application of advertising principles to broadcast media. Emphasis on commercial copy and client relationships. Prerequisites: JMC 30004 or 31002 and journalism and mass communication major or minor or permission.

41005  Advertising Campaigns (3)  
Analysis of the planning, financing and execution of an advertising campaign through case study methods. Prerequisites: JMC 20007, 31002, 31003 and journalism and mass communication major or minor or permission. Special fee: $10/credit hour—subject to change.

41081  Advertising Practices (3)  
The study of current advertising practices and issues. Prerequisites: JMC 31002 and 31003.

41085  Color Photography (3)  
(Cross-listed with VCD 48005) Creative photography for advertising and editorial uses. Assignments made in an art director/photographer relationship. Critique by professionals in addition to academic evaluation. Prerequisites: JMC 30004 or 31002 and journalism and mass communication major or permission. Special fee: $18.33/credit hour plus cost of film and processing—subject to change.

42007  Photo-Illustration Techniques (3)  
(Cross-listed with VCD 48007) Creative photography for advertising and editorial uses. Assignments made in an art director/photographer relationship. Critique by professionals in addition to academic evaluation. Prerequisites: JMC 32001 or 32002 and journalism and mass communication major. Special fee: Minimum of $15/credit hour—subject to change.

42008  Advanced Photographic Journalism (3)  
Discussion of contemporary photojournalists and issues. Production of photo-documentary, multimedia and illustrations appropriate to photojournalism. Senior portfolio review. Prerequisites: JMC 26007 and 32002. Special fee: $18.33/credit hour—subject to change.

42009  Fashion Photography (3)  
(Cross-listed with VCD 38009) Instruction in studio lighting, filters, special effects. Emphasis on editorial and advertising fashion photography. Studio and location assignments. Prerequisites: JMC 32001 or 32004 and 42005. Special fee: $15/credit hour—subject to change.

42092  Practicum in Photography (1-3)  
(Cross-listed with VCD 48092) Individual or group investigation into student-selected areas of photographic field. Prerequisite: upper-division standing or permission. Repeatable for a total of 10 hours Special fee: $7.50/credit hour—subject to change.

43022  Audio Studio Production (3)  
Production of in-studio audio programming units, with laboratory unit required as part of course. Prerequisites: JMC 33031, journalism and mass communication major or minor or permission. Special fee: $20/credit hour—subject to change.

43033  Audio Field Production (3)  
A study of the theory and craft of audio field production, providing analysis and practice of remote information gathering techniques and music recording. Prerequisite: JMC 33031, journalism and mass communication major, minor or permission. Special fee: $20/credit hour—subject to change.

43042  Video Studio Production (3)  
Study of producing and directing various types of video studio programs. Two hours lecture, two hours lab. Prerequisites: JMC 33031, journalism and mass communication major, minor or permission. Corequisite: JMC 30004. Special fee: $20/credit hour—subject to change.

43043  Video Field Production (3)  
Producing programs and packages with portable video equipment outside the studio. Editing program material. Two hours lecture, three hours lab. Prerequisites: JMC 22002 and 33031, journalism and mass communication major, minor or permission. Special fee: $20/credit hour—subject to change.

44040  Concept Psychographics (3)  
Analysis of media consumers utilizing demographic, attitudinal and lifestyle variables compared with more traditional approaches. Applications for programming, advertising and public relations are examined. Prerequisites: JMC 20004; JMC 30034 or permission; passage of JMC grammar/spelling/punctuation test.

46000  Newspaper Design (3)  
Design of newspapers from small inside pages to elaborate feature pages. News judgment. Basic information graphics and photo editing. Prerequisites: JMC 26001, 22001; VCD 37000. Special fee: $15/credit hour—subject to change.

*Courses offered only at Regional Campuses.
Course Descriptions

46001 Information Graphics (3)
(Cross-listed with VCD 43007) Introduction to shapes, color, type and combinations of these for computer-designed news graphics: maps, charts, graphs and diagrams. Prerequisite: JMC 20004 and 20007; VCD 37000 or equivalent; journalism and mass communication major, minor or permission. Passage of JMC grammar/spelling/punctuation test. Special fee: $16.66/credit hour—subject to change.

46006 Editorial Writing (3)
Structure and purpose of editorial and column writing; study of editorial section of newspaper; practice in writing editorials. Prerequisites: JMC 26007 or 26008; journalism and mass communication major, minor or permission.

46007 Reporting in Depth (3)
Techniques involved in researching, interviewing and writing in-depth news stories and analyses. Prerequisites: JMC 26007 or 26008; journalism and mass communication major, minor or permission.

46009 Reporting Public Affairs (4)
Instruction and practice in reporting all areas of public affairs, including government and the courts. Use of precision journalism techniques. Prerequisites: JMC 26007 or 26008; and JMC 36000 or 36005; journalism and mass communication major, minor or permission. Special fee: $10/credit hour—subject to change.

46016 Magazine Publishing (3)
Overview of magazine publishing—editorial, advertising, circulation and production. Analysis of magazines. Prerequisite: journalism and mass communication major, minor or permission; and junior standing. Special fee: $10/credit hour—subject to change.

46020 Magazine Design (3)
Marriage of words and visuals for designing magazine layouts and covers in desktop publishing. Prerequisites: VCD 37000, JMC 22000, 26001, 46016 or permission. Special fee: $15/credit hour—subject to change.

46021 Magazine Writing and Editing (3)
Research, interviewing, writing and marketing of major magazine articles. Editing techniques for magazines. Prerequisites: JMC 36005, 40005. Special fee: $10/credit hour—subject to change.

46054 Broadcast Documentary (3)
Development of documentary form for radio and television. Analysis and production of documentaries. Utilization of audio and video recording and editing. Prerequisites: JMC 43043 or 26008 or 26007 or permission. Special fee: $20/credit hour—subject to change.

47003 Teaching High School Journalism (3)
Methods and materials for teaching journalism in high school. Prerequisites: upper-division standing and permission of instructor. Special fee: $10/credit hour—subject to change.

47005 Advising Journalism Publications (3)
Group study of problems posed by advisors enrolled in the course. Prerequisite: JMC 47003 or permission. Special fee: $10/credit hour—subject to change.

48001 Media Relations and Publicity (3)
Planning and preparation of materials for use by the media, both on paper and online. The course explores the media relations function along with the uses and limitations of mass media in public relations. Prerequisites: JMC 26001; JMC 26007 or 26008; JMC 38002; journalism and mass communication major or permission. Special fee: $10/credit hour—subject to change.

48002 Public Relations Tactics (3)
Planning and preparation of face-to-face public relations tactics, including spokesperson training for on- and off-camera appearances, special event planning, speeches and presentations with visual support and other applications of "writing for the ear." Prerequisites: JMC 27001; JMC 26001; JMC 38002, or permission. Special fee: $10/credit hour—subject to change.

48003 Public Relations Online Tactics (3)
Explores fundamentals of Web site planning and design and provides hands-on skills development using the full range of cybermedia techniques. Includes emphasis on writing for online audiences. Prerequisites: JMC 26001, 28001 and 38002.

48006 Public Relations Publications (3)
Planning, writing and design of organizational publications, including newsletters, brochures, flyers, promotional mailers and Web sites. Course also explores the print production process. Prerequisites: JMC 26001, JMC 38002; VCD 37000; journalism and mass communication major, minor or permission. Special fee: $10/credit hour—subject to change.

48020 Mass Media Organizations and Public Information (3)
The roles of public information and mass media in public opinion formation. Techniques of assessing/interpreting public opinion polls and creating public information strategies using mass media. Prerequisites: upper-division standing.

48091 Seminar: Public Relations Campaigns (3)
This capstone course in the public relations major requires student teams to combine research, planning and execution into a single public relations campaign developed for a real-world organization. Prerequisites: JMC 26007 or 26008; JMC 48001, JMC 49002 and JMC 48006.

49021 Corporate Video (3)
The use of video in corporate and organizational environments. Emphasis is placed on the structure and function of the medium within each environment. Prerequisites: JMC 30004; JMC 43042 or 43043; journalism and mass communication major, minor or permission. Special fee: $20/credit hour—subject to change.

JUSTICE STUDIES (JUS)

12000 Introduction to Justice Studies (3)
Historical development and operational aspects of the contemporary justice systems 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: JUS 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: JUS 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: JUS 12000.
25092 Field Placement (1-6)  
Observational experience under the direction of supervising faculty in a justice agency. IP grade permissible. Prerequisites: 6 credit hours of JUS, 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: JUS 12000 or permission.

26702 Criminology (3)  
Examines crime from the legal and social viewpoints, including extent, patterns and theoretical explanations of criminal behavior. Prerequisite: JUS 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. This course may be used to satisfy the Liberal Education Requirements (LER).

26705 Survey of Contractual Justice Services (3)  
Overview of contractual agencies within the justice system including volunteerism, private policing, quasi-court services, and contractual and cognate correctional agencies. Prerequisite: JUS 12000 or permission.

27096 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: JUS 12000 or permission.

27311 Victimization (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: JUS 12000 or permission.

28001 Legal Research and Writing (3)  
(Cross-listed with LEGT 18001) In-depth analysis of the legal research process and development of legal writing skills; opportunities to utilize research and writing skills are integrated into the course. Prerequisite: JUS 18000 or permission.

28002 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: JUS 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: JUS 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: JUS 18000.

32200 Police and Community (3)  
An examination of the rights of individuals, citizen involvement and the police as members of the community, and the development, implementation and evaluation of related programs. Prerequisite: 9 credit hours of JUS courses, including 12000 and 22300, or permission.

32400 Research Methods in Justice Studies (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: 9 credit hours of JUS courses, including 12000, or permission. This course may be used to satisfy the writing-intensive 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: 9 credit hours of JUS, including 12000, or permission.

32600 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: 9 credit hours JUS, including 12000, or permission.

32700 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: 9 credit hours of JUS, 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: 9 credit hours of JUS courses, including JUS 12000 or 18000.

34311 Youth and the Justice System (3)  
Analysis of situations involving the legal rights of children and youths which demand intervention by justice institutions or service agencies. Prerequisite: JUS 12000 or permission.

36703 Juvenile Delinquency (3)  
Social and personal factors in juvenile delinquency; operation of juvenile justice system; prevention and control of delinquency. Prerequisites: 9 JUS credit hours, including 12000 and 26702, or permission. This course may be used to satisfy the writing-intensive requirement with approval of major department.

37091 Seminar in Critical Issues in Justice (1-3)  
Intense analysis of issues significant and current in the justice field which are not covered in regular courses. IP grade permissible. Prerequisite: 9 credit hours of JUS, including 12000, or permission.

37311 Minorities in Crime and Justice (3)  
Focus on the role of social and ethnic minorities as victims, offenders and participants in the justice process. Prerequisite: 9 credit hours of JUS, including 12000, or permission. This course may be used to satisfy the diversity requirement.

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: 9 credit hours of JUS, including 12000, or permission. This course may be used to satisfy the diversity requirement.

38002 Contract Law (3)  
This course is intended to provide students with an in-depth analysis of the law pertaining to contract formation, resolution of contract disputes and the impact of the uniform commercial code on traditional contract theory. Prerequisite: JUS 18000, 28001.

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: 9 credit hours of JUS courses, including 18000, or permission.

*Courses offered only at Regional Campuses.
38004 Legal Ethics and Professional Responsibility (3)
This course will introduce students to the types of ethical dilemmas that they will face once in the work force; to the ethical rules developed by the American Bar Association; and to methods for researching the answers to ethical dilemmas. Prerequisites: JUS 18000 and 28001.

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: JUS 18000 and 28001.

38006 Applied Legal Research and Litigation (3)
Case analysis and preparation of argumentative memorandum. Includes writing of factual memorandum, file summaries and advocacy letters. Prerequisites: JUS 18000 and 28001. This course may be used to satisfy the writing-intensive requirement.

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: 9 credit hours of JUS, including JUS 12000, or permission.

44400 Justice Administration (3)
Identification of administrative and management functions, leadership, management styles and supervision of personnel in justice organizations. Prerequisite: 12 credit hours of JUS, 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: 12 credit hours of JUS, including 12000 and 22300, or permission.

45093 Variable Title Workshop in Justice Studies (1-6)
S/U grading. Prerequisite: permission.

45096 Individual Investigation (1-3)
(Repeatability 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: 12 credit hours of JUS, including 12000 and 32400; 2.00 GPA in JUS; 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: 12 credit hours of JUS, including 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: 12 credit hours of JUS, 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: 12 credit hours of JUS, including 12000 and 26701, or permission.

46708 Treatment Methods (3)
Various methods of treatment are applied to correctional fields. Focus is on specific techniques in community and institutional correctional settings. Direct observation utilized when possible. Prerequisite: 12 credit hours of JUS, including 12000 and 26701, or permission.

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: 12 credit hours of JUS courses, including 12000 or 18000.

47211 Court Functions (3)
Analysis of the structure, functions and critical role of incumbents in the criminal court. Prerequisite: 12 credit hours of JUS, including 12000, or permission.

47212 Internship (3-12)
Work experience under direction of supervising faculty member in private, federal, state or local justice agency or law agency. IP grade permissible. Prerequisites: 9 credit hours of JUS, including 12000; 2.00 GPA in JUS and overall; junior standing; controlled.

47311 Comparative Justice Systems (3)
A systematic comparison of the developmental backgrounds, structure and functioning of the major systems of justice in the modern world. Prerequisite: 12 credit hours of JUS, including 12000, or permission.

48200 Data Analysis in Justice Studies (3)
This course exposes students to methods used in the analysis of quantitative and qualitative data in the field. Emphasis is placed on the development of analytical skills and appropriate use of statistical techniques. Computer applications and other hands-on methods emphasized. Prerequisite: 12 credit hours of JUS, including 12000 and 32400, or permission.

48300 Law of Corporations and Other Associations (3)
This course will cover the formation, operation and dissolution of various kinds of business organizations. Subjects covered include: sole proprietorships, corporations, partnerships, the law of agency and employment agreements. Prerequisites: JUS 18000 and 28001.

48400 Intellectual Property Law (3)
The purpose of this course is to acquaint students with the fundamentals of intellectual property (IP) law. Students will be introduced to the four primary fields within intellectual property: trademarks, copyrights, patents and trade secrets. At the conclusion of the course, students will fully understand how IP rights are acquired, registered (if necessary), protected, transferred and infringed. Moreover, students will be introduced to emerging IP topics and to international developments in the IP fields. Prerequisites: JUS 18000 and 28001.

KENT BLOSSOM ART (KBA)

44080 Studio Experience in Fine Arts (1-6)
Studio exploration of selected concepts in painting, sculpture, printmaking or photography. Content varies with each section offered. Course is repeatable. IP grade permissible. Prerequisite: permission. Special fee: $22/credit hour—subject to change.

45080 Studio Experience in Crafts (1-6)
Studio exploration of selected concepts in ceramics, enameling, glass, jewelry/metals or fiber arts. Content varies with each section offered. Course is repeatable. IP grade permissible. Prerequisite: permission. Special fee: $25/credit hour—subject to change.

KENT BLOSSOM MUSIC (KBM)

40026 Accompanying Projects (2-4)
(Repeatable for a total of 8 hours) Rotating piano assignment among responsibilities in chamber music rehearsals, chamber music preparation, master classes and instrumental private lessons. Individual responsibilities change weekly. S/U grading. 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 20th century. Woodwinds, horn, strings and piano. Intensive daily rehearsal and coaching. S/U grading. 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. Woodwinds, horn and strings. S/U grading. Prerequisite: audition.

40042 Applied Music—Instrumental (1-2)
S/U grading. Prerequisite: audition.

40083 Variable Title Workshop in Music (1-4)
Offered for specific professional needs. Emphasis on performance and pedagogical skills. S/U grading. Prerequisite: permission.

KENT BLOSSOM THEATRE (KBT)

22092 Practicum I: Design/Technology (3)
(Repeatable for a total of 12 hours) Practical experience in theatre production under faculty supervision. Available for lower-division students only. Prerequisite: freshmen/sophomores only.

22192 Practicum I: Performance (3)
(Repeatable for a total of 12 hours) Practical experience in theatre performance under faculty supervision. Available for lower-division students only. Prerequisites: freshmen/sophomores only.

41096 Individual Study: Theatre (1-3)
(Repeatable for a total of 12 hours) Selected research topics in theatre. Prerequisite: permission.

41992 Theatre Production Internship (1-6)
(Repeatable for a total of 12 hours) Intensive advanced training in practical aspects of production. Periodic seminars, laboratory sessions and performance in Porthouse Theatre Company. Prerequisites: junior standing and permission.

42092 Practicum II: Design Tech (3)
(Repeatable for a total of 12 hours) Advanced practical experience in theatre production under faculty supervision. Available for upper-division students only. Prerequisite: juniors/seniors only.

42192 Practicum II: Performance (3)
(Repeatable for a total of 12 hours) Advanced practical experience in theatre performance under faculty supervision. Available for upper-division students only. Prerequisite: junior/senior standing.

LABOR STUDIES (LS)*

10501 Introduction to American Labor (3)
Study of forces in American history which shaped labor movement, with attention to political, social, economic and legal factors. Prerequisite: none.

10505 Union Organization and Administration (3)
Study of organization and administration of a local union, including structure of union, responsibilities of union officers, committee work, legal requirements, and internal and external communications. Prerequisite: none.

10510 Labor and the American Economy (2)
Survey of the economic forces which affect the lives of Americans as producers, consumers and citizens. Evaluation of labor’s effects on American economy. Prerequisite: none.

20010 Industrial Hygiene and Environmental Testing (3)
Sampling and testing for workplace air monitoring, soil and waste water using different types of sample media, sample storage and sample preparation, introduction to OSHA, NIOSH, EPA and ASTM procedures. Prerequisites: CHEM 20111, 20112 and LABT 11004.

20501 Collective Bargaining and Labor Contracts (3)
Basic course covering the relationships between the parties, structure, content and strategies involved in collective bargaining. Course includes current issues and trends in major agreements. Prerequisite: none.

20505 Labor and Current Issues (2)
Discussion and evaluation of current labor issues, including labor movement; equal employment opportunities; and the environmental consequences of industrial expansion, health care, consumerism and foreign competition. Prerequisite: none.

LABORATORY TECHNOLOGY (LABT)*

11001 Laboratory Safety (3)
Investigation of standards for laboratory safety including material safety data sheets, chemical storage and handling, and preparation of laboratory chemical hygiene plan. Prerequisite: none.

11002 Laboratory Quality Assurance and Quality Control (4)
Investigation of quality assurance and quality control procedures related to sampling and analysis in environmental, industrial and chemical laboratories. Prerequisite: none.

11003 Laboratory Information Management Systems (2)
Introduces laboratory information management systems (LIMS), designs, implementation, importance to laboratory QA/QC and commercially available systems. Laboratory work to emphasize utilization of commercially available systems. Prerequisites: COMT 11000 and LABT 11002.

11004 Applied Laboratory Technology (3)
Introduces the applied techniques used in general industrial, chemical and environmental laboratories, including sample preparation, handling and data management using laboratory information management systems (LIMS). Prerequisites: COMT 11000 and LABT 11002.

KBM KBT LS LABT
LATIN (LAT)

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

16201 Elementary Latin I (4)
An introduction to the classical Latin language in the context of ancient Roman culture. Prerequisite: none.

16202 Elementary Latin II (4)
A continuation of the introduction to the classical Latin language in the context of ancient Roman culture. Prerequisite: LAT 16201 or equivalent.

26201 Intermediate Latin I: Readings (3)
Excerpts from Latin literature with emphasis on translation into English. Prerequisite: LAT 16202 or equivalent.

26202 Intermediate Latin II: Readings (3)
Excerpts from Latin literature with emphasis on both prose (e.g., Caesar, Cicero) and poetry (Vergil, Catullus). Prerequisite: LAT 26201 or equivalent.

36170 Cicero (3)
Readings in Cicero’s orations and philosophical works, stressing rhetorical techniques. Consideration of Cicero’s role in Roman history and his place in Latin literature. Prerequisite: LAT 26202 or equivalent.

36171 Vergil (3)
A study of the Latin text of Vergil’s Aeneid stressing the poetry of the language. Consideration of entire poem and its impact on Latin literature. Prerequisite: LAT 26202.

46351 Latin Comedy (3)
Characteristics and history of Latin comedy; readings from Plautus and Terence. Prerequisite: LAT 36170 or 36171.

46352 Elegiac Poets (3)
Selections from Tibullus, Propertius and Ovid. Prerequisite: LAT 36170 and/or 36171 or permission.

46372 Lyric Poetry (3)
Readings from the poetry of Catullus and Horace, with considerations of the general genre of lyric; a comparison of style and content of the two poets. Prerequisite: LAT 36170 or 36171.

46373 Advanced Prose Authors (2)
Consideration of a major prose author such as Pliny the Younger, Livy, Tacitus or Suetonius; may be repeated when a different author is read. Prerequisite: LAT 36170 or 36171.

46374 Juvenal’s Satires and Martial’s Epigrams (3)
General consideration of Roman satire. Prerequisite: LAT 36170 and/or 36171 or permission.

46375 Lucretius (3)
De Rerum Natura. Prerequisite: LAT 36170 and/or 36171 or permission.

LEGAL ASSISTING TECHNOLOGY (LEGT)*

18000 Introduction to Paralegal Studies (3)
(Cross-listed with JUS 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. Course offered at the East Liverpool Campus only. Prerequisite: none.

18001 Legal Research and Writing (3)
(Cross-listed with JUS 28001) In-depth analysis of the legal research process and development of legal writing skills; opportunities to utilize research and writing skills are integrated into the course. Course offered at the East Liverpool Campus only. Prerequisite: LEGT 18000.

18002 Corporate Law (3)
Introduction to corporation law and its application to client variations in practice. Course offered at the East Liverpool Campus only. Prerequisite: LEGT 18001.

18003 Family Law and Procedure (3)
(Cross-listed with JUS 28003) Designed to acquaint the student with family law substance and practice. Included: definitions, terminology, topical areas and the philosophy underlying family law practice. Prerequisite: LEGT 18000 or permission.

18004 Tort Claims for Paralegals (3)
Focus on tort claims management for paralegals. Topics include injuries to person and property, negligence, strict and products liability, defenses, processing insurance claims and settlements. Prerequisite: LEGT 18000 or permission.

18005 Employment Regulations (3)
Introduction to the employment environment and various regulations pertaining to the workplace. Wage and hour statutes, wrongful discharge statutes, ERISA, Title VII, COBRA. Course offered at the East Liverpool Campus only. Prerequisite: LEGT 18000.

20192 Internship (2)
Supervised field experience. This experience requires a minimum of 14 hours per week for unpaid work experiences or 20 hours per week for employment with pay. Course offered at the East Liverpool Campus only. Prerequisite: LEGT 28006 and permission. Corequisite: LEGT 28008.

27091 Special Topics in Paralegal Studies (2-3)
(Cross-listed with JUS 27091) (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: LEGT 18000 or permission.

28004 Principles and Practice of Litigation (3)
(Cross-listed with JUS 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: LEGT 18000 or permission.

28005 Civil Litigation (3)
Role of paralegals in preparation for motions, trials and appeals. Specialized practices such as personal injury, medical malpractice, product and environmental liability. Prerequisite: LEGT 28004.

28006 Advanced Legal Research and Writing (3)
Introduction to case analysis and preparation of argumentative memorandum. Including writing of factual memorandum, file summaries and advocacy letters. Course offered at the East Liverpool Campus only. Prerequisite: LEGT 18001.

28007 Estate and Probate Administration (3)
(Cross-listed with JUS 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. Course offered at the East Liverpool Campus only. Prerequisite: LEGT 28006.
28008 Professional Development for Paralegals (1)
Exploration and discussion of the paralegal field. Employment opportunities and responsibilities. Professional organizations and business etiquette. Prerequisites: LEGT 18001 and permission.

LIBRARY AND INFORMATION SCIENCE (LIS)
40693 Variable Title Workshop in Library and Information Science (1-3)
Intensive examination of special topics of interest. Course may be repeated. S/U grading. Prerequisite: junior or senior standing and permission.

41085 Selected Topics in Library Science (1-3)
Offered irregularly as resources and opportunities permit. Topics will be announced in Schedule of Classes. Prerequisite: permission.

MANAGEMENT AND INFORMATION SYSTEMS (M&IS)
24053 Introduction to Computer Applications (3)
Develop competency in the operation of contemporary software and hardware applications. To develop an appreciation for the contribution of computers, software and the Internet to society. Prerequisite: none.

24056 Fundamentals of Business Statistics (3)
Introduction to concepts in statistical methods and their applications to real-world problems. Examines both the theoretical and practical side of the different methods. Prerequisite: MATH 11011 or 12001.

24060 Systems Analysis I (3)
Coverage of the system life cycle, structured process modeling and data modeling methodologies, logical system design and automated analysis tools. Prerequisites: M&IS 24053 and permission.

24070 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. Prerequisites: M&IS 24053 and permission.

24080 Computer Programming for Business (3)
Introduces a programming language currently used in business and industry for data processing, decision making and other information systems applications. Prerequisite: M&IS 24070.

24083 Variable Title Workshop in Management and Information Systems (1-6)
Special workshop in management and information systems. Credits depend on scope of project. S/U grading. Prerequisite: permission.

24163 Principles of Management (3)
Introductory course in management and organizational design. The leading contributions in the area are reviewed and practical implications are developed. Prerequisites: Minimum sophomore standing.

Notes About the Courses That Follow:

NOTE 1: Registration in any 30000- or 40000-level management and information systems course is restricted to the following groups:

1. Officially declared advanced business administration majors.
2. Officially declared nonbusiness majors with a minimum 60 credit hours completed and a minimum 2.00 cumulative GPA. Registration priority is extended to those majors that specifically require 30000- and 40000-level management and information systems courses.
3. Officially declared premajor (with a minimum 60 credit hours completed and a minimum 2.50 cumulative GPA) registering for advanced 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. Prerequisite: M&IS 24056 and 24080; see notes 1 and 2.

34032 Data and File Technology (3)
An introduction to file architecture and database management systems. The application of these technologies is detailed. Prerequisite: M&IS 24070.

34053 Data Integration (3)
This course mixes concepts of data and information with hands-on applications with popular business software and the migration of the information to the Internet as well as Intranets. Prerequisites: M&IS 24060 and 24070; see notes 1 and 2. This course is open only to CIS minors. CIS majors will not receive credit.

34054 Using Information Systems for Solving Business Problems (3)
This course is a continuation of M&IS 24053 and provides students with further study of use of information systems in solving business problems. Prerequisite: M&IS 24053. This course is open only to business management majors during the initial registration period. If space is available after the initial registration, the course is open to any business major on a first-come, first-served basis.

34055 Computer Decision Modeling (3)
Introduces students to the scientific decision-making tools of operations research and management science, and also to the use of spreadsheet modeling for problem formulation and solution without the need for mathematics. The concepts of modeling and better decision making are stressed along with illustrations from the various functional areas of business. Prerequisites: M&IS 24053 and 24056.

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. Prerequisite: MATH 11011 or 12001; see notes 1 and 2.

34059 Service Operations Management (3)
Provides students with the concepts and tools necessary to effectively manage service operations. Also prepares them for management opportunities in service firms that represent the fastest-growing sector of the economy. The service management is presented from an integrated viewpoint with a focus on customer satisfaction. Course materials are organized around four modules: (1) understanding services, (2) designing the service enterprise, (3) managing service operations and (4) presenting world-class service. Prerequisite: M&IS 24060.
M&IS

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: M&IS 24053 and 24056; see notes 1 and 2.

34064 Manufacturing Resource Planning (3)
Introduces students to the basic tools that operations managers use to inform their decisions on a daily basis. Hands-on coverage of manufacturing resource planning tools, including forecasting and master production schedules, bill of materials structuring, order entry and purchasing, capacity requirements planning, routing, costing, customer service, shipping, invoicing and using an enterprise resource planning (ERP) software. Prerequisite: M&IS 34060.

34065 Quality Assurance (3)
Introduces importance of quality assurance and tools used to accomplish better quality in goods and services. Topics: TQM, Six Sigma, quality philosophies, sampling plans and statistical process control, ISO, quality competition and awards. Prerequisite: M&IS 34060.

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: M&IS 24163; see note 1.

34180 Human Resource Management (3)
Focuses on the competitive advantage derived from the better management of a firm’s human resources. Issues related to managing people at work will be discussed from both practical and theoretical perspectives. Prerequisites: M&IS 24163 and permission.

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: M&IS 24163; see notes 1 and 2.

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: M&IS 24163; see notes 1 and 2.

44042 Telecommunications and Networking (3)
Presentation of current and emerging telecommunication services and networking technologies with emphasis on their strengths, limitations and business applications. Prerequisite: M&IS 24070; see notes 1 and 2.

44043 Data Base Management Systems (3)
The design, implementation and management of database management systems within organizations are studied from both theoretical and applied perspectives. Prerequisites: M&IS 24060 and 24070; 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. Prerequisites: M&IS 24080 and 24070; see notes 1 and 2.

44045 Information Systems Management (3)
Management of information systems resources and the IS function. Topics include IS planning for global, national and interorganizational commerce, IS architecture development and strategic alignment, information technology portfolio and risk management, project management, management of technical employees and management of technology customer issues. Prerequisites: M&IS 24060, 24070 and one IS course; see notes 1 and 2. This course is open only to CIS majors.

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: M&IS 24080; see notes 1 and 2. This course may be used to satisfy the writing-intensive requirement with approval of major department.

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, internetworking and media. Prerequisite: M&IS 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: see notes 1 and 2.

44061 Operations Management and Control (3)
Introduces the student to the key functions of an operations planning and control system, which provides information for the efficient flow of materials, the effective utilization of people and equipment and the proper coordination of internal activities with suppliers and customers. Prerequisite: M&IS 34061.

44062 Supply Chain Management (3)
Students learn the basic analytical tools needed to coordinate business operations across the value chain. Course involves hands-on coverage of supply chain management with emphasis on supplier partnering and development, customer relations management, strategic sourcing and pricing, e-business, measuring supply chain performance, mass customization, planning supply and demand and coordination in the supply chain. Prerequisite: M&IS 34061.

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: permission; see notes 1 and 2. This course may be used to satisfy the writing-intensive requirement with approval of major department.

44091 Seminar in Human Resource Management (3)
In-depth readings, discussion, projects and presentations in a specialized area of human resource management. Prerequisites: M&IS 24053, 34180 and permission.

44093 Variable Title Workshop in Management and Information Systems (1-6)
S/U grading.

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: permission; 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: M&IS 24163; see note 1. This course may be used to satisfy the writing-intensive requirement with approval of major department.
44188 Developing and Training Human Resources in Organizations (3)
The focus of this course is quality training design, based upon theory and empirical research. Implications for practice and current challenges in employee training and development are also highlighted. Prerequisites: M&IS 34180; permission.

44191 Senior Research Seminar in Management (3)
Combination of individual and group research and class discussion for superior students. Investigations in administration and organization conducted in accordance with scholarly interests of participants. Prerequisite: permission; see notes 1 and 2.

44192 Internship in Management (3)
A supervised field experience requiring a minimum of 120 hours of work at a cooperating organization. Requires regular contact with instructor and preparation of an internship report connecting academic coursework to on-the-job experiences. Prerequisites: M&IS 24053 and 24163. See notes 1 and 2. Internship proposal submission and instructor permission required.

44195 Advanced Topics in Human Resource Management (3)
Advanced topics course that will be offered on a yearly basis. Topics can span the full range of HR functions. This course also can have a practicum format. Prerequisites: declared HRM minor, permission, and M&IS 34180.

44285 Integrated Business Policy and Strategy (3)
Integration of the functional areas of business in the formulation and implementation of policy. Projects and case analyses of business situations provide students with the opportunity to apply analytical and creative problem-solving skills. Prerequisites: M&IS 24163 and permission.

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. Prerequisites: 2.5 minimum GPA; M&IS 24060 and 24070; see notes 1 and 2.

MANUFACTURING ENGINEERING TECHNOLOGY (MFGT)*

12010 Safety in the Workplace (2)
Topics include Ohio general industry safety requirements. Discussion will include all workshops and factories, metal casting, steel mills, and rubber and plastic industries. Prerequisite: none.

13001 Computer Numerical Control Programming (3)
Lathe and mill computer numerical control (CNC) programming; conversational, M & G codes. Manual data input and off-line programming: offsets, cutter compensation, linear, circular and helical interpolation. Prerequisite: MERT 12000 and 12004.

13401 Advanced Industrial Electronics (3)
Advanced course in PLC program design and implementation. Emphasis on Boolean logic. Project definition and completion. Prerequisite: EERT 22013.

14001 Geometric Dimensioning and Tolerancing (3)
Theory and application of geometric dimensioning and tolerancing (GD&T) including interpretation of GD&T symbols on blueprints and inspection of parts with coordinate measuring machine. Prerequisites: MERT 12000 and EERT 22003.

21001 Standard Design Practice for Manufacturing Technology (3)
Analysis of fundamental machine design components. Discussion will include keys, fasteners, pulleys, gears, chains, bearings, power transmission equipment and associated topics. Prerequisites: EERT 22002 and MERT 12001 and 12005.

22014 Advanced Industrial Electronics (3)
Advanced course in PLC program design and implementation. Emphasis on Boolean logic. Project definition and completion. Prerequisite: EERT 22013.

23001 Computer-Aided Manufacturing (3)
Theory and application of computer-aided manufacturing. Generation of CNC code using CAM applications, both from CAD drawings and directly from CAM package. Prerequisites: MFGT 13001 and MERT 12001.

23002 Advanced Computer-Aided Manufacturing (3)
An advanced class in computer-aided manufacturing. Electrical Discharge Machining (EDM) program applications. Emphasis will be placed on industrial projects. Prerequisite: MFGT 23001.

MARINE RETAIL OPERATIONS TECHNOLOGY (MROT)*

11000 The Marine Dealership (3)
A review of recreational boating in the United States: new technology affecting the industry; and industry growth forecasts nationally and geographically. Prerequisite: none.

11005 Principles of Navigation and Seamanship (3)
Review of equipment and techniques fundamental to navigation, piloting and safety. Includes the study of tides and streams, navigational equipment and safe handling of recreational boats. Prerequisite: none.

21015 Internal Operations of the Marina and Dealership (2)
Review of current government regulations, risk management and operation management of the service department of marinas and marine dealership yard. Prerequisite: completion of 21 technical credit hours.

21050 Merchandising Boats and Service (3)
Basic concepts of merchandising including inventory, assortment planning, pricing, showroom and service facilities; location factors, design, layout and space utilization; advertising and other promotion functions. Prerequisite: MROT 11000 and BMRT 21050 or permission.

MARKETING (MKTG)

25010 Marketing (3)
Functions, institutions and basic problems in marketing goods and services from viewpoint of manager of business firm operating within social, economic and legal environment. Prerequisite: ECON 22060.

Notes About the Courses That Follow:
NOTE 1: Registration in any 30000- or 40000-level marketing course is restricted to the following groups:
1. Officially declared advanced business administration majors and minors.
2. Officially declared nonbusiness majors with a minimum 60 credit hours completed and a minimum 2.00 cumulative GPA. Registration priority is extended to those majors that specifically require 30000- and 40000-level marketing courses.
3. Officially declared premajor (with a minimum 60 credit hours completed and a minimum 2.50 cumulative GPA) registering for advanced business courses.

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

35011 Marketing Tools (3)
Topics include the analytical, financial, statistical, communications, and decision-making skills and development of the technical competencies needed to succeed as a marketing professional in small-sized firms. Prerequisite: Marketing major, M&IS 24063, MKTG 25010. This course may be used to satisfy the writing-intensive requirement with approval of major department.

*Courses offered only at Regional Campuses.
MKTG Course Descriptions

35015 Service Marketing (3)
This course focuses on marketing a product that is primarily service rather than manufactured good. Service marketers must address a broad range of issues, including design of the service production process, recruitment and training of service providers, relationship marketing for customer retention and management of service quality. Prerequisite: MKTG 25010; see notes 1 and 2.

35021 Research for Marketing Decisions (3)
This course focuses on the effective collection, organization, evaluation and use of data pertaining to marketing decision making. Data analysis, interpretation and presentation methods suited for a small-sized firm are emphasized. Prerequisites: marketing major, MKTG 35011.

35023 Customer Analysis (3)
This course addresses the methods marketers use to appraise the value of customer groups. Segmentation, target marketing, selected theories of consumer and buyer behavior, and database organization and analysis methods are covered. Prerequisite: Marketing major, MKTG 35011.

35024 Hands-on Technology Enhancement laboratory (1)
Laboratory designed to expand student's abilities with spreadsheets, statistical packages and presentation software. Prerequisites: marketing major, MAJS 24053 and MKTG 25010.

35026 Decision-Making Skill Enhancement laboratory (1)
Laboratory designed to expand students' data interpretation, decision-making and creative problem-solving skills. Prerequisites: marketing major, MKTG 35011.

35025 Consumer Behavior (3)
This course covers consumer decision-making processes and psychological, sociological, cultural and economic factors influencing them. Analysis of marketing mix strategies and policies in a behavioral context. Prerequisite: MKTG 25010; see notes 1 and 2.

35050 Marketing Research (3)
This course focuses on the collection and analysis of new marketing data, both for exploratory and for decision-making purposes. Students work individually and in teams, developing and communicating responses to managerial questions. Prerequisites: MKTG 25010; MAJS 24056 (may be taken concurrently with instructor permission); see notes 1 and 2.

35055 Internet Marketing (3)
This course will give students an understanding of the ways in which the Internet and the World Wide Web can be integrated into the marketing mix. In addition, tools of marketing which are available via the Internet will be explored. Prerequisite: MKTG 25010; see notes 1 and 2.

40003 Variable Title Workshop in Marketing (1-6)
Special topics in marketing. Hours of credit depend on scope of project. S/U grading. Prerequisite: control; see notes 1 and 2.

40510 Promotion Management (3)
This course covers the promotional tools and their role in communicating with customers. Emphasis is on the selection, budgeting and implementation of promotional tools for smaller-sized enterprises. Prerequisites: marketing major, MKTG 35021 and 35023.

45020 Competitive Market Analysis (3)
Course focuses on establishing and maintaining competitive positions in markets through product and pricing strategies driven by industry and competitive analysis. Methods for assessing market potential and forecasting are explored. Prerequisites: marketing major, MKTG 35021 and MKTG 35023.

45026 Personal Selling Methods and Practices laboratory (1)
Laboratory provides an overview of selling methods and practices. Students will engage in one-on-one role playing and other simulated selling scenarios. Prerequisites: marketing major, MKTG 35021 and 35023.

45030 Channel Management (3)
This course addresses the management of suppliers and customers related to the buying and selling of goods and services. Topics include channel relationships and functions, distribution, cost management, exporting and negotiations. Prerequisites: marketing major, MKTG 45010 and 45020.

45040 Integrated Marketing Strategy (3)
This is the capstone course for marketing majors. Emphasis is on the integration of marketing concepts and decision-making methods and skills to derive sound marketing decisions. Prerequisites: marketing major, MKTG 45010 and 45020.

45045 Advertising and Promotion Management (3)
This course increases students' understanding of advertising concepts as well as structure and functions of different "players" within the industry. It integrates marketing and advertising theory with application in advertising decision making. Prerequisite: MKTG 25010; see notes 1 and 2.

45046 Personal Selling and Sales Management (3)
This course covers communication and successful selling, building relationships, ethics, the buying process, prospecting, planning and making sales calls and sales management. Prerequisite: MKTG 25010; see notes 1 and 2.

45050 Entrepreneurship (3)
Course emphasizes the fundamentals of developing new businesses. Special focus will be given to enhancing students' background, knowledge, resources and skill sets germane to starting and managing a new business. Prerequisites: marketing major, MKTG 45010 and 45020. Requires permission of the department chair.

45060 International Marketing (3)
Examination of international marketing in terms of exporting and importing. Emphasizes differences among markets because of geography, politics, economics, culture, commercial policy and trade practices. Prerequisite: MKTG 25010; see notes 1 and 2.

45071 Business Marketing and E-Commerce (3)
This course covers relationship building, customer analysis and retention, market segmentation and strategy, purchasing and materials management, new product development and pricing. Prerequisite: MKTG 25010; see notes 1 and 2.

45082 Retailing and Web-Based Merchandising (3)
Survey of field of retailing, including the impact of the Internet. Analysis of decisions necessary for store location, layout and equipment, as well as for buying and merchandise control. Problems dealing with opening new firms. Prerequisite: MKTG 25010; see notes 1 and 2.

45084 Marketing Policies and Strategies (3)
Capstone course in marketing dealing with marketing policies and strategies with emphasis on managerial decision-making Harvard case approach. Prerequisites: senior standing; MKTG 35035, 35050; see notes 1 and 2. This course may be used to satisfy the writing-intensive requirement with approval of major department.

45091 Marketing Seminar (3)
Current topics in marketing. Certain sections of this variable topic seminar may require instructor permission or have further prerequisites. See current Schedule of Classes. Prerequisites: MKTG 25010; see notes 1 and 2; additional prerequisites may be specified in current course listing.
45096 Individual Investigation in Marketing (3)
Independent investigation of appropriate problem undertaken by a senior marketing major. Prerequisite: senior marketing major with minimum 3.0 GPA (both cumulative and in major); completed at least three courses in marketing, including MKTG 35050; and instructor permission.

45292 Marketing Internship (3)
Preparation of research report concurrent with on-the-job experience with cooperating business or other organization. Prerequisite: MKTG 25010; see notes 1 and 2. Instructor permission required.

MATHEMATICS (MATH)
For placement in college mathematics courses see Arts and Sciences—Mathematics and Logic Requirement—Placement. Due to the sequential nature of the study of mathematics, once students have received credit for, or established proficiency at, one level in a sequence of mathematics coursework, they are not allowed to receive academic credit toward graduation for a prior course in the sequence or for a course in a lower sequence. Students with questions concerning the applicability of such sequential coursework should consult the Department of Mathematics.

10004 Developmental Mathematics (4)
Survey of the fundamentals of mathematics. Covers real numbers, integers, equations and decimals. Hours not counted toward graduation. Prerequisite: assessment testing or permission.

10005 Introduction to College Mathematics (3)
Includes number systems, exponents, polynomials, the Cartesian coordinate system, linear and quadratic equations and inequalities. Prerequisites: appropriate placement test score or minimum C (2.0) grade in MATH 1004 and no previous mathematics courses.

10031 Fundamental Mathematics I (1)
Includes operations on integers, fractions, decimals and percents, properties of real numbers. Introduction to variables, first degree equations and formulas. Hours not counted toward graduation. Prerequisite: appropriate placement test score. Special fee: $15/credit hour—subject to change.

10032 Fundamental Mathematics II (1)
Equations and inequalities in one variable, linear equations, rate of change and slope, graphing in the Cartesian coordinate system, introduction to functions. Prerequisites: appropriate placement test score or minimum C (2.0) grade in either MATH 10031 or MATH 10004. Special fee: $15/credit hour—subject to change.

10033 Fundamental Mathematics III (1)
Systems of equations, algebraic expressions, exponents and radical expressions, functions and their graphs. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 10032. Special fee: $15/credit hour—subject to change.

10034 Fundamental Mathematics IV (1)
Polynomial operations and factoring, quadratic equations and functions, zeros of functions, rational expressions and functions. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 10033. Special fee: $15/credit hour—subject to change.

10035 Fundamental Mathematics V (1)
Polynomial functions, medium-level factoring techniques; solving equations and inequalities; problem solving. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 10035. Special fee: $15/credit hour—subject to change.

10036 Fundamental Mathematics VI (1)
Advanced factoring techniques; basics of exponential and logarithmic functions. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 10036. Special fee: $15/credit hour—subject to change.

10041 Elementary Probability and Statistics (3)
Descriptive statistics, probability concepts, binomial and normal distributions. Sampling, estimation, hypothesis testing. Analysis of paired data, linear models and correlation. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 10005 or 10034.

11008 Explorations in Modern Mathematics (3)
Topics from various branches of mathematics are chosen to introduce students to the wide variety of ways in which mathematics affects everyday life. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 10005 or 10034. This course may be used to satisfy the Liberal Education Requirements (LER).

11009 Modeling Algebra (4)
Study of algebra arising in the context of real-world applications, including linear, polynomial, exponential and logarithmic models. Intended for students not planning to take calculus. Prerequisite: appropriate placement test score or a grade of C (2.0) or better in MATH 10005 or 10034; no credit for MATH 11010 or 11011. This course may be used to satisfy the Liberal Education Requirements (LER).

11010 Algebra for Calculus (3)
Study of elementary functions and graphs, including polynomial, exponential and logarithmic functions; complex numbers; binomial theorem. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 10036; no credit for MATH 11011 or 12001. This course may be used to satisfy the Liberal Education Requirements (LER).

11011 College Algebra (4)
Level of difficulty between that of MATH 10005 and 12001. Includes factoring, equations, inequalities, functions, graphs, exponential and logarithmic functions. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 10005 or 10035; no credit for MATH 11010 or 12001. This course may be used to satisfy the Liberal Education Requirements (LER).

11012 Intuitive Calculus (3)
Designed to give an overview of differential and integral calculus to business and life science majors. Does not include trigonometric functions. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 11010, 11011 or 12001. This course may be used to satisfy the Liberal Education Requirements (LER).

11022 Trigonometry (2)
Solution of triangles, trigonometric equations and identities. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 11010, 11011 or 12001. May be taken concurrently with MATH 11010; no credit for MATH 12001.

12001 Algebra and Trigonometry (4)
Includes topics covered in MATH 11011 and 11022. Prerequisite: appropriate placement test score; no credit for MATH 11101, 11011 or 11022. This course may be used to satisfy the Liberal Education Requirements (LER).

12002 Analytic Geometry and Calculus I (5)
Concepts of limit, continuity and derivative, and the indefinite and definite integral for functions of one real variable. Maximization, related rates, fundamental theorem of calculus. Prerequisite: appropriate placement test score or minimum C (2.0) grade in MATH 12001 or in 11022 and either 11010 or 11011; no credit for MATH 12011 or 12012. This course may be used to satisfy the Liberal Education Requirements (LER).
12003 Analytic Geometry and Calculus II (5)
Continued study of techniques and applications of integration; trigonometric, logarithmic and exponential functions; polar coordinates; vectors; parametric equations; sequences and series. Prerequisite: MATH 12002 or 12012.

12011 Calculus with Precalculus I (3)
Introduction to differential calculus with a review of algebra and trigonometry. Includes exponents, factoring, functions, graphs, tangent lines, limits, continuity, derivatives and related rates. Prerequisite: appropriate placement test score; no credit for MATH 12002. This course may be used to satisfy the Liberal Education Requirements (LER).

12012 Calculus with Precalculus II (3)
Development of integral calculus and continued study of differential calculus. Includes curve sketching, optimization, fundamental theorem of calculus, areas between curves, exponential and logarithmic functions. Prerequisite: MATH 12011 or permission; no credit for MATH 12002. This course may be used to satisfy the Liberal Education Requirements (LER).

12021 Calculus for Life Sciences (4)
Differential and integral calculus using examples and problems in life sciences. Prerequisite: ILS major or permission.

12022 Probability and Statistics for Life Sciences (3)
Probability and statistics with applications in medical and biological sciences. Prerequisite: MATH 12021 or 12003.

14001 Basic Mathematical Concepts I (4)
Development of the real number system and its subsystems, open sentences, numeration systems, modular arithmetic and some number theory concepts. Prerequisite: appropriate placement test score or a grade of C (2.0) or better in MATH 10005 or 10034. This course may be used to satisfy the Liberal Education Requirements (LER).

14002 Basic Mathematical Concepts II (4)
Basic concepts of probability, statistics and geometry. Prerequisite: MATH 14001. This course may be used to satisfy the Liberal Education Requirements (LER).

19001 Technical Mathematics I (4)*
Introduction to geometry, algebra and trigonometry. For students in the engineering technologies. Prerequisite: three years of high school math or equivalent.

19002 Technical Mathematics II (4)*
Continuation of MATH 19001. Emphasizes advanced topics in algebra and trigonometry, analytic geometry, derivatives and integrals. Prerequisite: MATH 19001.

19009 Field Experience in Mathematics Instruction (1)
Learning through tutoring. A supervised laboratory experience in providing explanations of mathematical concepts. May be repeated in a different area. Prerequisite: permission for one of the areas—algebra, trigonometry, mathematics education or calculus.

20005 Special Topics in Mathematics (1-5)
Various special courses will be announced in the Schedule of Classes under this course number with different section numbers. Repeated registration permitted. Prerequisite: permission.

21001 Linear Algebra with Applications (3)
Systems of linear equations and the associated matrix operations, linear transformations, vector spaces, bases, eigenvectors. Prerequisite: MATH 11012 or 12002.

21003 Introduction to Systems Analysis and Data Communications (3)*
(Cross-listed with COMT 21003) Background in the topic of systems analysis, design, development and implementation including an overview of teleprocessing. Prerequisite: M&S 24080.

21005 Introduction to Probability Theory and Inf. Sci. (4)
Applications (3)
Study of probability and data analysis and inference. Brief introduction to data processing and telecommunication. Emphasis on problem solving and applications. Prerequisites: MATH 12002 or 12012.

21006 Introduction to Ordinary Differential Equations (3)
An introduction to ordinary differential equations and applications. Topics include solution methods, series solutions and singular points. Laplace transforms and linear systems. Applications include population dynamics, forced oscillations and resonance. Prerequisites: MATH 21001 and 22005.

21007 Modern Algebra I (3)
Prerequisites: MATH 12002 and 21001 (concurrent registration permitted). Systems of first-order predicate calculus with identity and function symbols. Prerequisite: none.

21008 Data Structures and Algorithms (3)
(Cross-listed with CS 23022) Discrete structures for computer scientists with a focus on: mathematical reasoning, combinational analysis, discrete structures, algorithmic thinking, applications and modeling. Specific topics include logic, sets, functions, relations, algorithms, proof techniques, counting, graphs, trees, Boolean algebra, grammars and languages. Prerequisites: CS 10051 and a grade of C (2.0) or better in MATH 11010 or 11011 and 11022 or appropriate placement test score into MATH 12002; no credit for MATH 31011.

22005 Analytic Geometry and Calculus III (3)
Study of functions of several variables, including partial derivatives and multiple integrals. Prerequisite: MATH 12003.

23002 Discrete Structures for Computer Science (3)
(Cross-listed with CS 23022) Discrete structures for computer scientists with a focus on: mathematical reasoning, combinational analysis, discrete structures, algorithmic thinking, applications and modeling. Specific topics include logic, sets, functions, relations, algorithms, proof techniques, counting, graphs, trees, Boolean algebra, grammars and languages. Prerequisites: CS 10051 and a grade of C (2.0) or better in MATH 11010 or 11011 and 11022 or appropriate placement test score into MATH 12002; no credit for MATH 31011.

30011 Basic Probability and Statistics (3)
Analysis and representation of data. Controlled experiments and observations. Measurement errors. Correlation and regression. Sampling. Probability models and tests of models. Inference. Prerequisite: a grade of C (2.0) or better in MATH 11010, 11011 or 12001.

31011 Discrete Mathematics (3)
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), and no credit for MATH 23022.

31045 Formal Logic (3)
(Cross-listed with CS 31045 and PHIL 31045) Study of first-order predicate calculus with identity and function symbols. Prerequisite: none.

32044 Introduction to Ordinary Differential Equations (3)
Prerequisites: MATH 12002 and 21001. Systems of first-order differential equations and applications. Topics include solution methods, series solutions and singular points. Laplace transforms and linear systems. Applications include population dynamics, forced oscillations and resonance. Prerequisites: MATH 21001 and 22005.

34001 Fundamental Concepts of Algebra (3)
Professionalized course in algebra for prospective secondary teachers. Postulational development of number system of algebra; other systems, related topics, applications. Prerequisite: MATH 12002.

34002 Fundamental Concepts of Geometry (3)
Professionalized course in geometry for secondary school teachers. Origin and development of the geometry of Euclid with modern refinements, topics, approaches. Other geometries, applications. Prerequisite: MATH 12002.

40011 Introduction to Probability Theory and Applications (3)
The course covers probability and combinatorics, discrete and continuous distributions, random variables, conditional probabilities, Bayes’ formula, mathematical expectations, law of large numbers, normal approximations, basic limit theorems. Prerequisite: MATH 12003.

40012 Introduction to Statistical Concepts (3)
Sample spaces, continuous distributions, sampling distributions, point and interval estimation, hypothesis testing, types of error, level and power of tests, sequential and nonparametric methods. Prerequisite: MATH 40011.
4002 Linear Models and Statistical Analysis (3)
Regression model, multivariate normal distribution, point and interval estimates, Gauss-Markov Theorem, correlation and regression, tests of hypotheses, applications. Prerequisites: MATH 21001 and 40012.

4003 Basic Nonparametric Statistics (3)
Rank tests for different kinds of hypothesis, large sample theory, efficiency comparisons, tests of Kolmogorov-Smirnov type. Prerequisite: MATH 40012.

4004 Statistical Methods for Experiments (3)
Comparison of two groups, t- and F-statistics, ANOVA, one-way and multivariate layouts, randomization, blocking. Linear regression, correlation and analysis of covariance (ANCOVA). Repeated measures analysis of variance. Prerequisites: MATH 30011 or permission.

4005 Sampling Theory (3)
This introductory course provides the methodology for the design and analysis of sampling and surveying studies. Simple random, stratified, cluster, PPS and two-stage sampling techniques. Linear, ratio and regression estimators. Prerequisite: MATH 30011 or equivalent.

4006 Topics in Probability Theory and Stochastic Processes (3)
Topics from conditional expectations, Markov chains, Markov processes, Brownian motion and Martingales and their applications to stochastic calculus. Prerequisite: MATH 40011 or permission.

4009 Variable Title Workshop in Mathematics (1-6)
Studies special topics in mathematics. Not acceptable for credit toward a major or minor in math without approval of student’s advisor. S/U grading. Prerequisite: permission.

4100 Introduction to Modern Algebra I (3)
Basic properties of groups, subgroups, factor groups. Basic properties of rings, integral domains, and homomorphisms. Prerequisites: MATH 21001 and 22005. This course may be used to satisfy the writing-intensive requirement with approval of major department.

4101 Theory of Matrices (3)
A rigorous study of the topics introduced in matrix algebra. Topics included are vector space preliminaries, canonical forms of matrices, diagonalizability criteria. Prerequisites: MATH 21001 or MATH 31011.

4102 Introduction to Analysis I (3)
Topics include basic structure of the real numbers, Cauchy sequences, convergence, completeness of the real numbers, continuity, differentiation and Riemann integration. Prerequisites: MATH 21001 and 22005 or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

4103 Theory of Matrices (3)
(Cross-listed with CS 4102) A continuation of Discrete Math, emphasizing combinatorial techniques, graph applications in algorithms, finite algebra, number theory and probability. Covers useful math for CS majors. Prerequisite: CS 31011 or MATH 31011.

4104 Metatologic (3)
(Cross-listed with CS 4104 and PHIL 4104) May be counted toward B.A. or B.S. in mathematics major. See PHIL 4104 for description. Prerequisite: PHIL 3104 or permission.

4105 Functional Analysis (3)
Topics include further development of integration theory, infinite series, uniform convergence, several variable calculus and metric spaces. Prerequisite: MATH 42001. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

4106 Functional Analysis (3)
Topics include further development of integration theory, infinite series, uniform convergence, several variable calculus and metric spaces. Prerequisite: MATH 42001. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

4107 Introduction to Complex Variables (3)
Introduction to complex analysis. Special topics include Green’s functions and the Matrix methods of wave equations. Prerequisite: MATH 32044.

4108 Introduction to Complex Variables (3)
Algebra of complex numbers, analytic functions, mappings, Cauchy integral theorem, residue theory and applications. Prerequisite: MATH 22005.

4109 Seminar: Modeling Projects (3)
Individual and small-group projects concerned with the formulation and analysis of mathematical models in a variety of areas. Written and oral reports are required. IP grade permissible. Prerequisite: MATH 42031 or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

4110 Introduction to Numerical Computing I (3)
(Cross-listed with CS 42201) An introduction to numerical methods and software for solving many common scientific computing problems. Linear systems, least-square data fitting, nonlinear equations and systems, and optimization problems. Prerequisites: MATH 12003, 21001 and CS 23021 or permission. Special fee: $3.33/credit hour—subject to change.

4111 Introduction to Numerical Computing II (3)
(Cross-listed with CS 42202) A continuation of MATH 42011. Topics include interpolation, numerical differentiation and integration, and numerical solution of ordinary differential equations. Prerequisites: MATH 32044 and CS 42201. Special fee: $3.33/credit hour—subject to change.

4501 Differential Geometry (3)
Analytic and metric differential geometry of curves and surfaces. Prerequisite: MATH 22005.

*Courses offered only at Regional Campuses.

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45021 Euclidean Geometry (3)
Geometry of Euclid extended to advanced topics of the triangle, quadrilaterals and circles; cross-ratio, groups, constructions, geometric generalizations; inversion. Prerequisite: MATH 21001 or permission of instructor.

45022 Linear Geometry (3)
Using transformations as a tool to study geometry and to differentiate between different kinds of geometry. Linear algebra methods applied to geometry. Prerequisite: MATH 21001 or permission.

46001 Elementary Topology (3)
Metric spaces, introduction to topological spaces, separation axioms. Prerequisite: MATH 22005.

47001 Mathematical Logic and Set Theory (3)
Axiomatic set theory, relations, development of real numbers, cardinal numbers, axiom of choice. Prerequisite: permission.

47011 Theory of Numbers (3)
Divisibility properties of the integers, prime numbers, congruences, quadratic reciprocity, Diophantine equations, number theoretic functions, simple continued fractions, rational approximations. Prerequisite: MATH 12003 or permission.

47021 History of Mathematics (3)
Survey from Babylonian and Egyptian mathematics to 20th century mathematics with emphasis on the development of algebra, geometry, calculus, number theory. Prerequisite: 3 hours of mathematics beyond 22005 or permission.

49995 Selected Topics in Mathematics 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.

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

49998 Research (1-15)
Prerequisite: permission.

MECHANICAL ENGINEERING AND RELATED TECHNOLOGIES (MERT)*

MECHANICAL ENGINEERING AND RELATED TECHNOLOGIES (MERT)*

12000 Engineering Drawing (3)
Engineering drawing principles and techniques: lettering, instrument use, orthographic projection, sketching, sections, auxiliary views, dimensioning and conventional practices. Electrical/electronics drawing including schematic and PC layout. Prerequisite: none.

12001 Computer-Aided Drafting (4)
Introduction to and use of computer-aided drafting techniques to draw working drawings: detail and assembly drawings of machine parts. Applications of descriptive geometry to determine true sizes, intersections and developments. Prerequisite: MERT 12000.

12004 Manufacturing Processes (3)
Basic principles of machine tools and machining processes including metal cutting, shaping, planing, drilling, turning and milling. Computer numerical control, special materials and processes. Prerequisite: none.

12005 Properties of Materials (3)
Nature of pure metals and alloys, properties of ferrous and nonferrous metals and nonmetallic materials. Casting, heat treating, forming, welding and related processes. Prerequisite: none.

21096 Individual Investigation in Mechanical Engineering Technology (1-4)
Independent, in-depth research of a mechanical engineering technology topic supervised and coordinated by an engineering technology faculty member. Prerequisite: permission.

22002 Statics and Strength of Materials (5)

22003 Computer-Aided Tool Design (3)
Tool design practices and procedures including materials, commercial standards, cutting tools, drill jigs, fixtures, dies and gauges using computer-aided design. Prerequisite: MERT 12001.

22004 Mechanics and Machine Design (5)
Machine design procedures including static and dynamic stresses, stress concentration, design considerations. Design of keys, pins, fasteners, welds, power transmission devices and related components. Prerequisite: MERT 22002.

22006 General Mechanical Laboratory (3)
Laboratory testing to determine material properties: tension, compression, shear, torsion, impact and hardness. Materials testing methods including engineering instrumentation. Prerequisite: sophomore standing.

22009 Robotics and Flexible Automation (3)
A hands-on course in automated manufacturing systems, including workcell design with interfacing to robotics and related economic considerations, selection and feasibility. Prerequisite: EERT 22014.

22011 Dynamics (3)
Motion of particles and rigid bodies; kinematics, kinetics, Newton’s Laws; work, energy, power and the impulse-momentum principle. Prerequisite: sophomore standing.

22012 Fluid Power (3)
Fluid properties, kinematics of fluid flow, momentum, viscosity, energy equation, turbulent and laminar flow, industrial hydraulics and equipment. Prerequisite: none.

22020 Applied Vector Analysis (1)
A course in vector analysis, differential forms, matrices and applied tensor analysis as applied to engineering and technology problems. Prerequisite: MATH 19002.

22021 Applied Finite Element Analysis (1)
Introduction to finite element analysis methods as applied to engineering and technology problems. Prerequisite: MATH 19002. Corequisite: MERT 22002.

22095 Special Topics (1-3)
Special topics in mechanical engineering technology. Repeated registration permitted. Prerequisite: permission.

MIDDLE CHILDHOOD EDUCATION (MCED)

30000 Curriculum and Organization in Middle Childhood (2)
History, philosophy, curricula and organization of schools serving early adolescents ages 8-14. Emphasis on development of programs and curricula that are culturally and developmentally responsive to the needs of early adolescents. Prerequisite: HDFS 24013.

30001 Teaching Mathematics in Middle Childhood I (3)
Examine issues and trends in mathematics and mathematics education. Theories of the teaching and learning of mathematics will be addressed within the context of problem solving, communications, reasoning and connections with other disciplines. Prerequisites: EDPF 29525, MATH 14001 and 14002 or MATH 12001 and 12002. Admission to advanced study. Special fee: $3.33/credit hour—subject to change.

30002 Integrated Social Studies and Science in Middle Childhood (3)
Introductory methods course integrating social studies and science. Emphasis on principles of teaching and learning as applied to teaching to social issues and problems appropriate for middle childhood students. Prerequisite: admission to advanced study. Special fee: $5/credit hour—subject to change.
30092 Field Experience II: Middle Childhood (1) School-based field experiences supplement the coursework in Curriculum and Organization in Middle Childhood. Emphasis on collaborative and interdisciplinary nature of teachers' work in middle childhood settings. S/U grading. Corequisite: MCED 30000.

31000 Teaching and Learning in Middle Childhood (3) Theories of learning and classroom management and their application to teaching in grades 4-9 classrooms with diverse learners. 15 credit hours of field experience in grades 4-5. Prerequisite: admission to advanced study in middle childhood education.

40000 Teaching and Learning in Middle Childhood (2) This course is the third of the four required seminars in middle childhood. Emphasis on theories of learning and classroom management and their application to teaching in classrooms with diverse learners. Prerequisite: HDFS 24013.

40001 Teaching Mathematics in Middle Childhood II (3) To develop knowledge of the theories, materials and methods used to teach mathematics in the contemporary classroom for grades 4-9 and develop skill in their use. Prerequisite: MCED 30001. Special fee: $3.33/credit hour—subject to change.

40002 Teaching Science in the Middle Childhood (3) Individual and group work develop effective techniques of teaching science concepts to 8-14-year-olds. Attention given to methods, equipment, safety and planning. This course includes 40 field/clinical hours. Prerequisite: MCED 30002. Special fee: $5/credit hour—subject to change.

40003 Teaching Social Studies in Middle Childhood II (3) Advanced methods course. Examines the purpose of citizenship education and understanding the role of history and the social sciences. Applying the principles of powerful teaching. Includes a major field experience at the student teaching site. Prerequisite: MCED 30002.

40005 Effective Use of Phonics in Reading (3) The influence of theoretical perspectives on word identification instruction, an examination of the role of phonics in reading and writing, strategies for effective phonics instruction and assessment. Prerequisite: advanced study.

40006 Reading and Writing in Middle Childhood (3) Understanding of literacy learning in the middle childhood (ages 8-14) with emphasis on the development of reading and writing processes, strategies for text learning, literacy in electronic environments, authentic assessment and teaching children who struggle as readers. Prerequisite: advanced study. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

40007 Teaching Reading With Literature in Middle Childhood (3) The study of the teaching of reading with literature to middle childhood students within an integrated language arts approach in a comprehensive literature program. Prerequisite: MCED 40006.

40008 Field Experience III: Middle Childhood (1) Students will be placed in their student teaching site(s). Field experiences will focus on individual, small group and large group instruction in inclusive classrooms. S/U grading. Corequisite: MCED 40000.

41000 Curriculum and Organization in Middle Childhood (3) History, philosophy, curricula and organization of schools serving early adolescents in grades 4-9. Emphasis on development of programs and curricula and early adolescent development. 15 credit hours of field experience in grades 6-9. Prerequisites: admission to advanced study into middle childhood education; MCED 31000.

42357 Student Teaching Middle Childhood/Gifted Education (5) All-day student teaching experience in the middle grade schools for eight weeks. S/U grading; IP grade permissible. Prerequisite: admission to the middle childhood gifted program; advanced standing; and completion of all professional coursework for the program. All others by permission of the program coordinator.

42358 Student Teaching in Middle Childhood (8) Full-time student teaching for 12 weeks in two selected concentrations (mathematics, science, language arts, social studies) and reading in grades 4-5/grades 6-7-8. S/U grading; IP grade permissible. Prerequisite: admission to the middle childhood program; advanced standing; and completion of all professional coursework for the program. Corequisite: MCED 49525.

49525 Inquiry into Professional Practice: Middle Childhood (3) A seminar linked to student teaching with an emphasis on action research as professional development; completion of professional portfolios; professional ethics; and legal, medical and ethical issues in teaching. Prerequisite: admission to middle childhood program; advanced standing; and completion of all professional coursework for the program. Corequisite: MCED 42358.

MILITARY SCIENCE (MSCI)

10180 Introduction to Leadership I (1) Introduces the student to the concept of leadership in the military and in democratic society in general. Examines leadership characteristics, principles and styles. Students must participate in outdoor character-building exercises. Corequisite: MSCI 10190 (ROTC only).

10185 Introduction to Leadership II (1) Introduces the student to techniques and methods that leaders must employ. Examines time management, stress management, staff/group dynamics, problem-solving process and leadership climate. Corequisite: MSCI 10190 (ROTC only).

10190 Leadership Seminar I (0) Instructional program preparing individuals to undertake the broad range of tasks associated with the dimensions of leadership. Stresses decision-making roles of leaders in planning and executing organizational programs. Corequisites: MSCI 10180, 10181.

20180 Survey of American Military History (1) Traces North American military history, theory, doctrine, strategy and tactics from the pre-Revolutionary period to the present. Corequisite: MSCI 20190.

20181 Leadership Assessment I (2) Interdisciplinary study of organizational leadership and group dynamics through assessment of 16 behavioral dimensions. Provides practical application and assessment of leadership skills in formal organizations. Corequisite: MSCI 20190 (ROTC only).

20183 Leadership Assessment II (2) Interdisciplinary study of organizational leadership and group dynamics through assessment of 16 behavioral dimensions. Provides practical application and assessment of leadership skills in formal organizations. Corequisite: MSCI 20190 (ROTC only).

20190 Leadership Seminar II (0) Instructional program preparing individuals to undertake the broad range of tasks associated with the dimensions of leadership. Stresses decision-making roles of leaders in planning and executing organizational programs. Corequisites: MSCI 20180, 20181, 20183.
20196  Individual Research (1 or 2)
Individual research projects in leadership, management techniques and MODE Program. Used ONLY for selected personnel for entry into the advanced program. Prerequisite: MS II standing: controlled.

20160  Leadership Development (3)
Develops managerial skills with emphasis on group dynamics, leadership theory and practical leadership experiences. Integrates communication skills, decision making and group motivation. Prerequisite: permission. Corequisite: MSCI 30190.

30170  Organizational Leadership (3)
Application of management fundamentals, decision theory and leadership principles to organizations. Emphasis in coordinating, directing and controlling organizations. Prerequisite: permission. Corequisite: MSCI 30190.

30183  Leadership Practicum (1-4)
Practical application of leadership in the military team. Prerequisite: permission.

30190  Leadership Laboratory III (0)
Instructional program preparing individuals to undertake the broad range of tasks associated with the dimensions of leadership. Stresses decision-making roles of leaders in planning and executing organizational programs. Corequisites: MSCI 30160, 30170.

40160  Military Management and Ethics (3)
Professional ethics and responsibilities of military leaders. Development of interpersonal and managerial communicative skills. Prerequisite: permission. Corequisite: MSCI 40190.

40170  The Professional Military Officer, Management, and Law (3)
Studies in professional officer development, military justice system and the management of personnel resources. Prerequisites: permission. Corequisite: MSCI 40190.

40190  Leadership Laboratory IV (3)
Instructional program preparing individuals to undertake the broad range of tasks associated with the dimensions of leadership. Stresses decision-making roles of leaders in planning and executing organizational programs. Prerequisites: permission. Corequisites: MSCI 40160, 40170.

40196  Individual Investigation (1-3)
Individual research projects, reports and readings. Prerequisites: controlled and advanced program standing.

MODERN AND CLASSICAL LANGUAGE STUDIES (MCLS)

10001  Introduction to Structural Concepts for Language Students (2)
Enter-level analysis of concepts of structure and form employed in language instruction. Designed for students who anticipate difficulty in basic language courses. Taught in English. Should be taken with a beginning language course. Prerequisite: none.

21417  Multiculturalism in Today’s Germany (3)
This course examines how issues of diversity have shaped German culture and traces the country’s transformation into a postnational, multicultural society. Taught in English; knowledge of German not necessary. Prerequisite: none. This course may be used to satisfy the diversity requirement.

22117  Diversity in Today’s Russia (3)
This course examines how issues of diversity have shaped Russian culture and traces Russia’s attempts at transition to a postnational, multicultural society. Taught in English; knowledge of Russian not necessary. Prerequisite: none. This course may be used to satisfy the diversity requirement.

23217  The Francophone Experience (3)
An introduction to various aspects of contemporary society and culture in countries where French is spoken. Taught in English; knowledge of French not necessary. Prerequisite: none. This course may be used to satisfy the diversity requirement.

28403  Hispanics in the United States (3)
An introduction to various aspects of Hispanic culture in the U.S. that examines how issues of diversity have shaped today’s multicultural United States. Taught in English; knowledge of Spanish not necessary. Prerequisite: none.

28404  The Latin American Experience (3)
An introduction to various aspects of contemporary Latin American societies and cultures. Taught in English; no knowledge of a foreign language is necessary. Prerequisite: none. This course may be used to satisfy the diversity requirement.

28405  The Spanish Experience (3)
An introduction to aspects of contemporary Spanish culture that examines how issues of diversity have shaped today’s multicultural, multilingual society. Taught in English; knowledge of Spanish not necessary. Prerequisite: none. This course may be used to satisfy the diversity requirement.

30230  Approaches to Translation (3)
An introduction to foreign language translation. Course introduces concepts, resources, principles and techniques of text analysis, and translation strategies applicable to various types of texts. Prerequisite: junior standing.

30576  Novels of Pierre Loti (3)
A study of the gay novels of Pierre Loti, including the emergence of the idea of “the homosexual man” in modern Western thought and the ways in which this development is reflected in the course of Loti’s writing. Prerequisite: ENG 21011. This course may be used to satisfy the diversity requirement.

30660  Orientation to Second Language Pedagogy (3)
Theories of human development and learning, second language acquisition research and second language methodology form the basis for classroom practices. Peer-teaching and 30 hours of field experience required. Prerequisite: admission to professional education: oral and written proficiency in language to be taught; or permission.

37143  The African-Brazilian Experience in Culture and Literature (3)
(Cross-listed with HIST 31143 and PAS 37143) Interdisciplinary approach to the study of the African-Brazilian experience, from the colonial period to the present, as reflected in selected literary, sociocultural and historical texts. Course taught in English. Prerequisite: junior standing or permission. This course may be used to satisfy the diversity requirement.

39697  Intradepartmental Colloquium (1-4)
Permits students to explore areas of special interest not usually covered in standard departmental courses, (e.g., movies and literature, women in literature). Prerequisite: none.

40093  Variable Title Workshop in Modern and Classical Language Studies (1-6)
Workshops individually designed to provide instruction and training in specific areas of modern and classical language studies. S/U grading. Prerequisite: departmental permission.

40095  Selected Topics (1-3)
Topic to be announced in the Schedule of Classes. Repeated registration permitted when content varies. Prerequisite: senior standing or permission.

40420  Foreign Languages and Culture Studies (2)
Students of international business, foreign languages and translation will explore the complex relationship between a foreign language and the cultural system of which it is a part. Course focuses on German, French and Spanish cultures. Prerequisite: none.

40525  Inquiry into Professional Practice (3)
Foreign language teaching as a profession and the teacher as disciplined investigator. The final seminar of four, it is conducted during the student teaching semester with emphasis on collaborative and individual classroom problem solving. Prerequisite: admission to student teaching.
40654  Computers in Second Language Teaching (3)
Designed for future teachers of language and culture, this course explores the availability of technology, its implementation in the classroom and its integration with second language skills. Prerequisite: none.

40657  Student Teaching of a Second Language (3-9)
Supervised practicum in the teaching of a second language, grades K-12. S/U grading; IP grade permissible. Prerequisite: admission to student teaching.

40660  Methods of Teaching Foreign Language (03)
Theoretical bases, approaches, methods, materials and techniques of foreign language instruction at the elementary and secondary levels. Peer-teaching and 30 hours of field experience required. Prerequisite: MCLS 30660 and foreign language proficiency level for teaching in public schools.

MUSIC (MUS)

11111  Music Rudiments (3)
Introduction to the pitch and rhythmic aspects of music. Emphasis on aural/oral skills and music notation. No credit toward graduation for music majors or minors. Prerequisite: placement test.

11121  Theory (3)
Basic elements of music—harmonic, melodic, rhythmic—studied through analysis, composition, keyboard and ear training. Diatonic materials emphasized. Prerequisite: placement test.

11122  Theory (3)
Continuation of basic elements of music—harmonic, melodic, rhythmic—studied through analysis, composition, keyboard, singing and ear training. Chromatic materials emphasized. Prerequisite: MUS 11121.

12211  Music of Western Cultures (2)
Provides a basic understanding of the elements of music embedded in a survey of types of music cultivated in Western societies including folk, popular and classical. Prerequisite: music major, minor or permission.

12212  Music of Nonwestern Cultures (2)
A survey of the musics of traditional Europe, Latin America, Asia, Africa and Oceania. Attention is given to listening skills, cultural context, organology, function and technical matters of style. May not earn credit for both MUS 12211 and 22121. Prerequisite: MUS 12211.

18611  Singer's Diction I (1)
Foundational training and performance practice in phonetics and singing diction for the English, American, Ecclesiastical Latin and Italian vocal repertoire. Prerequisite: music major or permission of instructor.

18612  Singer's Diction II (1)
Foundational training and performance practice in phonetics and singing diction for the vocal repertoire of French, German and selected other languages. Prerequisite: music major or permission.

20295  Special Topics in Music (1-3)
(Repeated registration permitted). Academic study in areas not offered adequately in the music curriculum. Topic areas are of special interest to the faculty member. Prerequisite: music major, minor or permission.

21121  Music Theory to 1750 (3)
Study of Western musical style from Gregorian chant through the Baroque period. Emphasis on aural, compositional, written and keyboard approaches as appropriate to medieval, Renaissance and Baroque music. Prerequisite: MUS 11122. Corequisite: MUS 32211.

21122  Music Theory From 1750 to 1900 (3)
Study of Western musical style from the early classical to the late Romantic period. Emphasis on aural, compositional, written and keyboard approaches as appropriate to classical and Romantic music. Prerequisite: MUS 21121 and 32211. Corequisite: MUS 32212.

22111  The Understanding of Music (3)
A listening approach for the understanding of Western art music, folk and jazz. Particular attention is paid to musical styles, forms and compositional techniques as related to music history. Not open to music majors. Prerequisite: nonmusic majors. This course may be used to satisfy the Liberal Education Requirements (LER).

22121  Music As a World Phenomenon (3)
An introduction to music as a world phenomenon. Study of selected art, folk and popular musics from world cultures through live performances, tapes, films, video tapes and readings. No credit for both MUS 22121 and 12212. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

23111  Music Fundamentals (3)
The study of pitch, rhythm, notation, structure and interpretation of music through performance on voice, melody instruments and accompanying instruments. Prerequisite: none.

23241  Music Teaching As a Profession (2)
Basic teaching strategies and techniques; an overview of music teaching as a career; diversity, integration, curriculum technology, classroom management, legal issues, personal skills and portfolio. Forty-five field/training hours required. Prerequisites: music major, sophomore standing.

25011  University Chorus (1)*
(Repeated registration permitted) Choral ensemble which studies and performs sacred and secular music for mixed voices. Activities include performance on and off campus. Prerequisite: audition or permission.

25131  Opera: Singer-Actor Techniques (1)
(Repeated registration permitted). Training in methods and skills necessary to the art of the singer-actor. Opera performed and prepared via study, observation and rehearsal. Prerequisite: audition.

25225  University Band (1)
(Repeated registration permitted.) Study and performance of music literature for wind band appropriate for music majors and nonmajors. Prerequisite: none.

25231  Jazz Ensemble (1)
(Repeated registration permitted.) Study and performance of music literature for jazz ensemble appropriate for music majors and nonmajors. Prerequisite: none.

25311  Chamber Music (1)
(Repeated registration permitted.) The study and performance of music for small ensembles. Prerequisite: permission.

31111  Advanced Sight Singing (2)
Advanced sight singing and ear training. Sight singing in five clefs emphasizing vocal and instrumental works from various periods including contemporary. Prerequisite: MUS 21122.

31121  Western Music Since 1900 (2)
Class meets three hours per week. The study of Western art music since 1900 from historical and theoretical viewpoints. Emphasis on aural, listening, music composition and written skills as well as intellectual understanding. Prerequisites: MUS 21122 and 32212.

31211  Composition (2)
(Repeated registration permitted) Original composition for instrumental and vocal solos and small ensembles using shorter musical forms. Prerequisite: permission.

*Courses offered only at Regional Campuses.
2211 Music History to 1750 (3)
A survey of Western music history from the early Christian chants through the Baroque style. Prerequisite: MUS 12211. Corequisite: MUS 21121.

2212 Music History 1750 to 1900 (3)
A survey of Western music history of the 18th and 19th centuries. Prerequisite: MUS 12211, 21121 and 21122. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

33111 Teaching Music in the Elementary Classroom (3)
Study of music and related arts for the classroom. Development of music skills and strategies for teaching music to children in elementary schools. Three field/clinical hours are required. Prerequisites: MUS 23111, EDPF 28911, 29515, 29592 and C&I 20000.

33211 Elementary and Secondary General Music (3)
Kodaly, Orff, Dalcroze and recent methods in general music. Music reading in elementary and secondary classes; cultural diversity and pedagogy for the special learner. Sixty field/clinical hours required. Taken concurrently with MUS 33212. Prerequisite: music major or permission.

33212 Teaching Skills in Music Education: General/Instrumental (1)
Clinical experience in the teaching of general and instrumental music in the schools. Fifteen field/clinical hours required. Taken concurrently with MUS 33211 or 43231. Prerequisite: music major, junior standing.

33213 Teaching Skills in Music Education: Choral/Orchestral (1)
Clinical experience in the teaching of choral and orchestral music in the schools. Fifteen field/clinical hours required. Taken concurrently with MUS 33211 or MUS 42211. Prerequisite: music major, junior standing.

33231 Elementary and Secondary Choral Music (3)
Choral methods, rehearsal techniques, conducting skills and literature used in elementary and secondary schools. Sixty field/clinical hours required. Taken concurrently with MUS 33213. Prerequisite: MUS 23241 and 34111.

34111 Elementary Conducting (2)
Introduction to and study of conducting: beat patterns, baton techniques, score reading, analysis and interpretive elements. Six field/clinical hours are required. Prerequisite: MUS 21121 or permission.

40295 Special Topics in Music (1-3)
(Repeatable for a total of 12 hours) Academic study in areas not offered adequately in the music curriculum. Topic areas are of special interest to the faculty member.

40296 Independent Study: Music (1-3)
Individual investigation in music topics not offered as either regular coursework or beyond the scope of existing music major courses. Repeatable for credit. Prerequisites: music major and permission.

41111 Practicum in Music Theory (2)
Ear training, sight singing, and analysis in preparation for graduate-level music theory coursework. Prerequisite: permission.

41131 Keyboard Harmony (3)
Theoretical skills demonstrated at the keyboard: harmonization of melodies in homophonic style, realization of figured bass, score reading, modulation and improvisation. Prerequisite: MUS 21122.

41141 Sixteenth-Century Counterpoint (3)
Two-, three-, and four-part vocal counterpoint in 16th-century style. Prerequisite: MUS 21122.

41151 Eighteenth-Century Counterpoint (3)
Technique of writing counterpoint in 18th-century style, especially that of J.S. Bach. Prerequisite: MUS 21122.

41161 Advanced Musical Analysis (3)
A study of 20th-century approaches to tonal and nontonal musical analysis. Emphasis on familiarity with styles, nomenclature and appropriate graphic techniques. Prerequisite: MUS 31121.

41181 Acoustics and Technology in Music (2)
An introduction to acoustics and psychoacoustics in direct relationship to music, and an introduction to uses of technology in music composition, performance, notation, theory, history and pedagogy. Prerequisite: music major or minor or permission.

41199 Senior Project: Music Theory (3)
Preparation and presentation of a senior thesis in the student’s area of expertise. Prerequisite: permission.

41211 Composition (2-4)
(Repeated registration permitted) Study of the materials and techniques of musical composition culminating in original works based on observable principles of unity and variety. Prerequisite: composition majors.

41220 Introduction to Electronic Music (3)
General introductory survey of electronic music, including its technology, history and aesthetics. Use of electronic media in art, music, jazz and popular music. Prerequisite: none.

41231 Techniques of Electronic Music (3)
Techniques of the composition of electronic music, including tape techniques and synthesizer techniques. Study oriented toward the facilities of the Kent State University Electronic Music Studio. Prerequisite: music major or permission.

41299 Senior Project: Music Composition (3)
The final composition experience prior to graduation. A recital of individually composed works must be presented. Prerequisite: MUS 41211.

41321 Orchestration (3)
Ranges, tonal possibilities, technical limitations and transpositions for all orchestral instruments. Scoring techniques and analysis of representative instrumental ensemble repertoire. Prerequisite: MUS 21122.

41341 Jazz Improvisation (2)
The development of the art of jazz improvisation through performance and analysis. Prerequisite: permission.

41342 Jazz Arranging (2)
Arranging for the large and small jazz ensemble. Prerequisite: permission.

42111 African Music and Cultures (3)
African music as related to social sciences and humanities. Oral traditions. Use of music recordings, tapes, musical instruments, participation in performance, and group work involvement. Prerequisite: none.

42131 America’s Music (3)
Historical survey of music in America from New England psalmody to present-day compositional trends. Prerequisite: none.

42141 Folk and Traditional Music of Western Continents (3)
Study of selected music cultures of Eastern and Western Europe, and South, Central and North America. Prerequisite: none.

42151 Asian Musics (3)
Survey of Asian musics. Emphasis on art, folk and popular musics and relationships of these musics to their respective cultures. Prerequisite: none.
42161 History of Jazz (3)
The evolution of jazz from its origin to present. Prerequisite: none.

42221 Symphonic Literature (3)
Historical and stylistic survey of music for large instrumental ensemble. Prerequisite: MUS 21122 or permission.

42222 Chamber Music Literature (3)
Historical and stylistic survey of chamber music literature. Prerequisite: MUS 21122 or permission.

42241 Piano Literature (3)
Survey of keyboard and piano literature from the 16th century to the present; study of related forms and styles. Emphasis on performing, listening and analysis. Prerequisite: permission.

42251 Song Literature (3)
A study of vocal literature from the 16th century to the present. Emphasis upon the style, interpretation and presentation of solo materials for all voice classifications. Prerequisite: MUS 32212 or permission.

42261 Opera Literature (3)
The historical development of opera from the 17th century to the present. Detailed analysis of representative works. Prerequisite: MUS 32212 or permission.

42271 Choral Literature (3)
Study of choral literature from all historical periods and styles. Prerequisite: permission.

42357 Student Teaching and Seminar (9)
The course provides a 15-week student teaching experience. Off-campus arrangements are handled by the School of Music. SU grading; IP grade permissible. Prerequisite: eligibility for admission to student teaching. Corequisite: MUS 49625.

43211 Secondary Instrumental Methods (3)
Secondary instrumental instruction; program organization, planning, repair, methods, choosing music, materials and teaching techniques. Sixty (60) field/clinical hours required. Taken concurrently with MUS 33213. Prerequisite: MUS 23241 and permission.

43231 Elementary and Middle School Instrumental Method (3)
Elementary and middle school instrumental instruction, program organization, rehearsal/teaching techniques, lesson plans, literature, budget/scheduling, recruiting, Sixty field/clinical hours required. Taken concurrently with MUS 33212. Prerequisite: MUS 23241 and permission.

43241 Marching Band Techniques and Literature (2)
Organization, administration and techniques of marching bands in the schools. Topics covered include musical styles, literature and show design. Ten field/clinical hours are required. Prerequisite: permission.

43242 Jazz Ensemble Techniques and Literature (2)
Study of the curriculum for the jazz ensemble, including organizational and administrative procedures. Emphasis on music interpretation, jazz styles and rehearsal techniques taught through laboratory experience. Prerequisite: permission.

43243 Vocal Jazz and Musical Theatre in the Schools (3)
History, vocal technique, style characteristics and repertoire necessary for teaching vocal jazz and African-American spirituals. Repertoire, organization and publicity for school productions of American musical theatre. Prerequisite: music major and junior standing.

43244 Student Teaching Preparation (2)
Individualized instruction to prepare music education students to student teach. Emphasis is placed on removing deficiencies or enhancing strengths prior to student teaching. Prerequisite: concurrent registration with student teaching is required.

45111 Choral Conducting and Arranging (3)
Continued development of conducting technique, score reading analysis, styles, interpretation, rehearsal procedure, language pronunciation, and arranging for voices and instruments. Six field/clinical hours are required. Prerequisite: MUS 34111.

45112 Instrumental Conducting and Arranging (3)
Continued development of conducting technique, score reading, analysis, styles, interpretation, rehearsal procedure and arranging for instrumental organizations. Twelve field/clinical hours are required. Prerequisite: MUS 34111.

45113 Opera: Singer-Actor Techniques (2)
(Repeated registration permitted) Training in methods and skills necessary to the art of the singer-actor. Opera performed and prepared via study, observation and rehearsal. Prerequisite: audition.

45141 Kent State University Chorale (1)
(Repeated registration permitted) Study and performance of literature for choral chamber ensemble from Medieval through contemporary styles with appropriate accompaniment sung in the original language. Prerequisite: audition.

45142 Men’s Chorus (1)
A chorus of male voices. Emphasis on music literacy, vocal production, instruction, study and performance of music written for male voices. All Western music periods are represented. Experience with mixed-voice choirs also occurs. Prerequisite: permission.

45143 Women’s Chorus (1)
A chorus of women’s voices. Emphasis on music literacy, vocal production, instruction, study and performance of music written for women’s voices. All Western music periods are represented. Experience with mixed-voice choirs also occurs. Prerequisite: permission.

45151 Kent State University Gospel Choir (1)
(Repeated registration permitted) Study and performance of choral music in the gospel tradition, including works by contemporary artists. One weekly rehearsal and a minimum of one concert per semester. Off-campus concerts are possible. Prerequisite: none.

45212 Orchestra (1)
(Repeated registration permitted) A select group of instrumentalists for the purpose of studying and performing music written specifically for chamber orchestra including works of the 17th, 18th and 20th centuries. Prerequisite: audition.

45221 Concert Band (1)
(Repeated registration permitted) Study and performance of music literature for wind band. Prerequisite: audition.

45222 Marching Band (1)
(Repeated registration permitted) Study and performance of literature and maneuvers for marching band. Prerequisite: audition.

45223 Wind Ensemble (1)
(Repeated registration permitted) A select concert ensemble that performs the finest in wind instrument literature with emphasis on major original works. Prerequisite: audition.

*Courses offered only at Regional Campuses.
MUS

45224 Basketball Band (1)
(Repeated registration permitted) Study and performance of music for the basketball band. Prerequisite: audition.

45225 University Band (1)
(Repeated registration permitted) Study and performance of music literature for wind band appropriate for nonmusic majors, and for music education majors performing on secondary instruments. Prerequisite: none.

45231 Jazz Ensemble (1)
(Repeated registration permitted) Study and performance of music literature in the jazz idiom. Prerequisite: audition.

45241 Trombone Ensemble (1)
(Repeated registration permitted) A thorough study of trombone performance in various-sized ensembles. Emphasis on original literature from over four centuries. Prerequisite: audition.

45251 Percussion Ensemble (1)
(Repeated registration permitted) A comprehensive study of percussion performance in various-sized ensembles. Use of keyboard percussion instruments along with drums and accessories. Study of percussion ensemble literature. Prerequisite: audition.

45261 Bassoon Ensemble (1)
(Repeated registration permitted) Study and performance of music for multiple bassoons; emphasis upon refined ensemble playing, interpretation, leadership skills and arranging techniques. Prerequisite: permission/audition.

45271 New Music Ensemble (1)
(Repeated registration permitted) Study and performance of 20th-century chamber music with an emphasis on works by contemporary composers. Prerequisite: permission.

45281 Flute Ensemble (1)
(Repeated registration permitted) Study and performance of music for multiple flutes; emphasis upon all aspects of ensemble playing and style considerations will be addressed in both chamber and conducted formats. Prerequisite: permission/audition.

45321 Accompanying (1 or 2)
(Repeated registration permitted) Accompanying instrumental and vocal soloists; piano ensemble works. Credit counted toward ensemble requirements. One-hour credit for two hours of assigned accompanying weekly. Prerequisite: permission.

47014 Folk Guitar for the Music Educator (1)
Development of basic folk guitar performance skills for music education majors. Prerequisite: music major, MUS 23111 or permission. Special fee: $35—subject to change.

47811 Instrument Class for the Choral/General Music Educator (1)
Class instruction in the basic playing skills of band and orchestral instruments intended to provide familiarity with the common school instruments for the choral/general music major. Prerequisite: music major or permission. Special fee: $20—subject to change.

48111 Eurhythms (1)
Applied study of rhythm through kinesthetic, intellectual and emotional involvement. Movement experiences to strengthen concentration and communication between ear, brain and muscles that execute rhythm. Prerequisite: music majors-minors.

48112 Eurhythms (1)
See MUS 48111. Prerequisite: MUS 48111.

48211 Introduction to Piano Pedagogy (2)
Observation and teaching of individual and class lessons, children and adults. Study and performance of preparatory materials, elementary through intermediate piano literature. Prerequisite: junior standing.

48221 Elements of Accompanying I (2)
Techniques of accompanying; selected overview of art song literature including Italian, German, French and English songs; development of playing-at-sight skills. Prerequisite: permission.

48222 Elements of Accompanying II (2)
Continuation of accompanying techniques including opera accompanying, orchestral reductions and selected overview of literature for solo instrument and piano; continuation of playing-at-sight skills. Prerequisite: MUS 48221.

48241 Voice Pedagogy (2)
Survey of techniques, practices and materials of teaching voice. Prerequisite: permission.

48251 Pedagogy of Music Theory (2)
The principles and techniques of teaching music theory. Prerequisite: MUS 21122.

48257 Pedagogy—Instrumental (2)
Principles and techniques of instruction; literature survey. Analysis of instrumental problems and performance practice. Offered as needed for strings, woodwinds, brass, percussion, organ or guitar. Prerequisite: permission.

48303 Variable Title Workshop in Music (1–4)
Offered for specific professional needs. Emphasis on performance and pedagogical skills. S/U grading. Prerequisite: permission.

48512 Improvisation (1)
The development of musical improvisation skills not tied to any particular music style. Students will perform on their own applied instrument(s). Prerequisite: MUS 21121.

48598 Music Research (2–3)
(Repeated registration permitted) Research or individual investigation for undergraduate students. IP grade permissible. Prerequisite: permission.

49625 Inquiry into Professional Practice (2)
Instruction in band, choral, general and orchestral music methods for music education majors. Focus on teacher leadership experiences and action research projects. Sixty-two field/clinical hours required. Prerequisite: music major, senior standing.

Applied Music
Students who plan to register for applied music for the first time must audition for the appropriate faculty member(s) prior to registering for the course.

Private applied music instruction: Privately instructed performance courses are offered each semester. Performance majors will register for 4 credit hours, receive a one-hour lesson weekly and attend the weekly studio class of their major performing medium. Non-performance majors will register for 2 hours of credit, receive one-half hour lesson weekly and attend the weekly studio class of their major performing medium. Applied music study for non-majors and non-minors is subject to faculty and studio availability and may be elected only with the permission of the School of Music.

The following courses are either 2 or 4 credit hours. Students electing 2 credits pay $80 per semester; students electing 4 credits pay $160 per semester.
<table>
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| 36111, 46111 | Piano Class for Nonmusic Students (2 Each)  
|           | Development of basic skills required in playing piano, including familiarity with the keyboard and music notation. Prerequisite: MUS 17011—none; 17012—MUS 17011 or audition. |
| 36311, 46311 | Voice Class (1 Each)  
|           | Preparatory voice. Credit not acceptable on music major sequences. Piano literature and functional elements of sight-reading, transposition, harmonization and improvisation. Prerequisite: audition. Special fee: $35/credit hour—subject to change. |
| 36411, 46411 | Violin (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36412, 46412 | Viola (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36413, 46413 | Cello (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36414, 46414 | Double Bass (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36511, 46511 | Flute (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36512, 46512 | Oboe (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36513, 46513 | Clarinet (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36514, 46514 | Bassoon (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36515, 46515 | Saxophone (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36611, 46611 | Trumpet (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36612, 46612 | Horn (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36613, 46613 | Trombone (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36614, 46614 | Euphonium (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36615, 46615 | Tuba (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36711, 46711 | Percussion (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |
| 36912, 46912 | Guitar (2 or 4)  
|           | A comprehensive study of performance, technique and repertoire appropriate to music majors and minors. Individual instruction. Prerequisite: audition. |

*Courses offered only at Regional Campuses.*
37111 Functional Piano (2)
Development of keyboard facility for practical purposes in classroom. Credit-By-Exam with departmental approval. Prerequisite: MUS 21122 or permission.

40296 Independent Study: Music (1-3)
Individual investigation in music topics not offered as either regular coursework or beyond the scope of existing music major courses. Repeatable for credit. Prerequisite: music major and permission.

47012 Folk Guitar Class I (2)
Development of basic folk guitar performance skills. Prerequisite: none.

47013 Folk Guitar Class II (2)
Continued development of acoustic guitar performance skills, study of performance-related theory and related topics such as open tuning and slide guitar. Prerequisite: MUS 47012 or permission.

47311 Voice Class (1)
Class instruction in the fundamentals of correct breathing, tone production and diction. Prerequisite: music majors-minors or permission. Special fee: $35/credit hour—subject to change.

47411 String Class (1)
(Repeatable for a total of 3 hours) Class lessons in fundamental principles of performance on woodwind instruments; methods and materials for class and private instruction. Prerequisite: music major-minor or permission. Special fee: $35/credit hour—subject to change.

47511 Woodwind Class (1)
(Repeatable for a total of 3 hours) Study of fundamental principles of performance on woodwind instruments; methods and materials for class and private instruction. Prerequisite: music major-minor or permission. Special fee: $35/credit hour—subject to change.

47611 Brass Class (1)
(Repeatable for a total of 3 hours) Study of fundamental principles of playing and teaching brass instruments. Survey of materials and method books suitable for class and private instruction. Prerequisite: music major-minor or permission. Special fee: $35/credit hour—subject to change.

47711 Percussion Class (1)
Study of various percussion instruments (mallets, snare drum, timpani and auxiliary) and techniques of performance. Designed for music educator with no previous percussion experience. Prerequisite: music major-minor or permission. Special fee: $35/credit hour—subject to change.

**MUS NURS**

**NURSING (NURS)**

10021 Basic Life Support Instructor Certification (1)
Development of techniques used in teaching B.C.L.S. instructor certification in cardiopulmonary resuscitation. One-hour lecture and two-hour laboratory weekly. S/U grading. Prerequisite: none.

10050 Introduction to Professional Nursing (1)
Focus on nursing's development as a discipline and profession. The scope of nursing practice and the health care delivery system are discussed. Prerequisite: none.

20000 Professional Nursing Issues (2)
Focuses on nursing theory; personal and professional role development; issues of cultural diversity; ethical, political and economic influences on health care delivery at local and regional levels. Prerequisite: admission to sophomore nursing sequence; NURS 10050.

20020 Foundations of Assessment and Communication in Nursing (3)
Individuals are assessed as members of families and community members. Communication in nursing is explored. Prerequisite: admission to sophomore nursing sequence. Special laboratory fee: $50.50—subject to change.

20030 Foundations of Nursing Interventions (5)
Focuses on aspects of nursing care to improve the health of individuals within families and groups. Utilizes principles of the interpersonal process, nursing process and professional nursing. Prerequisite: NURS 20020. Special laboratory fee: $80—subject to change.

20160 Nursing Process (2)
Concepts of nursing process/process recording are taught with emphasis on those processes as used at Kent State University College of Nursing. Philosophies of nursing are discussed. Prerequisites: sophomore in nursing and permission.

20950 Human Growth and Development for Health Professionals (3)
Examines theoretical principles and concepts of human growth and development throughout the life cycle applicable to personal and professional activities essential to the accurate assessment of human needs and understanding human behaviors. Prerequisite: PSYCH 11762 and sophomore standing.

21095 Special Topics (2-4)
Scheduled topics of interest to faculty and students. Prerequisite: sophomore standing.

21096 Individual Investigation (2-4)
Designed for the student interested in exploration and research of material not covered in required nursing courses. Prerequisites: NURS 20040 and permission.

30000 Professional Nursing Concepts (2)
Focuses on concepts impacting professional nursing. National issues affecting nursing and health care are examined. Prerequisites: NURS 20000, 20030, 20950; BSCI 30030, 30050 and CHEM 20284. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

30010 Parent and Newborn Nursing (4)
A study of nursing assessment, need identification and evaluation for individuals and families during the child bearing cycle. Prerequisites: NURS 20000, 20030, 20950; BSCI 30030, 30050; and CHEM 20284. Special laboratory fee: $69—subject to change.

30020 Health Care of Children (4)
Nursing process in family-centered care of children including health and developmental promotion and illness and restorative intervention. Prerequisites: NURS 20000, 20030, 20950; BSCI 30030, 30050; and CHEM 20284. Special laboratory fee: $69—subject to change.

30030 Nursing of Adults (5)
Focuses on nursing process as foundation to provide nursing care composed of clinical experience in acute care settings. Prerequisites: NURS 20000, 20030, 20950; BSCI 30030, 30050; and CHEM 20284. Special laboratory fee: $80—subject to change.

30040 Nursing of Adults with Rehab Needs and/or Gerontologic Changes (4)
This course encompasses care of persons and families dealing with gerontologic changes and/or rehabilitation needs. Prerequisites: NURS 20000, 20030, 20950; BSCI 30030, 30050; and CHEM 20284. Special laboratory fee: $69—subject to change.

30050 Basic Nursing Informatics (2)
Focuses on the use of nursing informatics for clinical nursing practice, inquiry and communication. Prerequisite: NURS 20020.

30060 Basic Pharmacology for Nursing Practice (2)
Introduction to general principles of pharmacology. Major classes of pharmacotherapeutic agents, mechanisms of action, pharmacokinetics, dosage and administration; effects and nursing responsibilities. Prerequisites: NURS 20020; BSCI 30030; and CHEM 20284.
Course Descriptions

30063 Spiritual Care of Patients (2)
Study of the spiritual needs of patients and the nurse’s role with regard to these needs. Prerequisites: NURS 20041 and 20950.

31095 Special Topics (2-4)
Scheduled topics of interest to faculty and students. Prerequisites: NURS 20041 and 20950 or permission.

31096 Individual Investigation (2-4)
Designed for the student interested in exploration and research of material not covered in required nursing courses. Prerequisites: NURS 20041 and permission.

40000 Professional Nursing Development (2)
Focuses on career development in professional nursing. International and/or global issues affecting nursing and health care delivery are examined. Prerequisites: NURS 30000, 30010, 30030, 30040, 30050, and 30060. Special laboratory fee: $69—subject to change.

40010 Nursing of the Critically Ill (4)
Holistic approach to assessing, intervening, and evaluating critically ill persons. Nursing practice in critical care settings with diverse populations. Prerequisites: NURS 30000, 30010, 30030, 30040, and 30050. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

40020 Community Health Nursing (4)
Concepts of community health nursing with emphasis on health promotion and prevention of population-based health problems. Students are responsible for their own transportation to field experience. Prerequisites: NURS 30000, 30010, 30020, 30030, 30040, 30050, and 30060. Special laboratory fee: $69—subject to change.

40030 Psychiatric Nursing and Mental Health Nursing Care (4)
Focuses on the development of therapeutic relationships with individuals, families and vulnerable populations across the life span who have potential and/or identified mental health needs. Students will learn and apply theory about mental health illness. Prerequisites: NURS 30000, 30100, 30020, 30030, 30040, 30050, 30060. Special laboratory fee: $17.25/credit hour—subject to change.

40040 Leadership and Management in Nursing (4)
Concepts and practice essential to leading and managing health care personnel across the health care continuum. Prerequisites: NURS 30000, 30010, 30020, 30030, 30040, 30050, and 30060. Special laboratory fee: $60—subject to change.

40050 Practicum in Nursing Integration (3)
The course focuses on role development/synthesis of nursing knowledge in a selected potential practice area. Students set their own objectives and are paired with a nurse preceptor. Prerequisites: NURS 30000, 30010, 30020, 30030, 30040, 30050 and 30060. Special laboratory fee: $50.50—subject to change.

40057 Case Management in Healthcare Agencies (2-3)
Course describes roles of institutional, community and insurance-based case managers; identifies mechanisms to establish case management systems; and develops communication, critical evaluation and financial management skills. Prerequisite: senior standing.

40061 Physical Assessment (2)
Self-instructional course using AV materials, readings and laboratory practice in the performance of physical assessments. Instructor available weekly. Written and performance tests required. Prerequisite: senior nursing student or permission.

40062 Nurse Externship in Nursing Practice (4)
Opportunity for professional nursing practice is expanded to a selected population with complex health care needs. Focus is on increasing theoretical knowledge base and using knowledge in complex care situations with patients and their families. Prerequisite: senior nursing student or permission.

40065 Introduction to Nursing Inquiry and Research (3)
Introduction to clinical inquiry and research for the registered nurse. Prerequisites: NURS 30160, 30361, 30462, 30870 or permission.

40085 Introduction to Nursing Inquiry and Research (3)
Introduction to clinical inquiry and research for the professional nurse. Theoretical frameworks appropriate to nursing are used in the development of a nursing research proposal. Prerequisite: NURS 40060 and statistics course. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

40872 Introduction to Nursing Research (3)

41000 Nursing Concepts and Professional Nursing Role Development (5)
The course is designed to assist RN students utilizing their personal and professional knowledge and experience in the study of leadership and management. Facilitates discovery of how nursing and leadership theories define and enhance practice. Focuses on career development in professional nursing and the role of the professional nurse. Didactic and clinical content and experiences are designed to assist in analysis of the professional role. Emphasis is placed on student accountability for learning. IP grade permissible. Prerequisite: registered nurse or graduate of an associate degree or diploma nursing program. Satisfactory completion of BSCI 20020, 20021, CHEM 10050, 10052 or permission.

41095 Special Topics (2-4)
Scheduled topics of interest to faculty and students. Topics to be announced when scheduled. Prerequisites: NURS 30160, 30361, 30462, 30870 or permission.

41096 Individual Investigation (2-4)
Designed for the student interested in exploration and research of material not covered in required nursing courses. Prerequisites: NURS 30160, 30361, 30462 and 30870.

42000 Leadership/Management for the Professional Nurse (5)
The course is designed to assist RN students utilizing their personal and professional knowledge and experience in the study of leadership and management. Facilitates discovery of how nursing and leadership theories define and enhance practice. Focuses on career development in professional nursing and the role of the professional nurse. Didactic and clinical content and experiences are designed to assist in analysis of the professional role. Emphasis is placed on student accountability for learning. IP grade permissible. Prerequisite: NURS 41000.

44000 Community-Oriented Nursing Practice (5)
Concepts of community-oriented nursing practice with emphasis on improving the health of the community. This course is a Web-based course designed for registered nurses completing the RN-BSN/MSN program. 3 credit hours of class and two credit hours of clinical. Prerequisite: NURS 41000.

NURSING TECHNOLOGY (NRST)*
All nursing courses must be taken in sequence.

10001 Foundations of Nursing Agency (5)
Development of basic nursing skills and physical assessment. The student will begin implementation of the nursing process using Universal Self-Care Requisites as an organizational framework. Prerequisite: admission to the nursing program.
10002 Introduction to Nursing Process (1)
Orem’s theory is used as the organizing framework.
The nursing care plan format using the nursing process is presented. Prerequisite: Admission to the nursing program. Corequisite: NRST 10001.

10003 Nursing Agency I (6)
Emphasizes broad concepts common to nursing practice. Increasingly complex skills are introduced. Care focuses on simple therapeutic self-care demands. Prerequisites: Successful completion of all first-semester courses (BSCI 20020, CHEM 10054, or CHEM 10050, US 10001, NRST 10001 and 10002) with a cumulative 2.0 GPA or higher.

10004 Older Adult Developmental Self-Care (2)
Age-related and pathological changes of aging. Includes nursing care approaches for older patients with health deviations. Prerequisites: Admission to the nursing program. Permission of the director required for LPNS. Cumulative 2.0 GPA or higher.

10005 Therapeutic Use of Self (2)
Focus is on the self-care of individuals with emphasis on understanding human relationships in the promotion of self-care. Culture, values and past experiences as factors in communication are explored. Prerequisites: NRST 10001 and 10002; cumulative 2.0 GPA or higher.

10006 Transitions in Nursing Agency (3)
This course serves to validate prior learning, update and enhance students’ knowledge, begin the role transition and prepare students for advanced placement into the RN-ADN program. Prerequisites: Admission to ADN program; BSCI 20020, US 10001, CHEM 10054 or CHEM 10050 and CHEM 10052, and NRST 10004. Cumulative 2.0 GPA or higher.

20026 Nursing Agency II (5)
Nursing care of adults with intermediate therapeutic self-care demands. Emphasis is placed on the nurse as a provider of care. Prerequisites: All 10000-level NRST courses; BSCI 20021; CHEM 10052; PSYC 11762; NUTR 33512; cumulative 2.0 GPA or higher.

20027 Psychosocial Self-Care Deficits (3)
Focus is on self-care deficits of the emotionally ill patient with emphasis on understanding human needs in relation to the abnormal behavior patterns of the adult. Emphasis continues to be placed on the therapeutic use of self in meeting psychological needs as well as the development of therapeutic communication skills. Prerequisites: All 10000-level NRST courses, BSCI 20021, PSYC 11762, NUTR 33512, with a cumulative 2.0 GPA or higher.

20028 Nursing Agency III (6)
Nursing care of individuals with complex therapeutic self-care demands. Emphasis is placed on the nurse as provider and manager of patient care. Course must be taken the semester that the student is planning to graduate. Prerequisites: NRST 20026, 20207 and NURS 20950; ENG 11011, SOC 12050, one 3-credit-hour LER course. Cumulative 2.0 GPA or higher.

20207 Maternal/Newborn Development Self-Care (2)
Nursing care of the expectant and newly delivered family. The nursing approach acknowledges the mother’s self-care abilities and dependent care agent role. Health deviations related to childbearing are incorporated. Prerequisites: NRST 20206, 20207 and NURS 20950; ENG 11011, SOC 12050, one 3-credit-hour LER course. Cumulative 2.0 GPA or higher.

20209 Child and Family Development Self-Care (2)
Family-centered nursing care of children. Developmental self-care requisites and common health deviations are emphasized. Prerequisites: NRST 20206, 20207 and NURS 20950; ENG 11011, SOC 12050, one 3-credit-hour LER course. Cumulative 2.0 GPA or higher.

20210 Contemporary Nursing Issues (1)
Major social, economic and educational trends are studied. The focus is on the role of the associate degree nurse as a member of the profession. Prerequisites: NRST 20206, 20207 and NURS 20950; ENG 11011, SOC 12050, one 3-credit-hour LER course. Cumulative 2.0 GPA or higher. Corequisite: NRST 20208.

21095 Special Topics (2-4)
Scheduled topic of interest to students and faculty. Prerequisites: Sophomore standing and successfully completed all NRST 10000-level courses.

21096 Individual Investigation in Nursing (1-3)
(Repeatable for a total of 18 hours) Readings and/or investigation of nursing topics supervised by nursing faculty. S/U grading. Prerequisite: Permission of director.

21098 Practicum in Nutrition (2-4)
Directed professional training experiences in the field of nutrition and dietetics. Prerequisite: Permission.

41092 Practicum in Nutrition (2-4)
Directed professional training experiences in the field of nutrition and dietetics. Prerequisite: Permission.

41093 Workshop in Nutrition (1-3)
Workshop setting dealing with a topic or topics in the field of nutrition and dietetics. S/U grading. Prerequisite: None.

41095 Special Topics in Nutrition (1-4)
Discussion of a major topic within a specific field in nutrition and dietetics. Prerequisite: Written permission from instructor.

41096 Individual Investigation in Nutrition (1-3)
Independent study in nutrition and dietetics. Prerequisite: Written permission from instructor.

42013 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: NUTR 33512. Special fee: $6.66/credit hour—subject to change. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

The Associate Degree in Nursing program, Regional Campuses, Kent State University, reserves the right to initiate changes in the program as deemed necessary for maintaining quality nursing education.

NUTRITION AND DIETETICS (NUTR)

23511 Nutrition Related to Health (3)
Essentials of nutrition as they relate to the health and well-being of individuals and families. Prerequisite: None.

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: NUTR 23511 and completed social science LER course.

33523 Nutrition and Dietetics (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: NUTR 23511 and completed social science LER course.

33524 Human Nutrition (3)
Principles of experimental design and data analysis and techniques of scientific writing will be applied. Prerequisite: NUTR 33512. Special fee: $6.66/credit hour—subject to change. This course may be used to satisfy the writing-intensive course 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: NUTR 23511.

43017 Development of Skills (3)
Development of skills in the use of craft media as a basic approach to occupational therapy practice. Includes concept of activity analysis and problem solving. Prerequisite: admission to program. Special fee: $25.

43018 Development of Skills in the Use of Craft Media and Basic Concepts Related to an Occupational Therapy Practice (1)
Development of skills utilized in adapting equipment and basic concepts related to occupational therapy practice. Prerequisite: admission to OT program and OTAT 10001. Corequisite: OTAT 10002.

43019 Development of Skills in the Use of Craft Media and Basic Concepts Related to an Occupational Therapy Practice (2)
Continuation of OTAT 20001 and 20002. Special fee: $25.

43020 Development of Skills in the Use of Craft Media and Basic Concepts Related to an Occupational Therapy Practice (3)
Continuation of OTAT 20001 and 20002. Special fee: $25.

43021 Development of Skills in the Use of Craft Media and Basic Concepts Related to an Occupational Therapy Practice (4)
Continuation of OTAT 20001 and 20002. Special fee: $25.

43022 Development of Skills in the Use of Craft Media and Basic Concepts Related to an Occupational Therapy Practice (5)
Continuation of OTAT 20001 and 20002. Special fee: $25.

43023 Development of Skills in the Use of Craft Media and Basic Concepts Related to an Occupational Therapy Practice (6)
Continuation of OTAT 20001 and 20002. Special fee: $25.

10001 Therapeutic Media I (3)
Development of skills in the use of craft media as a basic approach to occupational therapy practice. Includes concept of activity analysis and problem solving. Prerequisite: admission to program. Special fee: $25.

10002 Therapeutic Media II (3)
Continuation of developmental disabilities acquired in prior and concurrent OTAT courses. Prerequisite: OTAT 20001 and 20002.

10003 Therapeutic Media III (3)
Continuation of developmental disabilities acquired in prior and concurrent OTAT courses. Prerequisite: OTAT 20001 and 20002.

10004 Therapeutic Media IV (3)
Continuation of developmental disabilities acquired in prior and concurrent OTAT courses. Prerequisite: OTAT 20001 and 20002.

10005 Clinical Application (8)
320 clinical laboratory hours. Under the supervision of personnel in selected health care agencies, the student will apply knowledge, skills and techniques acquired in prior and concurrent OTAT courses. Prerequisite: OTAT 20000. Corequisite: OTAT 20003 and 20004.

10101 Elementary Kiswahili I (4)
This course is an introduction to Kiswahili in which students will learn the essentials of speaking, reading and writing the most extensively used language in East Africa. Prerequisite: none.

10102 Elementary Kiswahili II (4)
Continuation of PAS 10101, aimed at advancing students’ knowledge and communication skills in Kiswahili by introducing Kiswahili literature—short narratives, proverbs and folktales. Prerequisite: PAS 10101 or equivalent.

13001 Foundations of Pan-African Studies I (3)
This interdisciplinary course provides a fundamental understanding of what constitutes the Pan-African world. Prerequisite: none.

13002 Foundations of Pan-African Studies II (3)
This interdisciplinary course will introduce students to the study of the African diaspora. Prerequisite: none.

13201 Elementary Yoruba I (4)
This course is an introduction to Yoruba in which students will learn the essentials of this West African language that is also spoken in Cuba and Brazil. Students will learn tonal pronunciation and cultural conversation. Prerequisite: none.

13202 Elementary Yoruba II (4)
Continuation of PAS 13201, with emphasis on tonal pronunciation, cultural conversation and basic reading and writing skills. Prerequisite: PAS 13201 or equivalent.

20101 Kiswahili III (3)
Continuation of Kiswahili II, aimed at developing knowledge, competence and recognition of Kiswahili usage in all forms of Kiswahili literature. Prerequisite: PAS 10102.

20102 Kiswahili IV (3)
Continuation of Kiswahili III, aimed at developing knowledge, competence and recognition of Kiswahili usage in all forms of Kiswahili literature. Prerequisite: PAS 20101.

2200 African World Creative Writing (3-6)
Focus on creative writing and performance in the mode and performance styles of people of African descent. Students will write, perform, critique and produce original works. Prerequisite: ENG 21011.

*Courses offered only at Regional Campuses.
22101 African American Visual Artists (3)
An Afrocentric survey of visual and aural artistry, course examines cultural context and perspectives, mediums of expression, form, style, content and patronage of African-American artists from 1800. Prerequisite: none.

22200 Introduction to the African Arts (3)
Investigation of function of creative forms of artistic expression particular to experiences of Pan-African community at home and abroad. Prerequisite: none.

22201 Expressivity in African Arts (3)
An African-centered examination of the process and profession of African traditional visual artists; emphasis on sculpture, pottery, fabric, textile design, embroidery, mural decorations in two- and three-dimensional finishes. Prerequisite: PAS 22200.

23001 Black Experience I: Beginnings to 1865 (3)
Study and analysis of the African experience prior to, and following, the arrival of Africans in the New World. Emphasis on North America, South America, Africa and Caribbean. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

23002 Black Experience II: 1865 to Present (3)
The second of two parts, this course covers the period 1865 to present and is a continuation of PAS 23001. Prerequisite: PAS 23001 (recommended) but not required. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

23171 The African American Community (3)
Explores problems of African-American communities: public administration, transportation, health, public finance, crime and justice, geography/Black demography and education. Prerequisites: PAS 23002 or permission. This course may be used to satisfy the diversity requirement.

23201 Intermediate Yoruba I (3)
Continuation of PAS 23202, aimed at developing further competency in reading, writing and speaking. Prerequisite: PAS 13201 or 23202 or permission.

23202 Intermediate Yoruba II (3)
Continuation of PAS 23201, aimed at advanced competency speaking, writing and reading. Prerequisite: PAS 23201 or permission.

24407 Caribbean Studies (3)
Focus on people of African descent in the West Indies and their way of life for the cultural contributions made to Pan-African communities. Prerequisite: PAS 23001 or 23002. This course may be used to satisfy the diversity requirement.

30010 African and African-American Philosophies (3)
(Cross-listed with PHIL 31070) Exploration of philosophical issues in African and African-American thought systems including examination of traditional and emerging approaches to developing conceptions of African and African-American philosophies. Prerequisite: junior standing or one course in philosophy. This course may be used to satisfy the diversity requirement.

30120 Contemporary Issues in African American Education (3)
This course examines the interrelationship of contemporary issues and the education of people of African descent. Prerequisite: PAS 23002 or PAS 13002 or permission.

31092 Practicum in African Theatre Arts (3-9)
(Repeatable for a maximum of 9 hours) Exposes students to fundamental techniques of stage through auditory, visual and physical participation. Students are evaluated in performance and related theatre activities. Prerequisite: PAS 22200 or permission.

32010 The Pan-African Essay (3)
Analyzes expository writing by historic and contemporary Pan-African essayists and incorporates various approaches and techniques into student writing. Prerequisite: ENG 21011. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

33100 African American Family in Historical Perspectives (3)
Examines social, political, cultural and historical factors which have influenced the development of African-American family organization from African shores through the African experience. Prerequisites: PAS 23002 or permission. This course may be used to satisfy the diversity requirement.

33110 The Black Woman: Historical Perspectives (3)
This course surveys the experiences of African-American women throughout various periods of history and their roles in shaping the social, economic, political and cultural development of societies. Prerequisites: PAS 23002 or permission. This course may be used to satisfy the diversity requirement.

33120 The African American Man in Contemporary Society (3)
Focuses on various roles of the African-American man within the context of the African experience and the African diaspora. Prerequisite: PAS 23002 or permission.

33200 Ancient African Cultures (3)
This course will be an introduction to the ancient cultures of Africa and their contributions to world civilization. Prerequisite: none.

33203 Kiswahili Conversation (3)
A conversation course specifically designed to enhance oral proficiency through further practice in conversation and written Kiswahili as well as discussion of culture-based texts. Prerequisite: PAS 10102 or permission.

33310 Latinos, the African Diaspora and American Society (3)
Introduction to Latino minorities. Focus on Mexican-Americans, Puerto Ricans and Cubans, and African influences on Latino culture. Prerequisite: none. This course may be used to satisfy the diversity requirement.

33508 Caribbean Social and Political Directions (3)
Twentieth-century West Indian social and political development. Emphasis on federation, independence and nationalism in the Caribbean community as a sector of the total Pan-African community. Prerequisite: PAS 24407.

34000 Introduction to African World View (3)
Investigates traditional African cosmological world views and aesthetics in global Africa. Prerequisite: PAS 23001, 23002, or permission. This course may be used to satisfy the diversity requirement.

35100 African American Social, Political, and Economic Systems (3)
An Afrocentric approach to the interrelated social, political and economic systems of people of African descent. Prerequisite: junior standing or permission.

35200 African Social, Political, and Economic Systems (3)
An African-centered focus on traditional African institutions as these interact with the Jihad Movements, Western European incursion, the slave trade, colonialism, independence movements and contemporary issues. Prerequisite: junior standing or permission.

36210 African Traditional Architectural Settings (3)
An African exploration of the interplay among African worldviews, oratures and the artistry and aesthetics of traditional African communal structures. Prerequisite: none.
**PAS**

**Course Descriptions**

37000 Oral and Written Discourses in Pan-African Studies (3)
Examines the spoken and written English of African-Americans with some emphasis on mastering consensus English writing skills required in upper-division PAS courses. Prerequisite: ENG 2101. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

37010 Research Methods in Pan-African Studies (3)
This course will expose students to the basic components of research methods in Pan-African studies utilizing multidisciplinary approaches. Prerequisite: PAS 37000.

37020 Pan-Africanism and the Model OAU (3)
Critical examination of Pan-Africanism in the development of the Organization of African Unity (OAU). Students prepare to potentially participate as mock delegates in the annual Model OAU Summit. Prerequisite: PAS 13001 or PAS 23002.

37143 The African-Brazilian Experience in Culture and Literature (3)
(Cross-listed with HIST 31143 and MCLS 37143)
Interdisciplinary approach to the study of the African-Brazilian experience, from the colonial period to the present, as reflected in selected literary, sociocultural and historical texts. Course taught in English. Prerequisite: junior standing or permission. This course may be used to satisfy the diversity requirement.

40080 Pedagogy for Pan-African Studies (3)
This course introduces both the data and methodology for understanding and presenting Africa, its geography, history, peoples, cultures and ideologies to elementary and secondary students. Prerequisite: PAS 30120 or permission.

41192 Practicum in African American Affairs (1-12)
(Repealable for a total of 12 hours) Guided involvement in urban areas with large African-American populations to provide experience with community service, government agencies, public and private schools, self-help organizations, etc. IP grade permissible. Prerequisite: junior or senior standing, or permission.

42095 Special Topics in the Literature of Pan-Africa (3)
Selected topics in orature, drama, poetry, prose, novel, and criticism in various African world experiences and settings. This course may be repeated up to 12 hours when topics vary. Prerequisite: PAS 23002 and ENG 2101.

42500 Black Education in America (3)
(Repeatable for a maximum of 6 hours) Analyzes the historical, social and political perspectives of educating people of African descent in America. Prerequisite: PAS 13002 or PAS 23002 or permission.

43095 Special Topics in Pan-African Literature, Arts, and Cultures (3)
Broadens upper-division offerings in wholistic study and performance in Pan-African literatures, arts and cultures. Prerequisite: PAS 13001 or 13002; PAS 23001 or 23002; PAS 31092 or PAS 22101 or permission.

4320 Politics of Culture (3)
This course will address the way in which culture has been politicized. It will look at issues such as cultural relativism and objectivity in anthropological studies with reference to specific peoples and geographic areas. Prerequisite: none. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

43395 Special Topics in African Diaspora Studies (3)
Study of selected topics related to people of African descent outside of the African continent including, but not limited to, the Americas and Europe. This course may be repeated up to 12 hours when the topic varies. Prerequisite: PAS 13001 and PAS 13002.

45095 Special Topics in Pedagogy in Pan-African Studies (3-12)
Study of selected topics in issues, approaches and styles in the education of people of African descent in African and Western settings. This course may be repeated when the topic varies. Prerequisite: PAS 13001 or 13002 or PAS 23001 or 23002.

47010 Theoretical Approaches to Pan-African Studies (3)
A critical analysis of the diverse approaches and underlying principles of Pan-African Studies. Prerequisite: senior standing or permission.

47095 Special Topics in Theoretical and Applied Research (3)
Selected topics in the intellectual, cultural, political and historical development of Pan-Africanism, its diverse theoretical approaches and multiple applications including the Organization of African Unity. This course may be repeated up to 12 hours when topic varies. Prerequisite: PAS 32010 and PAS 13002 or PAS 23002 or permission.

47150 The Underground Railroad (3)
This course examines the Underground Railroad and its impact as an American phenomenon. Related to the Underground Railroad research project under the Institute of African American Affairs. Prerequisite: PAS 23002 or PAS 13002.

49093 Variable Title Workshop in PAS (2-6)
Su grading. Prerequisite: permission.

49095 Selected Topics (2 or 3)
Scheduled topic announced. Intended to encourage further study in areas not treated adequately in standard courses. Offered irregularly by available or visiting faculty. IP grade permissible. Prerequisite: junior or senior standing, or permission.

49096 Individual Investigation (1-3)
(Repeatable once for credit) Research in areas of interest not available in departmental courses. Approval by faculty member or chairperson necessary prior to registration. IP grade permissible. Prerequisite: junior or senior standing.

**PHILOSOPHY (PHIL)**

11001 Introduction to Philosophy (3)
An introduction to the diverse methods and subject matters of philosophy. Primary philosophic sources from varied philosophical traditions focus on at least three philosophic areas. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

11009 Principles of Thinking (3)
The place of argument in reasoning and the place of reasoning in thinking are explored through a concentration on argument—its structure, expression, function and limits. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

21001 Introduction to Ethics (3)
This course considers what constitutes ethics, not just which specific acts or act-kinds are ethical, using at least three primary philosophic sources from varied ethical traditions. Prerequisite: none. This course may be used to satisfy the liberal education requirements (LER) and diversity requirement.
21002 Introduction to Formal Logic (3)
Techniques of formal logic, traditional and contemporary. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

21003 Ethics in Contemporary Contexts (3)
Interactions of ethical standards, sanctions, conflicts and priorities within contemporary contexts (legal, political, religious, professional, commercial, individual) having their own standards and logic. Prerequisite: PHIL 21001.

21020 Comparative Religious Thought I (3)
Philosophic study of the religious impulse as it manifests itself variously in beliefs, practices and institutions ranging over times and cultures. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

21021 Comparative Religious Thought II (3)
Comparative exploration in depth of three religions, selected to represent a Western religion, an Eastern religion and a religion often overlooked in traditional comparative studies. Prerequisite: PHIL 21020. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

30005 Contemporary Moral Issues (3)
Philosophical examination of at least four issues currently debated in society—e.g., gun control, capital punishment, welfare and economic disparity, pornography, affirmative action, excluding ethical issues in medicine. Prerequisite: one course in philosophy or junior standing or permission.

30015 Medicine and Morality (3)
A philosophical exploration of at least three issues related to current medical practices, which may include ethical, religious, legal and clinical aspects. Prerequisites: one course in philosophy or junior standing or permission.

30025 Environmental Philosophy (3)
A philosophical examination of conceptions of nature and the relations between human beings and the natural world with emphasis on exploring connections between environment and science, the humanities, law, religion, ethics or aesthetics. Prerequisite: one course in philosophy or junior standing or permission.

31001 Ancient Greek Philosophy (3)
Examination of issues of Greek thought from its inception through Plato and Aristotle. Prerequisite: at least one of PHIL 11009, 21002, 30145; and at least one of PHIL 11001, 21001; or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

31002 Medieval Philosophy (3)
Examination of issues in medieval thought; for instance, the existence and nature of God and the problem of universals. Prerequisite: at least one of PHIL 11009, 21002, 30145; and at least one of PHIL 11001, 21001; or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

31003 Continental Rationalism (3)
Selections from Rationalists; for instance, Descartes, Spinoza and Leibniz. Prerequisite: at least one of PHIL 11009, 21002, 30145; and at least one of PHIL 11001, 21001; or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

31004 British Empiricism (3)
Selections from British empiricists; for instance, Locke, Berkeley and Hume. Prerequisite: at least one of PHIL 11009, 21002, 30145; and at least one of PHIL 11001, 21001; or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

31005 German Critical Philosophy (3)
Selections from Kant and post-Kantians. Prerequisite: at least one of PHIL 11009, 21002, 30145; and at least one of PHIL 11001, 21001; or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

31006 Nineteenth-Century Philosophy (3)
Selections from works of 19th-century philosophers. Prerequisite: at least one of PHIL 11009, 21002, 30145; and at least one of PHIL 11001, 21001; or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

31010 Twentieth-Century Philosophy (3)
Selections from the most influential schools of thought within 20th-century philosophy: existentialism, pragmatism, logical positivism, analytic philosophy, phenomenology. Prerequisite: at least one of PHIL 11009, 21002, 30145; and at least one of PHIL 11001, 21001; or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

31020 American Philosophy (3)
Selections from principal American philosophers from Colonial times to present. Prerequisite: at least one of PHIL 11009, 21002, 30145; and at least one of PHIL 11001, 21001; or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

31030 Existentialism (3)
Development and themes of existentialism. Prerequisite: junior standing or one course in philosophy or permission.

31035 Philosophy and Justice (3)
Consideration of topics and issues in the general sphere of justice from different perspectives by classical and contemporary philosophers. Prerequisite: junior standing in justice studies or political science, or a prior course in philosophy, or permission. This course may be used to satisfy the diversity requirement.

31040 Women and Philosophy (3)
Examines the influences and contributions of women to philosophy and the influences philosophy has had on women either historically or currently. Prerequisite: one course in philosophy, junior standing or permission. This course may be used to satisfy the diversity requirement.

31045 Formal Logic (3)
(Cross-listed with CS 31045 and MATH 31045) Study of first-order predicate calculus with identity and function symbols. Prerequisite: junior standing, one course in philosophy or permission.

31060 Aesthetics (3)
Investigation of concepts such as the aesthetic object and creative expression, and critique of certain theories designed to solve various problems of aesthetic evaluations. Prerequisite: junior standing in architecture, art, journalism and mass communication, music, speech, or one course in philosophy, or permission.

31065 Philosophies of Religious Experience (3)
Examination of phenomena of religious experience, its structure, ramifications and expression in myth and ritual. Prerequisite: junior standing, or one course in philosophy, or permission.

31068 Religious Thought in Contemporary Contexts (3)
An inquiry into religious convictions, beliefs, symbolizations and texts in contemporary contexts in which religious considerations influence conception, valuation or interpretation of a contemporary situation and how contemporary contexts influence religious thought. Prerequisite: one course in philosophy or junior standing or permission.
31070 African and African-American Philosophies (3) (Cross-listed with PAS 30010) Exploration of philosophical issues in African and African-American thought systems including examination of traditional and emerging approaches to developing conceptions of African and African-American philosophies. Prerequisite: junior standing or one course in philosophy. This course may be used to satisfy the diversity requirement.

31072 American Indian Philosophies (3) Examination of philosophical issues and themes in American Indian worldviews, with attention given to the reflections of contemporary native scholars. Prerequisite: prior course in philosophy, junior standing or permission. This course may be used to satisfy the diversity requirement.

31075 Philosophy and Multiculturalism (3) Philosophical examination of various approaches to multiculturalism, in terms of definitions, justifications and relevant alternative views regarding the scope and nature of multiculturalism. Prerequisite: one course in philosophy or junior standing or permission. This course may be used to satisfy the diversity requirement.

32091 Seminar: Philosophical Reflections (3) (Repeated registration permitted with departmental approval) Exploration of philosophic literature for contrasting or developing conceptions of human beings. Prerequisite: junior standing, or one course in philosophy or permission.

40005 Health Care Ethics (3) Ethical problems in health care critically assessed, and consideration of how these specific ethical problems illuminate the ethical enterprise. Prerequisite: prior course in philosophy, junior standing in a health care discipline or permission.

40008 Variable Title Workshop in Philosophy (1-6) S/U grading. Prerequisite: permission.

41010 Problems in the Philosophy of Religion (3) Philosophical examination of issues and problems presented by various writers in philosophy of religion. Prerequisites: one or more of the following: PHIL 31001, 31002, 31003, 31004, 31005, 31006, 31010 or 31020; or permission.

41015 Philosophical Study of Religion (3) A philosophical examination of pivotal issues, schools and theorists in the study of religion and the future of comparative studies. This course pursues the academic study of religion at an advanced level. Prerequisites: at least one of PHIL 31001, 31002, 31003, 31004, 31005, 31006, 31010, 31020, or permission.

41020 Social Philosophy (3) Philosophic examination of theories of societies as proposed by various writers. Prerequisite: one or more of the following: PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020 or permission.

41025 Philosophy of Law (3) Critical examination of the nature and function of law. Prerequisite: junior standing in justice studies or political science, or one philosophy course at 30000 level or above, or permission.

41030 Ethical Theories and Practices (3) Intensive and in-depth study of some dimensions of philosophic traditions in ethics. Prerequisite: at least one of PHIL 31001, 31002, 31003, 31004, 31005, 31006, 31010, 31020 or permission.

41035 Philosophy of Science (3) Analysis of methodological problems in scientific disciplines. Prerequisite: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020 or permission.

41040 Theories of Knowledge (3) Study of various problems in philosophical theories of knowledge with some emphasis on current philosphical challenges on such theories. Prerequisite: one or more of the following: PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020 or permission.

41042 Topics in Metaphysics (3) Philosophical examination of at least three issues in metaphysics with an emphasis on the historical debates that give rise to them and their contemporary contexts. Prerequisites: at least one of PHIL 31001, 31002, 31003, 31004, 31005, 31006, 31010, 31020 or permission.

41045 Metallic (3) (Cross-listed with CS 41045 and MATH 41045) Consideration of various metatheorems, including soundness and completeness of propositional and predicate calculus, undecidability of predicate calculus and incompleteness of the theory of arithmetic. Prerequisite: PHIL 31045 or permission.

41050 Philosophical Analysis (3) Study of major problems in analytic philosophy and subsequent philosophical analysis. Prerequisites: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020; or permission.

41055 Phenomenology (3) Investigation of phenomenological movement, its methods and the scope and course of its applications in philosophy and other disciplines. Prerequisite: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020; or permission.

41060 Pragmatism (3) Detailed reading from classical American pragmatists, along with some attention to later interpretations and explorations of current reappraisals and developments. Prerequisite: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020; or permission.

41065 Plato (3) Detailed examination of selected Platonic dialogues, with some attention to Plato’s development and dismissal of certain pre-Socratic (and Socratic) themes. Prerequisite: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020 or permission.

41070 Aristotle (3) Detailed examination of selected works of Aristotle, with some attention given to Aristotle’s development and dismissal of certain pre-Socratic and Platonic themes. Prerequisite: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020 or permission.

41076 Continental Philosophy (3) Investigation of some figure, issue or theme in continental philosophy from Descartes to present. Prerequisites: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020 or permission.

41077 British and American Thought (3) Detailed investigation of a figure or issue in British or American philosophy. Prerequisites: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020 or permission.

41080 Philosophy and Art in the Modern Age (3) Exploring, with emphasis on the modern age, philosophical conceptions of art in their interplays with, especially, practicing artists’ attitudes toward theory. Prerequisites: junior standing in art; one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020; or permission.

41085 Theories, Concepts and Narratives (3) Concentrated discussion of explanation, its elements, its varieties and its alternatives. Prerequisites: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020; or permission.

*Courses offered only at Regional Campuses.
PHIL 41086 Philosophy of Expression (3)
Concentrated study of expression through philosophy of literature, of music, of body, of language or of symbols. Prerequisite: one or more of the following—PHIL 31001, 31003, 31004, 31005, 31006, 31010 or 31020; or permission.

PEB 49995 Special Topics (2-3)
(Repeatable when content varies) Prerequisite: permission.

PEB 49996 Individual Investigation (1-3)
(Repeated registration permitted with departmental approval prior to registration) Thesis or other independent study or creative project. IP grade permissible. Prerequisite: departmental permission prior to registration.

PEB 49999 Senior Honors Project (2-3)
(Repeated registration permitted with departmental approval prior to registration) Thesis or independent study or creative project. IP grade permissible. Prerequisite: departmental permission before registration.

PHYSICAL EDUCATION BASIC (PEB)

10001 Adaptable Physical Education (2)
Physical education foundations and activities adapted to the capabilities and needs of the handicapped student. Prerequisite: recommended by Kent Health Center.

10020 Development and Conditioning (1)
Introduction to the principles of physical training. Practical application of these principles through a variety of activities. Prerequisite: none.

10035 Lifetime Fitness (2)
The role of exercise in enhancing physical fitness. Lectures on principles of planning scientifically sound exercise programs. Laboratory experiences in personal fitness evaluation and exercise routines. Prerequisite: none.

10036 Fitness Walking (1)
Application of sound training methods to achieve personal cardiovascular fitness through participation in a walking program. Prerequisite: none.

10095 Selected Topics: Physical Education Activities (1-2)
Prerequisite: none.

10102 Beginning Swimming (1)
Prerequisite: no or minimal swimming ability.

10103 International Folk Dance (1)
Prerequisite: none.

10106 Downhill Skiing—Specialization (1)
Five days of intensive skiing at commercial establishment with skill instruction and related lectures. Transportation, lodging, rental, lift fees are assessed. S/U grading. Prerequisite: none.

10125 Basketball (1)
Prerequisite: none.

10126 Basketball—Varsity (1)
Controlled registration.

10202 Intermediate Swimming (1)
Prerequisite: PEB 10102 or equivalent.

10204 Badminton (1)
Prerequisite: none.

10304 Bowling (1)
Prerequisite: none. Special fee: $25/credit hour—subject to change.

10305 Billiards (1)
Prerequisite: none. Special fee: $10/credit hour—subject to change.

10306 Jogging (1)
Prerequisite: none.

10315 Intermediate Billiards (1)
Prerequisite: PEB 10305 or equivalent. Special fee: $10/credit hour—subject to change.

10325 Soccer (1)
Prerequisite: none.

10403 Beginning Ballroom Dance (1)
Prerequisite: none.

10404 Fencing—Foil Only (1)
Prerequisite: none.

10425 Baseball—Varsity (1)
Controlled registration.

10426 Softball—Varsity (1)
Controlled registration.

10505 Volleyball (1)
Prerequisite: none.

10604 Beginning Golf (1)
Prerequisite: none. Special fee: $6/credit hour—subject to change.

10612 Lifeguard Training (2)
Individuals beyond the lifesaving level are prepared to assume the responsibilities of lifeguards at pools or at nonsurf open water beaches. Prerequisites: PEB 10202 or equivalent.

10704 Intermediate Golf (1)
Prerequisite: none. Special fee: $15/credit hour—subject to change.

10724 Golf—Varsity (1)
Controlled registration.

10802 Fitness Swimming (1)
Application of sound training methods to achieve personal fitness through swimming. Prerequisite: PEB 10202.

10904 Tennis (1)
Prerequisite: none.

10906 Racquetball (1)
Prerequisite: none.

10907 Intermediate Tennis (1)
Prerequisite: PEB 10904 or equivalent.

10916 Intermediate Racquetball (1)
A continuation of the basic techniques of racquetball, with an emphasis on refinement of skill performance, and an introduction to intermediate racquetball techniques and strategies that lead to higher levels of performance. Prerequisite: PEB 10906 or equivalent.

11024 Track and Field—Varsity (1)
Controlled registration.

11025 Cross Country—Varsity (1)
Prerequisite: controlled registration.

11104 Beginning Gymnastics (1)
Prerequisite: none.

11124 Gymnastics—Varsity (1)
Controlled registration.

11125 Football—Varsity (1)
Controlled registration.
11203 Horsemanship (1)  
(Repeatable for intermediate and advanced levels)  
One hour riding, one hour lecture per week. Riding emphasis is placed upon acquisition of balance and proper form while maintaining control of the horse. Lecture provides knowledge and practice in care of horse. Prerequisite: none. Special fee: $100/credit hour—subject to change.

11206 Ice Hockey—Varsity (1)  
Prerequisite: none.

11604 Beginning Karate (1)  
Prerequisite: none.

11605 Intermediate Karate (1)  
Prerequisite: PEB 11604 or three months’ experience.

11634 Self-Defense (1)  
Prerequisite: none.

11825 Wrestling—Varsity (1)  
Controlled registration.

11904 Beginning Ice Skating (1)  
Prerequisite: none. Special fee: $25/credit hour—subject to change.

12004 Basic Figure Skating (1)  
Prerequisite: PEB 11904. Special fee: $25/credit hour—subject to change.

12204 Weight Training (1)  
Prerequisite: none.

12225 Women’s Weight Training (1)  
A basic course in the use of equipment in an average weight room and its application toward the development of strength and power. Prerequisite: none.

12424 Exercise and Weight Control (1)  
Instruction in and practice of exercises based upon proper food selection for the purpose of weight control. Prerequisite: none.

12425 Nautilus Exercises (1)  
Fundamental skills and knowledge involved in the use of the Nautilus for fitness development. Prerequisite: none.

12604 Intermediate Fencing (1)  
Prerequisite: PEB 10404 or equivalent.

13003 Dance Exercise (1)  
An aerobic program concerned with cardiovascular efficiency, flexibility and strength gain which is achieved through dance movement. Prerequisite: none.

13006 Cross-Country Skiing (1)  
Basic through intermediate nordic skiing technique, waxing, equipment and clothing selection, conditioning, winter safety considerations and trip planning. Prerequisite: student must supply equipment.

13008 Intermediate Volleyball (1)  
A continuation of the basic techniques of volleyball, with an emphasis on refinement of skill performance and an introduction to intermediate volleyball techniques and strategies that lead to higher levels of performance. Prerequisite: PEB 10505 or equivalent.

13010 Judo-Aikido (1)  
Prerequisite: none.

13012 Backpacking (2)  
Trip planning and leadership, equipment and clothing selection, safety considerations, search and rescue, environmental ethics, map and compass, weekend backpacking trip. Prerequisite: student must supply equipment.

13013 Canoeing (2)  
Basic paddling skills learned in a pool environment and then experienced in open lakes and white water situations. Canoe rental fee assessed. Prerequisite: swim 100 yards and tread water five minutes fully clothed. Special fee: $10/credit hour—subject to change.

13023 Rock Climbing (1)  
Combination of lecture, activity classes and weekend field trip. Basic instruction in safe rope handling, knots, conditioning, climbing technique, belaying, anchor systems and rappelling. Prerequisite: none.

13024 Beginning Kayaking (2)  
Basic paddling skills learned in a pool environment and then experienced in open lakes and whitewater situations. Kayak rental fee assessed. Prerequisite: swim 100 yards and tread water five minutes fully clothed. Special fee: $10/credit hour—subject to change.

13025 Basic Sailing (1)  
Introduction to skills and procedures needed to enjoy the sport of sailing. Boat design and construction, rigging, safety and a hands-on application stressed. Prerequisite: swim 100 yards and tread water five minutes fully clothed.

13027 Winter Backpacking (2)  
Adaptation of backpacking skills including trip planning, leadership, equipment, clothing, travel methods, orienteering, safety considerations, search and rescue, and survival skills in the winter environment. Prerequisite: student must supply equipment.

13093 Variable Title Workshop in Exercise, Leisure and Sport (1-2)  
Workshop in exercise, leisure and sport activities; topics vary; S/U grading. Prerequisite: none.

**PHYSICAL EDUCATION PROFESSIONAL (PEP)**

15010 Introduction to Physical Education, Fitness and Sport (2)  
An introduction to the history, philosophy, structure and changing nature of sport, fitness and the pedagogical aspects of physical education. Overview of the profession and career opportunities. Prerequisite: none.

15013 Development and Analysis of Dance (2)  
Development and analysis of dance skills through experience in folk, social, modern and aerobic dance. Prerequisite: PEP 15017.

15014 Development and Analysis of Gymnastic Skills (1)  
Development and analysis of gymnastic skills through experiences in conventional gymnastics events. Prerequisite: PEP 15017.

15015 Development and Analysis of Game Performance (1)  
Development and analysis of game performance skills used in net/wall games. Prerequisite: PEP 15017.
15016 Development and Analysis of Game Performance II (3)
Development and analysis of game performance skills used in target games, field/run/score games, and invasion games. Prerequisite: PEP 15017.

15017 Fundamental Motor Skills (1)
Motor skill development and analysis through practice in fundamental motor movements. Prerequisite: none.

15018 Development of Swimming and Aquatic Skills (1)
Development and analysis of basic aquatic skills, swimming strokes, starts and turns, diving skills, physical fitness principles, aquatic safety and basic rescue techniques. Prerequisite: none.

15019 Development and Analysis of Track and Field (1)
Introduction to basic techniques and rules of track and field events. Consideration of relative conditioning, safety and instructional procedures. Prerequisite: none.

25001 Officiating Sport Activities (1-2)
Individual prescriptions for certification in officiating the following sports: basketball, baseball, field hockey, football, gymnastics, etc. Prerequisite: none.

25025 Teaching in Physical Education (3)
A seminar focused on the inquiry of teaching and learning of movement activities. A study of the role of the teacher, teacher behaviors, learning environments in movement activities and technology applications in physical education. Prerequisite: EDPF 29525 or corequisite: all of the PEP 15010 to 15017.

25026 Overview of Outdoor Pursuits and Adventure Education (3)
An overview of outdoor pursuits and adventure education. This course includes a required three-day (48-hour) weekend at an outdoor adventure education center. Prerequisite: none. Special fee: $30/credit hour—subject to change.

25033 Lifespan Motor Development (3)
Introduction to motor development across the life span. Special emphasis on description of motor development changes and factors influencing change. Prerequisite: PSYC 11762.

25034 Early Childhood Motor Development (3)
Motor development during the early childhood years, with emphasis on factors influencing change. Prerequisite: PSYC 11762 and concurrent with EGED 20163 or permission.

25051 Human Anatomy (3)
Structural analysis of the major organ systems of humans. Emphasis is placed on ontology, anthropology, myology, nervous system and cardiopulmonary systems. Lecture and laboratory. Prerequisite: none.

25059 Sport in Society (3)
Analysis of how sport relates to the social relations and cultural values of United States society. The course is framed by a critical evaluative perspective, examining how social class, ethnicity, race and gender relations contour sport practices. Prerequisite: none. This course may be used to satisfy the diversity requirements.

25068 Measurement and Evaluation in Fitness and Sport (3)
Measurement and statistics applied to physical education and exercise/sport sciences; laboratory experiences in statistics, test construction and administration, and evaluation. Prerequisite: none.

35010 Psychological Dimensions of Motor Behavior (3)
Psychological factors in exercise, physical activity and sport, emphasizing motor control, learning and performance. Laboratory included. Prerequisites: junior standing and PEP 25068. This course may be used to satisfy the writing-intensive requirement with approval of major department.

35022 Content and Methods for Elementary Physical Education (3)
Content and methods for elementary physical education. Prerequisites: C&I 20000; EDPF 28911, 28616 and 28952.

35040 Coaching Football (2)
Techniques of coaching football, including film analysis and offensive and defensive skills and systems. Prerequisite: not open to freshmen.

35041 Coaching Soccer (2)
Coaching soccer, including analysis of skills, strategy and administrative responsibilities. Prerequisite: not open to freshmen.

35042 Coaching Volleyball (2)
Coaching volleyball, including analysis of skills, offensive and defensive strategy, and administrative responsibilities. Prerequisite: not open to freshmen.

35043 Coaching Gymnastics (2)
Philosophy, fundamentals, skill analysis, spotting, conditioning, administrative and organizational responsibilities. Prerequisite: not open to freshmen.

35044 Coaching Basketball (2)
Philosophy, fundamentals, strategy, administrative responsibilities and conditioning. Prerequisite: not open to freshmen.

35045 Coaching Wrestling (2)
Fundamental skill development, skill analysis, diet and weight control, team selection methods and administrative responsibilities. Prerequisite: not open to freshmen.

35047 Coaching Tennis and Golf (2)
Coaching tennis and golf, including skill analysis and organization of tournaments and matches. Prerequisite: not open to freshmen.

35048 Coaching Baseball and Softball (2)
Coaching techniques in softball and baseball, including analysis of basic skills, position play, and offensive and defensive strategies. Prerequisite: not open to freshmen.

35049 Coaching Track and Field (2)
Coaching techniques relative to track and field events. Principles of organization for track and field meets. Prerequisite: not open to freshmen.

35052 Educational Dance/Gymnastics (3)
Analysis of the sequential development of dance and gymnastic skills from foundational movement patterns to conventional skills. Laboratory experiences in teaching children. Prerequisite: PEP 45051.

35054 Biomechanics (3)
Anatomical and mechanical bases of human movement. Emphasis is placed on tools and techniques for motion analysis, mechanical concepts, forces and performance analysis. Lecture and laboratory. Prerequisite: PEP 25051.

35065 History and Philosophy of Sport and Physical Activity (3)
Historical and philosophical foundations of sport and physical education: a study of factors influencing pedagogical, curricular and evaluation decisions in sport and physical education programs today. Prerequisite: PEP 15010. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

35075 Exercise Programming (3)
Problems and issues in developing exercise programs in institutional and commercial settings. Prerequisites: PEB 10035 and BSCI 20020.

35079 Sports Physiology (3)
Application of physiological principles of human performance to sports/exercise. Focus on examples for teaching and coaching. Prerequisite: PEP 25051.
Course Descriptions

40612 Practicum in Research Fitness Programs for the Elderly (3)
A practicum experience in which students will pre-
scribe, supervise and evaluate older adults during
exercise. Laboratory experiences are required in the
physiology and cognitive areas. S/U grading; IP
grade permissible. Prerequisite: none.

43093 Variable Title Workshop in Exercise, Leisure and Sport (1-3)
Workshop in exercise, leisure and sport studies;
topics vary; S/U grading. Prerequisite: none.

43098 Research in Exercise, Leisure and Sport (1-3)
(Repeatable to 12 credit hours.) Research project
completed under the supervision of a faculty mem-
er. Written approval of supervising faculty member
and school director required prior to registration.
Prerequisite: junior standing and permission.

45015 Psychology of Coaching (3)
Psychological factors affecting athletic perfor-
mance, with particular attention to practice factors,
personality, motivation and problem athletes. Pre-
requisite: junior standing.

45020 Contemporary Athletic Coaching (3)
A focus on the philosophy, skills, strategies and tac-
tics of coaching within contemporary society. Pre-
requisite: none.

45021 Organization and Administration of Athletics (3)
An understanding of theories necessary to run an
efficient athletic department at all levels, including:
budgeting, leadership and administrative theory,
organizational structure, personnel, legal issues and
facilities. Prerequisite: none.

45037 Adapted Physical Education (3)
An academic and practical approach to physical edu-
cation for specific disorders. Field-based experience
(10 hours). Prerequisites: PEP 25051 and 35054.

45051 Elementary School Physical Education Methods (3)
Approaches to teaching in elementary school physi-
cal education. Focusing on sequential curriculum
development and on learning outcomes in three
domains. Prerequisites: PEP 25033, 25025, 15013-
15017 and admitted to professional education.

45053 Elementary School Physical Education Content (3)
Physical education content for the elementary
school child with emphasis on developmentally
appropriate learning in three domains. Prerequi-
sites: PEP 25033, 25025, 15013-15017, admitted to
professional education.

45058 Secondary School Physical Education Methods (3)
Approaches to teaching in secondary school physi-
cal education. Focus on sequential curriculum
development and on learning outcomes in three
domains. Prerequisites: PEP 25033, 25025, 15013-
15017 and admitted to professional education.

45059 Secondary School Physical Education Content (3)
Introduction and development of content, manage-
ment and organizational skills related to sports and
activities utilized in secondary school physical edu-
cation. Prerequisites: PEP 25033, 25025, 15013-
15017 and admitted to professional education.

45065 Exercise Testing (3)
Lecture and laboratory experiences dealing with the
administration and interpretation of exercise tests.
Prerequisites: PEP 35075 and 45080.

45080 Physiology of Exercise (3)
Response of the human to acute and chronic exer-
cise with emphasis on the underlying physiological
mechanisms. Prerequisite: BSCI 30030.

45091 Senior Seminar (1)
Investigation and study of current problems, topics
and/or issues in physical education, exercise or
sport. S/U grading; IP grade permissible. Prerequi-
site: senior standing.

45092 Internship in Physical Education (2-8)
(Repeatable for a total of 8 hours) Supervised full-
time experience providing knowledge of overall
operations for an agency or sports program in an
approved setting. Fifty work hours per credit hour.
S/U grading; IP grade permissible. Prerequisites:
student standing and permission.

45096 Individual Investigation in Physical Education (1-3)
(Repeatable for a total of 6 hours) Independent
study completed under the supervision of a faculty
member. Written approval of supervising faculty
member and school director required prior to regis-
tration. IP grade permissible. Prerequisite: senior
standing and permission.

45392 Internship in Mainstreamed Physical Activity (1-12)
Supervised experience with School of Exercise,
Leisure and Sport Motor Development Center par-
ticipants of all ages and abilities in a mainstreamed
situation; assessment, program planning, instruc-
tion, report preparation. S/U grading; IP grade per-
missible. Prerequisite: none.

45400 Internship Seminar (1)
(Repeatable for a total of 3 hours) Discussion of
procedures and expectations for internships in exer-
cise programming. S/U grading. Prerequisite: PEP
35075 and an exercise sciences concentration.

45402 Internship in Physical Fitness/Cardiac Rehabilitation (2-8)
(Repeatable for a total of 8 hours) Supervised expe-
rience providing practical experience in administra-
tion and operation of programs in physical fitness,
health enhancement and/or cardiac rehabilitation.
S/U grading; IP grade permissible. Sixty clock hours
per credit hour. Prerequisites: PEP 45490, senior
standing and permission.

45492 Internship in Athletic Coaching (2-4)
Supervised experience in organized sport focused
upon the duties of a coach; can be at one or more
levels (youth, school, college, professional) and
sports. S/U grading; IP grade permissible. Repeat-
able. Sixty contact hours per credit. Prerequisite:
PEP 45020 and permission.

45692 Internship in Athletic Coaching (2-4)
(Repeatable for a total of 8 hours) Supervised full-
time experience in organized sport focused
upon the duties of a coach; can be at one or more
levels (youth, school, college, professional) and
sports. S/U grading; IP grade permissible. Repeat-
able. Sixty contact hours per credit. Prerequisite:
PEP 45020 and permission.

46050 Special Topics in Physical Education (1-3)
Selected topics in physical education dependent
upon interest. Prerequisite: none.

46065 Exercise Testing (3)
Lecture and laboratory experiences dealing with the
administration and interpretation of exercise tests.
Prerequisites: PEP 35075 and 45080.

48625 Inquiry into Professional Practice in
Physical Education (3)
Seminar focused on development of those skills and
knowledge which enable future teachers to engage in
effective reflective, collaborative and ethical profes-

48626 Student Teaching in Physical Education (12)
This experience provides for a full semester of stu-
dent teaching in a school setting that is corequisite
with PEP 49525, Inquiry into Professional Practice
in Physical Education. S/U grading; IP grade per-
missible. Prerequisite: eligibility for admission to
student teaching. Corequisite PEP 45052.

PHYSICAL THERAPIST ASSISTANT TECHNOLOGY (PTST)*
10000 Introduction to Physical Therapist Assisting (2)
Orientation to the field of physical therapy history,
Functions and responsibilities. Legal and ethical
accountability. Patient rights. Safety. Health care
delivery system. Prerequisite: none.

10001 Principles of Patient Care in Physical Therapy (4)
Underlying principles of physical therapy proce-
dures. Equipment. Fundamentals of patient care re-
late to the role of the physical therapist assistant.
Prerequisite: Admission to the program. Special fee:
$6.25/credit hour—subject to change.

$6.25/credit hour—subject to change.

*Courses offered only at Regional Campuses.

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10002 Analysis of Movement (4)

10003 Clinical Conditions I (2)
Introduction to medical conditions commonly encountered in the practice of physical therapy which affect the integumentary, digestive and endocrine systems. Will include general medical testing procedures and psychological disorders. Prerequisite: PTST 10001. Corequisites: PTST 10002, 10004 and 10005.

10004 Physical Therapy Procedures I (4)
Theory and techniques of treatment procedures with emphasis on modalities. Maintenance of equipment and supplies. Prerequisite: PTST 10001. Corequisites: PTST 10002; 10003 and 10005. Special fee: $6.25/credit hour—subject to change.

10005 Directed Practice in Physical Therapy I (2)
Introduction to the practice of physical therapy procedures in the clinical setting under the supervision of a licensed physical therapist. IP grade permissible. Prerequisite: PTST 10001. Corequisites: PTST 10002, 10003 and 10004.

10006 Physical Rehabilitation Procedures (4)
Principles of therapeutic exercise and rehabilitation in physical therapy. Prerequisite: PTST 20005. Special fee: $6.25/credit hour—subject to change.

10007 Directed Practice in Physical Therapy II (5)
Continued discussion and practice of physical therapy procedures and techniques in an institutional setting under the supervision of licensed physical therapy personnel. Prerequisite: PTST 20005.

10008 Clinical Conditions III (2)
Continued study of medical conditions commonly encountered in the practice of physical therapy. Focus on geriatric disorders, pharmacology, neurological disorders, fetal development/normal development, genetic and pediatric disorders. Prerequisite: PTST 10003, 20003.

10009 Medical Terminology (1)
Terminology utilized by the medical profession. Emphasis is on definition, spelling, pronunciation and correct usage of terms. Prerequisite: none.

20001 Therapeutic Communications in Physical Therapy (1)
Focus on understanding human behavior, emotional needs of individuals, therapeutic use of self, and development of communication skills and interpersonal relationships. Prerequisite: none.

20003 Clinical Conditions II (2)
Continued study of medical conditions commonly encountered in the practice of physical therapy. Focus on orthopedic and cardiopulmonary pathologies. Prerequisite: PTST 10003. Corequisites: PTST 20004 and 20005.

20004 Physical Therapy Procedures II (4)
Continuation of theory and techniques of treatment procedures. Emphasis on correlating equipment with treatment procedures and correlating application with dysfunction. Prerequisite: PTST 10004. Corequisites: PTST 20003, 20005. Special fee: $6.25/credit hour—subject to change.

20005 Directed Practice in Physical Therapy II (5)
Discussion and practice of physical therapy procedures and techniques in an institutional setting under the supervision of licensed physical therapy personnel. Prerequisite: PTST 10005. Corequisites: PTST 20003 and 20004.

20006 Physical Rehabilitation Procedures IV
Principles and techniques of therapeutic exercise and rehabilitation in physical therapy. Prerequisite: PTST 20005. Special fee: $6.25/credit hour—subject to change.

20007 Directed Practice in Physical Therapy III (6)
Continued discussion and practice of physical therapy procedures and techniques in an institutional setting under the supervision of licensed physical therapy personnel. Prerequisite: PTST 20005.

20008 Clinical Conditions IV (2)
Continued study of medical conditions commonly encountered in the practice of physical therapy. Focus on geriatric disorders, pharmacology, neurological disorders, fetal development/normal development, genetic and pediatric disorders. Prerequisite: PTST 10003, 20003.

PHYSICS (PHY)

Note 1: PHY 13001 and 13002 do not require the use of calculus.

Note: 2 PHY 23101 and 23102, which use calculus, should be taken by majors in physics, mathematics, chemistry B.S., industrial technology science option, aerospace science option and pre-engineering.

Note 3: Credit is not granted for both the PHY 13001/13002 and the 23101/23102 series, nor for the PHY 13001/13002 series.

11030 Seven Ideas That Shook the Universe (3)
Description of major revolutionary physical concepts and their implications for understanding the physical universe. Not counted toward physics major. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

11660 Physical Science (3)
A course integrating basic concepts in chemistry, physics and astronomy. Prerequisite: none. Because this course represents a partial overlapping of the material in beginning courses in chemistry and physics, students should not take both PHY 11660 and either general chemistry or general physics. Ordinarily, credit is not allowed for such duplication. Any student affected by this principle should consult with the department chair of chemistry or physics. This course may be used to satisfy the Liberal Education Requirements (LER).

12111 Physics for Health Technologies (3)*
Basic physics applied to health technologies: measurement techniques, force and motion of solids and fluids, energy, heat, wave phenomena, electricity. Prerequisite: admission to health technology program.

12201 Technical Physics I (3)*
Introduction to principles of physics: mechanics. Two-hour recitation and two-hour laboratory weekly. Pre/corequisite: MATH 19001 or 12001.

12202 Technical Physics II (4)*
Introduction to principles of physics: fluids, thermodynamics, electricity and magnetism. Two-hour recitation and two-hour laboratory weekly. Prerequisite: PHY 12201.

12411 Introduction to Computer Hardware (3)
Laboratory-lecture course designed to introduce the computer scientist to the digital logic and memory circuits and the concepts fundamental to computer hardware. Two-hour lecture and two-hour laboratory weekly. Prerequisite: none.

13001 General College Physics I (5)
Principles of mechanics, heat and sound. Three-hour lecture, one-hour recitation and two-hour laboratory (see PHY 13021) weekly. Pre/corequisite: MATH 12001 or permission. This course may be used to satisfy the Liberal Education Requirements (LER).

13002 General College Physics II (5)
Principles of electricity and magnetism, optics and modern physics. Three-hour lecture, one-hour recitation and two-hour laboratory (see PHYS 13022) weekly. Prerequisite: PHY 13001 or 23101. This course may be used to satisfy the Liberal Education Requirements (LER).

13011 College Physics I (3)
Principles of classical physics, primarily mechanics. Three-hour lecture, one-hour recitation and two-hour laboratory (see PHY 13021) weekly. This course meets concurrently with PHY 13001 for the first 3/5 of a regular term. Pre/corequisite: MATH 12001, 12012 or permission. This course may be used to satisfy the Liberal Education Requirements (LER).
13012  College Physics II (3)  Principles of classical physics, primarily electricity and magnetism. Three-hour lecture, one-hour recitation and two-hour laboratory (see PHY 13002) weekly. This course meets concurrently with PHY 13002 for the first 3/5 of a regular term. Prerequisite: PHY 13011, 13001 or 23101. This course may be used to satisfy the Liberal Education Requirements (LER).

13021  General College Physics Laboratory I (0)  Required laboratory component of PHY 13001 and PHY 13011. Credit and grade for laboratory are subsumed within credit and grade for PHY 13001 or 13011 on student's transcript. Corequisite: PHY 13001 or 13011.

13022  General College Physics Laboratory II (0)  Required laboratory component of PHY 13002 and 13012. Credit and grade for laboratory are subsumed within credit and grade for PHY 13002 or 13012 on student's transcript. Corequisite: PHY 13002 or 13012.

20095  Special Topics (1-3)  Topic announced when scheduled. Prerequisite: none.

21040  Physics in Entertainment and the Arts (3)  Descriptive introduction to physics underlying selected forms of art and entertainment. Examples are drawn from music, visual arts and communications media. Not counted toward requirements for major in physics. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

21041  Physics in Entertainment and the Arts Laboratory (1)  Laboratory component of PHY 21040. Two-hour laboratory weekly. Pre/corequisite: PHY 21040. Special fee: $20/credit hour—subject to change. This course may be used to satisfy the Liberal Education Requirements (LER) and the science laboratory component of the Ohio Transfer Module.

21430  Frontiers in Astronomy (3)  Modern description of astrophysical observations, the results of these observations and the physical principles based on them. Not counted toward requirements for major in physics. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER).

22811  Forensic Physics (4)  Fundamental physical concepts are related to various forensic activities including evidence analysis, ballistics, auto collision analysis and radioactive materials accidents. Three-hours lecture and two-hour laboratory weekly. Prerequisite: none.

23020  Intermediate Physics Laboratory (2)  (Repeated registration permitted) Experiments in classical and modern physics are selected to accompany and to supplement junior-level physics courses. Prerequisite: 10 hours of physics. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

23001  General University Physics I (5)  Principles of mechanics, heat and sound at calculus level. Four-hour lecture/recitation and three-hour laboratory weekly. Pre/corequisite: MATH 12002 with department approval.

23102  General University Physics II (5)  Principles of electricity, magnetism, light and modern physics at calculus level. Four-hour lecture/recitation and three-hour laboratory weekly. Prerequisites: PHY 13001 or 23101 and MATH 12003, or corequisite MATH 12003 with department approval.

24001  Astronomy (3)  Astronomical measurements and their instruments, the solar system of planets, the sun and stars, spectra, radiation, evolution of stars, galaxies, concepts of cosmology. Not counted toward physics major. Prerequisite: MATH 12001 or permission. This course may be used to satisfy the Liberal Education Requirements (LER).

30020  Intermediate Physics Laboratory (2)  (Repeated registration permitted) Experiments in classical and modern physics are selected to accompany and to supplement junior-level physics courses. Prerequisite: 10 hours of physics. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

30095  Special Topics (1-3)  Topic announced when scheduled. Prerequisite: permission.

32511  Electronics (4)  “Hands-on” course to give the student a working knowledge of analog electronics and of AC and DC circuits typically used by the scientist. Prerequisites: PHY 13002 or 23102 and MATH 12002.

32512  Aerodynamics (3)  Multispeed aerodynamics including topics in fluid mechanics, airfoil and wing theory, stability and control, performance and aerodynamic loads. Prerequisites: PHY 13002 or 23102 and MATH 12002.

32564  Materials Physics (3)  Structure, thermal and magnetic properties of matter, and interaction of radiation with matter in terms of fundamental concepts of atomic and condensed matter physics. Prerequisite: PHY 36001.

35101  Mechanics I (3)  Intermediate course in mechanics stressing problems involving point masses in inertial reference frames. Problem-solving techniques are emphasized. Prerequisites: MATH 12003 and 10 credit hours of physics.

35102  Mechanics II (3)  Sequel to PHY 35101 stressing motions of multiparticle systems and rigid bodies in inertial and accelerating reference frames. Prerequisites: PHY 35101, MATH 22005.

35402  Scientific Computing (2)  Solution of scientific problems with a PC using QBASIC or C language. Includes applications to integral and differential equations of physical sciences. IP grade permissible. Prerequisites: MATH 22005, 10 credit hours of physics and proficiency in a high-level computer language (equivalent to CS 10061).

35501  Waves (3)  Properties and applications of vibrating systems and waves; superposition, normal modes, Fourier analysis, energy and momentum, dispersion, polarization, refraction, interference, diffraction, holography. Prerequisites: MATH 12003 and PHY 35101.

35611  Microprocessor-Based Design I (3)  Microprocessors as the basis for intelligent controllers and instruments. Signal analysis, input/output, interrupt handling, and data connectors. IP grade permissible. Prerequisites: PHY 12411 and proficiency in a high-level computer language (equivalent to CS 10081).

36001  Introductory Modern Physics (3)  Special theory of relativity, Rutherford-Bohr model of atom, quantization of light, matter waves, Schroedinger equation, hydrogen atom, electron spin, multi-electron atoms. Prerequisites: MATH 12003 and PHY 23102 or permission.

40020  Advanced Physics Laboratory (2)  (Repeated registration permitted) Advanced experiments in classical and modern physics are selected to accompany and to supplement senior-level physics courses. Prerequisite: PHY 30020; pre/corequisite: 6 hours of 40000-level physics courses or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

40060  Physical Literature (1-3)  Study of current or topical literature. Prerequisite: permission.
40093 Variable Title Workshop in Physics (1-6)
Workshop individually designed to provide instruction and training in specific areas of physics. S/U grading. Prerequisite: permission.

40095 Special Topics (1-3)
Topic announced when scheduled. Prerequisite: permission.

40096 Individual Investigation (1-6)
Individual projects for physics majors. IP grade permissible. Prerequisite: 20 credit hours of physics, permission of department chairperson.

40099 Senior Honors Thesis (1-10)
Thesis for departmental, general or university honors must be 1-10 hours with continuous registration throughout the senior year beginning in the summer prior to the senior year. IP grade permissible. Prerequisites: Honors senior standing, departmental and Honors Division consultation and approval prior to first semester of senior year; formal petition.

40195 Special Topics (1-3)
Topic announced when scheduled. Prerequisite: permission.

42500 Physics of Laboratory Devices and Techniques (3)
Physics of semiconducting devices such as diodes, transistors; laboratory techniques using temperature control, vacuum pumps; X-ray, neutron, light, and electron scattering. Prerequisite: PHY 36001.

42512 General Electronic Instrumentation (4)
Laboratory-based course in digital and analog electronics, computer interfacing and computer-based technique all within context of applications in measurements, signal-to-noise enhancement and control instrumentation. Lecture two hours, laboratory four hours weekly. Prerequisite: PHY 32511 or permission.

42513 Computer Systems Design (3)
Hands-on experience in selecting and using a microcomputer-based data acquisition and control system in the science laboratory. One hour lecture, four hours laboratory weekly. IP grade permissible. Prerequisite: proficiency in a high-level computer language (equivalent to CS 10061).

44802 Astrophysics (3)
Galactic structure, stellar formation and evolution, origin of the elements (or nucleosynthesis), nonoptical astronomical, and description of various cosmological theories. Prerequisites: MATH 12003 and a major or minor in the physical sciences or technology cohort or consent of instructor.

45201 Electromagnetic Theory I (3)
Properties of electric and magnetic fields developed by vector methods. Emphasis is on static fields in both vacuum and matter. Prerequisite: Pre/corequisite: MATH 32044 and 16 credit hours of physics or permission.

45202 Electromagnetic Theory II (3)
Sequel to PHY 45201 continuing development of theory of classical electromagnetic fields with emphasis on dynamic fields. Prerequisite: PHY 45201 or permission.

45301 Thermodynamics (3)
Fundamental concepts in thermodynamics from a macroscopic as well as statistical approach. Includes applications to engineering. Prerequisites: MATH 22005 and 10 credit hours of physics.

45403 Computer Analysis of Experimental Measurements (2)
Applications of the minicomputer to the reduction and analysis of data. Error analysis, root-finding, curve-fitting, smoothing of data. Prerequisites: MATH 22005 and PHY 35402 or equivalent.

45501 Fundamentals of Modern Optics (3)
Emission and propagation of coherent and incoherent light; nonlinear optical effects; introduction to devices and spectroscopic techniques based on modern optics. Prerequisite: PHY 45201.

45612 Microprocessor-Based Design II (3)
Design, construction, programming and interfacing of microcontrollers based on a 16-bit microprocessor. IP grade permissible. Prerequisite: PHY 35611 or permission.

46101 Quantum and Atomic Physics (4)
Bohr theory, wave mechanics, wave packets. Applications to barriers, oscillators, hydrogen atom, multi-electron atoms, X-rays, molecular spectra. At level of Eisberg-Resnick’s Quantum Physics. Prerequisite: PHY 36001; MATH 22005 or permission.

46301 Introduction to Nuclear Physics (3)
Introduction to the concepts of nuclear physics including basic properties of the atomic nucleus, experimental techniques, nuclear models and reactions, nuclear fission and fusion, and elementary particles. Prerequisites: PHY 36001; MATH 22005 or permission.

46401 Introduction to Solid State (3)
Crystal structure, crystal diffraction and reciprocal lattice, crystal binding, phonons and lattice vibrations, Fermi gas, energy bands. Prerequisites: 18 hours of physics, MATH 22005 or permission.

PLASTICS TECHNOLOGY (PLCT)*
12000 Introduction to Plastics (4)
Description of various plastics, outline of polymer chemistry, identification tests, polymerization, molecular growth and molecular weight, extrusion, injection molding, thermoforming, compression molding and related topics. Prerequisite: none.

12003 Reinforced Plastics (3)
Comprehensive review of resin systems and fiber reinforcement for use in production of FRP products. Fabrication procedures. Comparative properties. Prerequisite: PLCT 12000.

12004 Properties of Plastic Materials (3)
Study of the mechanical, electrical, optical and environmental characteristics of various plastics. Making and testing of plastic materials: impact testing, chemical testing, heat stability and electrical testing. Prerequisite: PLCT 12000.

12005 Radiation Polymer Technology I (3)
This course is an introduction to the application of radiation processing technologies on plastic materials. Systems, equipment and mechanisms are discussed. Prerequisite: PLCT 12000 and PLCT 12003.

22000 Assembly and Finishing of Plastics (3)
Bonding, printing, electroplating, vacuum metalizing, hot stamping, painting, engraving, welding, sanding and machining. Prerequisite: PLCT 12000.

22001 Plastics Product Design (3)
Plastics product design case studies from the plastics industry, from the initial concept of function through part design, tooling, production and quality assurance. Prerequisite: PLCT 12000.

22002 Plastics Tool Design (3)
Design of molds and tools for plastics processing emphasizing part design, mold design, production aids for after-finishing, quality control. Prerequisite: PLCT 12000.

22005 Plastics Manufacturing (2)
Study of plastics processing technologies including molding and extrusion processes. Behavior of plastic materials under heat and pressure will be studied. Prerequisite: PLCT 12000.

22006 Radiation Polymer Technology II (2)
Comprehensive review of structure, synthesis, transformation and radiation processing of polymeric materials. Prerequisite: PLCT 12005.

*Courses offered only at Regional Campuses.
POLITICAL SCIENCE (POL)

10001 Introduction to Political Science (3)
This course introduces the history and structure of political science, including its relationship to neighboring disciplines. This course thus asks: What does it mean to study politics? What does it mean to study politics scientifically? What are the consequences of different conceptions of politics? Prerequisite: none.

10004 Comparative Politics (3)
This course introduces the different institutional structures of governance (e.g., parliamentary vs. presidential systems) in a range of different states; for different types of regimes (e.g., democratic and authoritarian); and at the international level. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

10100 American Politics (3)
This course covers the basic elements of politics at the national level in the United States: structures, processes, behaviors, institutions, policies. Special emphasis is given to conflicting theories of power as they apply to different economic, sexual and racial groups. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

10300 Public Policy (3)
This course provides a survey of basic public policy concepts and processes within an historical context. It incorporates applied work to bridge conceptual understanding and empirical cases. Prerequisite: none.

10301 Diversity in American Public Policy (3)
This course focuses on the electoral and institutional aspects of sex, race, age and social class as those classifications function as both causes and effects of voting behavior and public law. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

10500 World Politics (3)
A practical, theoretical introduction to a study of systematic patterns in international relations. Includes analysis of rules, instruments, processes, decision-making factors, conflict resolution. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.

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30501 Comparative Theory and Concepts (3)
Introduces logic and methods of comparison in politics, institutions and policy. Students apply the comparative method through an individual project and reading, comparing political systems and policies. Prerequisite: POL 10004 or permission.

30511 Problems of International Organization (3)
Intensive study of major European problems handled by international organizations, including the United Nations, and nongovernmental organizations. Combines classroom and field investigations. Prerequisite: registration in the Geneva Semester.

30520 European Politics (3)
This course examines major European national political systems (British, French, German, Russian and Scandinavian), relations between the European states, the institutions of the European Union and prospects and problems of European integration. Prerequisite: POL 10004 or permission.

30530 Asian Politics (3)
This course examines the politics of China, Japan and the Koreas by looking at the relationship between state and industry in these countries. We will look at the rise of the state in each nation and the subsequent roles they have played in industrialization. Prerequisite: POL 10004 or permission. This course may be used to satisfy the diversity requirement.

30540 African Politics (3)
An analysis of major issues in African politics and international relations. The contemporary development of Africa will be analyzed in the global context of the historical forces of imperialism and colonialism. Prerequisite: POL 10004 or permission. This course may be used to satisfy the diversity requirement.

30550 Latin American Politics (3)
Analysis of political culture/process in selected Latin American states, with particular emphasis on Mexico, Brazil, Argentina and Columbia. Prerequisite: POL 10004 or permission. This course may be used to satisfy the diversity requirement.

30551 U.S.-Latin American Relations (3)
Survey of U.S.-Latin American diplomacy, contemporary hemispheric issues and relations between Latin American states themselves. Prerequisite: POL 10004 or permission.

30810 Politics of the Global Economy (3)
Examines interaction between economics and politics in international relations. Topics: poverty and uneven economic development, political prerequisites for free trade, intrawestern and north-south economic conflict and distributive justice. Prerequisite: POL 10300 or 10500 or permission.

30820 International Organization and Law (3)
This course introduces the subject matter in historical and theoretical contexts, then devotes detailed attention to the full range of international organizations that exist today. A final section addresses the role of international law in world politics. Prerequisite: POL 10300 or 10500 or permission.

30840 Nongovernmental Organizations (3)
This course introduces the diverse range of nongovernmental organizations which exist today and explores their varying roles in setting agendas, shaping legislation and implementing public policy reforms. Prerequisite: POL 10300 or 10500 or permission.

30991 Seminar: Columbus Program in Intergovernmental Issues (6-12)
Annual fall semester resident-study in Columbus, Ohio. Students spend three days per week working at an internship; two days per week attending briefings and completing POL 30430. Prerequisite: 45 hours of college credit, minimum 2.5 GPA. Corequisite: POL 30430, plus permission.

40112 Politics and the Mass Media (3)
This course examines the multiple roles played by the mass media in contemporary politics and analyzes the implications of those roles. Prerequisite: POL 10100 or permission.

40116 Public Opinion and Political Behavior (3)
Analysis of determinants of public opinion and political behavior. Study of how the public makes up its mind and impact of public opinion on government policy. Prerequisite: POL 10100 or permission.

40118 Political Parties and Interest Groups (3)
An examination of the changing roles of political parties and interest groups in the American political system, including a comparison of their respective electoral activities. Prerequisite: POL 10100 or permission.

40182 Constitutional Law: Governmental Structures and Functions (3)
Nature and scope of constitutional government. Study of judicial review, separation of powers, federalism, commerce and taxation. Prerequisite: POL 10100 or permission.

40183 Constitutional Law: Civil Rights and Liberties (3)
Nature and scope of constitutional limitations. Study of First Amendment, freedom of expression, freedom of religion, criminal rights, due process, equal protection. Prerequisite: POL 10100 or permission. This course may be used to satisfy the diversity requirement.

40191 Seminar in American Politics (3)
(Repeatable with permission) A required, writing-intensive seminar for juniors and seniors in the American politics concentration. The focus of the seminar will vary depending on instructor. Prerequisite: political science major or minor, completed lower-division requirements, and junior or senior standing or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

40310 Political Economy of Public Policy (3)
This course covers aspects of political economy which are most relevant to the public policy process. The primary focus is on capitalist theory and its primary critiques and their applications to private- and public-sector policy actions. Prerequisite: POL 10300 or permission.

40320 Ethics and Public Policy (3)
The ethical obligations of public policy makers are examined in this course, within a series of applied cases. The goal is to empower students with the intellectual tools of critical analysis within diverse policy environments. Prerequisite: POL 10300 or permission.

40391 Seminar in Public Policy (3)
(Repeatable with permission) A required, writing-intensive seminar for juniors and seniors in the public policy concentration. The focus of the seminar will vary depending on instructor. Prerequisite: political science major or minor, completed lower-division requirements and junior or senior standing or permission. This course may be used to satisfy the writing-intensive course requirement with approval of major department.

40440 U.S. Environmental Politics and Policies (3)
This is a course in United States environmental politics and policies. It deals with topics such as the history of the U.S. environmental movement, public opinion and environmental issues, environmental racism and classism and environmental policy making and implementation. Prerequisite: POL 10100 or POL 10300 or permission.

40470 Women and Politics (3)
Examines origins, development, current record of century-old women’s movement unique in U.S. annals; compares it with other contemporary social movements. Examines issues of women and public policy. Prerequisite: POL 10100, 10300 or permission. This course may be used to satisfy the diversity requirement.
40530 Politics of War (3)
Examines central questions concerning the justification, explanation, characteristic features and consequences of war. Specific cases will be examined, such as WWII, the Chinese Revolution, Vietnam’s Civil War and potential nuclear war. Prerequisite: POL 10500 or permission.

40540 Politics of Development (3)
Examines practice, record and theories of political development for less developed, developing and developed political systems. Includes extensive analysis of issues, problems through case studies. Prerequisite: POL 10004, 10005 or permission. This course may be used to satisfy the diversity requirement.

40580 Human Rights and Social Justice (3)
Examines the relationship between human rights and problems of the Third World in the civic, political, social and cultural arenas. Particular attention is placed on the struggle of women. Prerequisite: POL 10004, 10005 or permission. This course may be used to satisfy the diversity requirement.

40591 Seminar in International Relations-Comparative Politics (3)
(Repeatable with permission) A required, writing-intensive seminar for juniors or seniors in the IR-comparative politics concentration. The focus of the seminar will vary depending on instructor. Prerequisites: political science major or minor, completed lower-division requirements and junior or senior standing or permission. This course may be used to satisfy the diversity-intensive requirement with approval of major department.

40810 Government-Business Relations (3)
This course focuses on the relationship between the public and private sectors, including a theoretical as well as historical analysis of the evolving relationship between the two. Domestic, comparative and international aspects are featured. Prerequisite: POL 10004, 10300, 10500 or permission.

40850 U.S. Foreign Policy (3)
Examines policy objectives, patterns of decision making and foreign policy actions, roles of interest groups, public opinion, Congress, executive and external influences on policy. Prerequisite: POL 10004, 10300, 10500 or permission.

40860 Comparative Foreign Policy (3)
Comparative analysis of foreign policy patterns and determinants on the basis of the examination of foreign policy of selected countries. Prerequisite: POL 10004, 10300, 10500 or permission.

40920 Politics of Social Movements (3)
Examines the role of social movements in industrial democracies. Focuses on the labor movement and the push for industrial and economic democracy for comparative study of social and political change in France, Germany, Scandinavia and the United States. Includes transnational dimension in European Union and the challenges posed by economic globalization. Prerequisite: POL 10100, 10004, 10300, 10500 or permission.

40991 Washington Program in National Issues (15)
Annual spring semester resident-study in Washington, D.C. Credit hours divided among three units: preparatory colloquium, on-site briefings seminar and internship. S/U grading. Prerequisites: junior standing, 2.75 GPA and permission of the director.

40992 Public Service (1-3)
Allows academic credit for approved participation in a variety of political processes, or as an intern with governmental or private agencies dealing with public affairs. Prerequisites: permission and political science majors and minors only.

40993 Variable Title Workshop in Political Science (1-6)
S/U grading. Prerequisite: none.

40995 Selected Topics in Political Science (1-3)
Special course, not regularly offered. Subject varies depending on the emerging issue, staff availability and competencies. Precise title always listed in the Schedule of Classes. Prerequisite: junior or senior standing or permission.

40996 Individual Investigation (1-3)
For students desiring research into subjects beyond level of completed coursework or on subjects for which no regular course is offered. Prerequisites: permission and political science majors and minors only.

**PORTUGUESE (PORT)**

**PORTUGUESE (PORT)**

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

17201 Elementary Portuguese I (4)
An introduction to the Portuguese language in the context of Luso-Brazilian cultures. Prerequisite: No previous formal training in Portuguese.

17202 Elementary Portuguese II (4)
A continuation of the introduction to the Portuguese language in the context of Luso-Brazilian cultures. Prerequisite: PORT 17201 or equivalent.

27209 Field Study (1-6)
(Repeatable for a total of 6 hours) For residence and/or field research in a Portuguese-speaking community. Prior to registration for this course, student must obtain departmental approval. Prerequisite: one year of college language or equivalent.

27210 Intensive Portuguese (5)
Intensive study for students continuing beyond elementary Portuguese and for those with the equivalent of Spanish Composition and Conversation I. Course provides training through Intermediate Portuguese II. Prerequisite: PORT 17202 or SPAN 38211 or permission.

37211 Composition and Conversation (3)
Study and practice of oral and written Portuguese. Prerequisite: PORT 27210 or permission.

37330 Early Brazilian Literature (3)
Outline of developments in Brazilian literature and reading of representative works from the colonial period to 1922. Prerequisite: PORT 37211 or permission. This course may be used to satisfy the writing-intensive course graduation requirement with approval of major department.

37331 Recent Brazilian Literature (3)
Outline of developments in Brazilian literature and reading of representative works from 1922 to the present. Prerequisite: PORT 37211 or permission. This course may be used to satisfy the writing-intensive requirement with approval of major department.

37421 Luso-Brazilian Civilization (3)
Lectures, readings, oral and written reports on outstanding features of the Portuguese-speaking world with emphasis on Brazil. Prerequisite: PORT 37211 or permission.

47003 Variable Title Workshop in Portuguese (1-6)
Workshops individually designed to provide instruction and training in specific areas of Portuguese studies. S/U grading. Prerequisite: departmental permission.

47095 Selected Topics (3)
Intensive treatment of a selected aspect of Luso-Brazilian literature or linguistics. Topic announced in the Schedule of Classes. Prerequisite: 9 hours of 30000-level courses.

*Courses offered only at Regional Campuses.
47096 Individual Investigation (1-3) (Repeatable for a total of 6 credit hours) Allows the advanced, serious student to carry out research/study project on Portuguese literature, language or culture. Prior approval of supervising faculty member, department required. IP grade permissible. Prerequisite: PORT 27210 or equivalent; junior standing; permission.

<table>
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<tr>
<th>PSYCHOLOGY (PSYC)</th>
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<tr>
<td>11762 General Psychology (3) Introduction to the behavioral science approach to an understanding of human performance and potentials. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER). Prior requirement: PSYC 11762.</td>
</tr>
<tr>
<td>20651 Child Psychology (3) A description and analysis of child development from conception to age 10. This course may be used to satisfy the Liberal Education Requirements (LER). Prerequisite: PSYC 11762.</td>
</tr>
<tr>
<td>22121 Perception (3) Examination of areas of psychology upon which diversity issues have a bearing and focused study of psychological issues relevant to African-American, Asian-American, Hispanic/Latino-American and American Indian groups. Prerequisite: PSYC 11762. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.</td>
</tr>
<tr>
<td>30652 Social and Personality Development (3) Processes and findings in social and personality development, with a focus on childhood and adolescence. Will include the examination of individual differences as well as developmental changes in social function and personality. Prerequisite: PSYC 11762; PSYC 20651, HDFS 24012, PSYC 30651 or permission.</td>
</tr>
<tr>
<td>30655 Cognitive Development (3) Covers the development of cognitive across the life span. Considers how people think at different phases of their life, why their thinking changes with development and what methods are used to investigate these issues. Prerequisite: PSYC 11762; PSYC 20651, HDFS 24012 or permission.</td>
</tr>
<tr>
<td>30656 Psychology of Aging (3) Exploration of basic research and theory on the psychological consequences of aging and psychological factors that affect the behavior of older persons. Prerequisite: PSYC 11762.</td>
</tr>
<tr>
<td>31043 Basic Learning Processes (3) Examination of basic principles of Pavlovian and instrumental conditioning. Emphasis on major empirical phenomena derived from research with animals and humans. Prerequisite: PSYC 11762.</td>
</tr>
<tr>
<td>31141 Perception (3) Influence of environmental, physiological and personal factors in reception, organization and interpretation of stimuli. Prerequisites: PSYC 11762.</td>
</tr>
<tr>
<td>31498 Undergraduate Research (1-6) (Repeatable for a total of 16 hours but see arts and sciences and psychology major/minor requirements for applicability limits) Individual research open to qualified students. S/U grading, IP grade permissible. Prerequisites: PSYC 11762 and permission.</td>
</tr>
<tr>
<td>31574 Research Methods in Psychology (3) The rationale, logic and procedures of scientific research in psychology, with an emphasis on measurement, causal inference and research design. Prerequisite: PSYC 11762; PSYC 21621.</td>
</tr>
<tr>
<td>31684 Quantitative Methods in Psychology II (3) Small sample theory, binomial, analysis of variance, chi square, linear regression, nonparametric statistics. Prerequisite: PSYC 21621 or equivalent.</td>
</tr>
<tr>
<td>31773 Industrial Psychology (3) A descriptive survey course directing attention to the application of principles, facts and methods of the science of human behavior to people at work. Prerequisite: PSYC 11762.</td>
</tr>
<tr>
<td>40111 Abnormal Psychology (3) Diagnostic characteristics, causes and treatment of behavior disorders. Mild, moderate and severe types of disturbances illustrated by cases and research studies. Prerequisites: PSYC 11762 and junior standing.</td>
</tr>
<tr>
<td>40211 Psychological Assessment (3) Use and interpretation of verbal, performance, personality and clinical tests. Skills in using tests at professional level not given. Prerequisites: PSYC 11762 and 21621.</td>
</tr>
<tr>
<td>40383 Psychological Interventions (3) Application of psychological principles and techniques to the problems of the individual. This course is designed to introduce the field of clinical psychology, including models of understanding abnormal behavior, treatment of individuals, and ethics and professional issues. Prerequisites: PSYC 11762 and junior standing.</td>
</tr>
<tr>
<td>40461 Psychology of Language (3) Relationship between language and its speakers. Emphasizes psychological experiments dealing with speech perception, sentence comprehension, semantics, language acquisition, and language and thought. Prerequisite: PSYC 11762 and (PSYC 30445 or permission).</td>
</tr>
<tr>
<td>40563 Comparative Psychology (3) Introduction to animal behavior and its development, mechanisms, evolutionary history and adaptive significance. Both learned and innate behaviors are treated. Prerequisites: PSYC 11762 and junior standing.</td>
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<tr>
<td>40625 Development of Gender Role and Identity (3) A life span, developmental model is used to analyze the changes which occur with age in gender-related role performance and identity formation. Prerequisite: PSYC 11762. This course may be used to satisfy the diversity requirement.</td>
</tr>
<tr>
<td>40974 History of Psychology (3) History of psychology in 18th, 19th and 20th centuries. Emphasis upon emergence of modern experimental psychology. Prerequisites: PSYC 11762 and junior standing.</td>
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<tr>
<td>41282 Personality (3) Introduction to major theories and research in personality. Prerequisite: PSYC 11762.</td>
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</table>
41363 Biopsychology (3)
Introduction to the physiological, biochemical and neuroanatomical foundations of behavior. Special attention to central nervous system and its relation to behavior. Prerequisites: PSYC 11762 and junior standing.

41495 Special Topics in Psychology (3)
(Repeated registration permitted) In-depth examination of particular topics of current interest to faculty and students. Specialized areas of research, theory or methodology may be covered. Specific topics announced. IP grade permissible. Prerequisites: junior standing and permission.

41498 Individual Investigation (1-6)
(Repeatable for a total of 16 hours but see arts and sciences and psychology major/minor requirements for applicability limits) Involves participation in empirical research, review of psychological literature and preparation of a paper or annotated bibliography. IP grade permissible. Prerequisite: PSYC 11762 and permission.

41532 Social Psychology (3)
Study of interpersonal and group behavior, focusing on such topics as attraction, attitude change, helping, aggression and conformity. Prerequisites: PSYC 11762 and junior standing.

41573 Laboratory Experience in Psychological Research: Social/Clinical (3)
Intensive experience in the conduct, analysis and reporting of empirical research in social or clinical psychology. Specific content will vary with the instructor. Repeatable once with instructor and departmental permission if topic is different. Prerequisites: 3.2 GPA, PSYC 11762, 21621 and 31574 or permission. This course may be used to satisfy the writing-intensive requirement.

41574 Laboratory Experience in Psychological Research: Cognitive/Learning (3)
Intensive experience in the conduct, analysis and reporting of empirical research in cognitive psychology or human/animal learning. Specific content will vary with the instructor. Repeatable once with instructor and departmental permission if topic is different. Prerequisites: 3.2 GPA, PSYC 11762, 21621, 31574 and permission. This course may be used to satisfy the writing-intensive requirement.

41581 Health Psychology (3)
The relationship of psychological factors to physical illness, including impact of such factors on illness, that of illness on behavior and psychotherapeutic interventions in those arenas. Prerequisites: PSYC 11762 and junior standing.

41990 Writing in Psychology (1)
Writing-intensive course taken in conjunction with a 3-credit-hour upper-division psychology course (except PSYC 31498, 41498, 41573 or 41993). Prerequisite: departmental permission (controlled enrollment). This course may be used to satisfy the writing-intensive requirement with approval of major department.

41993 Variable Title Workshop in Psychology (1-6)
Variable topic offered as need arises. Specific topics are announced in the Schedule of Classes. S/U grading. Prerequisites: PSYC 11762 and permission.

RADIOLOGIC TECHNOLOGY (RADT)*

14000 Introduction to Radiologic Technology (3)
Introduction to: radiologic technology, radiographic anatomy and physiology, imaging equipment, radiographic procedures, radiation protection, radiographic terminology, X-ray tube and production, and X-ray film. Two-hour lecture, three-hour laboratory weekly. Prerequisite: admission to program.

14001 Orientation to Clinical Radiography (2)
Radiographic positioning of the chest and abdomen. Darkroom chemistry, beam restriction devices and introduction to contrast mediums. One hour lecture, three hours laboratory weekly. Prerequisite: RADT 14000 and HED 14020.

14004 Radiologic Physics (4)
Introduction to concepts of physics. Study of the X-ray machine circuit and components, the production of X-rays and their interaction with matter. Prerequisite: admission to program.

14007 Radiographic Procedures I (5)
Techniques, radiography and taking and recording vital signs. Introduction to venipuncture and clinical pharmacology. Prerequisite: RADT 14000 and HED 14020.

14010 Clinical Education I (1)
Supervised experience and observation with emphasis on basic radiological examinations, patient care, professionalism and the procedures covered in RADT 14020. Competency testing begins. Assigned to a clinical education center 16-20 hours per week. Prerequisite: RADT 14001. Corequisite: RADT 14020; and BSCI 11000.

14011 Clinical Education II (1)
Continuation of Clinical Education I, with emphasis on clinical practice of basic skills of radiologic technology and the examinations covered in RADT 14021. Competency testing continues. Assigned to a clinical education center 16-20 hours per week. Prerequisite: RADT 14010, 14019, 14020, BSCI 11000. Corequisite: RADT 14021.

14012 Clinical Education III (1)
Continuation of Clinical Education II, with more emphasis on independent clinical practice of procedures previously mastered and problem solving. Competency testing continues. Assigned to a clinical education center for 40 hours per week for five weeks. Prerequisite: RADT 14011, 14021, 14022.

14013 Clinical Education IV (1)
Continuation of Clinical Education III, with emphasis on individual performance and instruction of radiographic procedures and the ability to adapt to unusual situations. Competency testing continues. Assigned to a clinical education center for 40 hours per week for five weeks. Prerequisite: RADT 14012.

14019 Radiographic Exposure and Imaging I (2)

14020 Radiographic Procedures II (5)
Radiographic anatomy and positioning of the upper and lower extremities, pelvic and pectoral girdles, skull, facial bones, sinuses, vertebral column and bony thorax. Four hours lecture, two hours laboratory weekly. Prerequisite: RADT 14002. Corequisite: BSCI 11000.

14021 Radiographic Procedures II (4)
Radiographic anatomy and positioning of the gastrointestinal system, urinary and biliary systems, and trauma patients. Three hours lecture, two hours laboratory weekly. Prerequisite: RADT 14020 and BSCI 11000.

14022 Radiographic Exposure and Imaging II (3)
Aspects of radiographic quality, fluorescent equipment, X-ray timers and tomography. Experiments involving the factors that influence radiographic quality. Two hours lecture, two hours laboratory weekly. Prerequisite: RADT 14019.

21095 Special Topics in Radiologic Technology (2-4)
(Repeated registration permitted) Student participation course on topics pertinent to radiologic technology. Topics are chosen by the instructor. Students may enroll in course more than once. Prerequisite: permission of instructor.

24000 Medical Terminology (2)
Method of construction and recognition of medical terms from Greek and Latin prefixes, suffixes, word roots and combining forms. Radiologic terminology is emphasized. Prerequisite: admission to the program.
24001 Radiologic Pathology (3)  
Introduction to disease and injury states and their application to radiologic technology. Each anatomical system is discussed and appropriate imaging modalities demonstrated. Prerequisites: BSCI 11000; HED 14020; RADT 14002, 24010 and 24020.

24002 Radiation Protection (3)  

24010 Clinical Education V (1)  
Continuation of Clinical Education IV, with emphasis on clinical practice. Begin participation in procedures covered in RADT 24020. Competency testing continues. Assigned to a clinical education center 24 hours per week. Prerequisite: RADT 14013. Corequisite: RADT 24020.

24011 Clinical Education VI (1)  
Continuation of Clinical Education V, emphasis on advanced clinical practice. Independent performance on radiographic examinations, participation in specialized radiographic areas covered in RADT 24020. Assigned to a clinical education center 24 hours per week. Prerequisites: RADT 14004, 24001, 24010, 24020. Corequisite: RADT 24022.

24020 Radiographic Procedures III (3)  
Advanced radiographic procedures of the nervous, circulatory, urinary, reproductive and digestive systems. Pediatric and geriatric radiography and specialized procedures and equipment. Prerequisite: RADT 14021.

24022 Radiographic Exposure and Imaging III (3)  
Evaluation of radiographic systems to assure consistency in the production of quality images. Two hours lecture, two hours laboratory weekly. Prerequisite: RADT 14022.

24096 Individual Investigation in Radiologic Technology (1)  
Directed research of special interest or need in the student’s program. A research paper will be written on an assigned topic in radiologic technology. Prerequisite: RADT 14000.

34004 Radiation Therapy Patient Management (3)  
Provides the basic concepts in patient assessment and evaluation. Includes communication skills, infection control, nutrition, medications, exams, emergencies, patient transfer techniques, medical ethics and law as applied to radiation therapy. IP grade permissible. Prerequisite: program admission.

34008 Radiation Therapy Physics I (3)  
Introduction to radiation therapy physics, including the fundamentals of atomic structure, radiation properties, radiation production, radiation quality, interactions of radiation with matter and principles of radiation detectors. IP grade permissible. Prerequisite: program admission.

34030 Radiation Therapy Clinical Education I (1)  
Observation and supervised clinical education with emphasis on administering radiation therapy treatments, simulation, block formation and patient care. Students are assigned to a clinical education site for approximately 16 hours per week. IP grade permissible. Prerequisite: program admission.

34042 Abdominal Sonography I (3)  
Anatomy, physiology and pathology of the abdomen; instrumentation and scanning techniques; normal and abnormal sonographic appearances of abdominal structures will be presented. Prerequisite: program admission.

34044 Ultrasound Physics and Instrumentation (3)  
Ultrasound principles to include interaction of sound with matter, propagation of sound in tissue, physical units, transducer parameters, image storage and display, quality assurance, bioeffects, image artifacts and physical principles of Doppler. Prerequisite: program admission.

34045 Ultrasound Clinical Education I (2)  
Provides clinical education and experience at a clinical site to allow students the opportunity to practice skills necessary to obtain high quality sonographic images, to alter protocols based on patients and to identify image quality problems. IP grade permissible. Prerequisite: program admission.

34052 Abdominal Sonography II (3)  
Continuation of RIS 34042; anatomy, physiology, and pathology of the abdomen; instrumentation and scanning techniques; normal and abnormal sono- 
graphic appearance of abdominal structures will be presented. Prerequisite: RIS 34042, 34044, 34045, 34083. Corequisite: RIS 44083.

34055 Ultrasound Clinical Education II (3)  
Provides clinical education and experience at clinical sites to allow students the opportunity to practice skills necessary to obtain high quality sonographic images, to alter protocols based on patients and to identify image quality problems. IP grade permissible. Prerequisite: RIS 34045 or permission. Corequisite: RIS 34062.

34062 Obstetrics and Gynecology Sonography I (3)  
Anatomy and pathophysiology of the nonpregnant female pelvis; instrumentation and scanning techniques; normal and abnormal sonographic appearances; and findings of the uterus, fallopian tubes and ovaries will be covered. Prerequisites: RIS 34044, 34045, 34052, and 34083. Corequisite: RIS 34055, 44083.

34065 Ultrasound Clinical Education III (2)  
Provides clinical education and experience at a clinical site to allow students the opportunity to practice skills necessary to obtain high quality sonographic images, to alter protocols based on patients and to identify image quality problems. IP grade permissible. Prerequisite: permission. Corequisite: RIS 44072.

34082 Small Parts Sonography (1)  
Anatomy and pathophysiology of superficial structures; instrumentation and scanning techniques; normal and abnormal sonographic appearances of small structures; correlation with laboratory findings and other imaging modalities will be presented. Prerequisite: RIS 34044, 34083, 44083. Corequisite: RIS 44075.

34083 Sectional Anatomy in Medical Imaging (3)  
Presentation of sectional anatomy of the body in the transverse (axial), sagittal and coronal planes as seen in medical images in CT, MRI and diagnostic medical sonography. Prerequisite: program admission and BSCI 11000 or 20020.

41095 Special Topics in Radiologic and Imaging Sciences (1-3)  
Courses will consist of various topics in medical imaging designed to enhance learning outcomes. Prerequisites: permission. Enrollment in RIS concentration: CT, MRI, diagnostic medical sonography or nuclear medicine.

44001 Patient Management in Nuclear Medicine (2)  
Provides a working knowledge of a health care facility’s function, basic patient care skills, emergency care, patient communications and professionalism. Includes interactions and care of diverse populations. Prerequisite: program admission.

RADIOLOGIC AND IMAGING SCIENCES (RIS)*

34003 Radiation Therapy Principles/Practice I (3)  
An overview of cancer, radiation therapy and its physical and technical aspects. Includes the roles/responsibilities of the therapist, treatment parameters, documentation and delivery of patient care, education and procedures. IP grade permissible. Prerequisite: program admission.

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44002 Nuclear Medicine Procedures I (3)
An introduction to imaging in vivo. Nuclear medicine procedures. Course focuses on the biological, anatomical and physiological aspects involving the skeletal, cardiovascular, respiratory, genitourinary and gastrointestinal organ systems. Prerequisite: program admission.

44005 Nuclear Medicine Clinical Education I (3)
Provides clinical experience at assigned clinical site. Includes orientation to program and policies, observation of procedures, patient management, radiation safety, equipment orientation and the competency procedure. IP grade permissible. Prerequisite: program admission.

44006 Nuclear Medicine Physics and Instrumentation I (4)
Presents concepts and physical principles of nuclear medicine physics including interactions with matter. Also presents information on radiation detectors and their applications, functions and limitations. Prerequisite: program admission. Corequisite: RIS 44010.

44010 Nuclear Medicine Clinical Education II (3)
Continuation of RIS 44005. Students apply principles of patient care, structure and function, physics, instrumentation, radiation safety and protection, imaging techniques and radiopharmacy to clinical education. Students begin performing clinical competency exams. IP grade permissible. Prerequisite: RIS 44005.

44011 Nuclear Medicine Radiopharmacy (3)
Includes methodologies, calculations and basic properties of radionuclides. Radiopharmaceutical chemistry is applied and localized and quality control is examined. Includes radiopharmacy management and governing rules and regulations. Prerequisites: RIS 44001, 44002, 44005, 44006, 44010. Corequisites: RIS 44012, 44014, 44015, 44017.

44012 Nuclear Medicine Procedures II (3)
Emphasis on the biological, anatomical and physiological aspects of nuclear medicine procedures involving the endocrine and central nervous systems, as well as inflammatory, tumor, miscellaneous and pediatric studies. Prerequisites: RIS 44001, 44002, 44005, 44006, 44010. Corequisites: RIS 44011, 44014, 44015, 44017.

44013 Radiation Therapy Principles/Practice II (3)
Examines the multidisciplinary treatment approaches. Consists of advanced topics in therapy, chemotherapy, immunotherapy and surgical interventions for combined modalities, for benign conditions and for managing side effects and emergencies. IP grade permissible. Prerequisite: RIS 34003.

44014 Nuclear Medicine Physics and Instrumentation II (2)
Physics and instrumentation of imaging devices is presented to include basic functions, application of principles, quality control and computer applications. Prerequisites: RIS 44002, 44005, 44006, 44010. Corequisites: RIS 44011, 44012, 44015, 44017.

44015 Nuclear Medicine Clinical Education III (2)
Continuation of RIS 44010 with emphasis on clinical procedures covered in RIS 44012 and equipment in RIS 44014. Competency testing continues. IP grade permissible. Prerequisites: RIS 44001, 44002, 44005, 44006 and 44010. Corequisites: RIS 44011, 44012, 44014 and 44017.

44016 Nuclear Medicine Procedures III (3)
Emphasis on in vitro procedures, immunology, radionuclide therapy, SPECT and PET scanning. Also includes a review of all nuclear medicine procedures. Prerequisites: RIS 44011, 44012, 44014, 44015, 44017. Corequisite: RIS 44020.

44017 Nuclear Medicine Radiation Safety (3)
Emphasis on the units of radiation measurement, dose limits, safety and monitoring devices, safe handling of radioactive materials, licensing requirements, therapeutic doses and the effects of radiation on the body. Prerequisites: RIS 44001, 44002, 44005, 44006, 44010. Corequisites: RIS 44011, 44012, 44014, 44015.

44018 Radiation Therapy Physics II (3)
Continuation of the principles of radiation therapy physics and the study of photon beam dosimetry, electron beam dosimetry and treatment planning. IP grade permissible. Prerequisite: RIS 34008.

44020 Nuclear Medicine Clinical Education IV (2)
Continuation of RIS 44015 with emphasis on advanced procedures, SPECT and PET scanning, advanced and emerging technologies, teleradiology and PACS and critical thinking skills for the clinical site. IP grade permissible. Prerequisite: RIS 44015. Corequisite: RIS 44016.

44021 Patient Management in Computed Tomography (CT) (3)
Provides knowledge about care-giving skills for patients undergoing CT exams. Information includes effective communication, problem-solving techniques, patient safety/comfort, patient preparation, monitoring, contrast agents and venipuncture. Prerequisite: admission to program.

44022 Computed Tomography (CT) Imaging Procedures (3)
Presentation of information about CT scanning techniques related to each part of the body as well as special studies. Positioning criteria, protocols and variations from routine exams will be included. Image quality evaluation criteria will be discussed. Prerequisite: program admission.

44024 Physical Principles of Computed Tomography (CT) (3)
Information presented about data acquisition and processing. The components in the image acquisition system are outlined. The software and technical parameters used in the acquisition of images is discussed. Problem-solving methodologies discussed. Prerequisite: program admission, RADT 14004 or equivalent; COMT 11000 or equivalent.

44025 Computed Tomography (CT) Clinical Education I (3)
Provides clinical education at a clinical site so students can observe and become familiar with CT equipment and procedures, and apply knowledge of physics and patient care. Students begin to perform some CT procedures under direct supervision of technologists. Competency exams required. IP grade permissible. Prerequisite: program admission.

44026 Radiation Therapy Pathology (3)
General overview of various disease processes with emphasis on cancer types. Includes epidemiology, etiology, symptoms, metastases, histology, tumor grading, staging, detection, screening and diagnosis, treatment, side effects and prognosis. IP grade permissible. Prerequisites: RIS 34003 and 34083.

44027 Computed Tomography (CT) Clinical Education II (3)
Continuation of RIS 44025. Students apply knowledge of physics, patient care, sectional anatomy and pathology in the performance of CT clinical competency exams. Students act more independently using critical thinking skills. IP grade permissible. Prerequisite: RIS 44025.

44028 Radiation Therapy Radiobiology (3)
Establishes a foundation in radiation biology for radiation therapy. Cell biology and its response to radiation are reviewed as well as the effect of radiation on pathology and body systems. IP grade permissible. Prerequisite: RIS 44018.

44031 Patient Management in MRI (3)
Provides information on the role of the MRI technologist in maintaining patient safety and comfort as well as personal and coworker safety. MR contrast agents and venipuncture will be studied. Includes problem solving with diverse patient types. Prerequisite: program admission.
44032 Magnetic Resonance Imaging Procedures (3)

Provides the imaging techniques related to the body, special clinical applications, coil selection, scan sequences, protocols, positioning criteria, normal and abnormal anatomical and pathological structures and signal characteristics. Prerequisite: program admission.

44034 Magnetic Resonance Equipment and Image Acquisition (3)

Develops an understanding of MR image acquisition and the equipment used. Provides information in the use and manipulation of the hardware and technical parameters used in image generation, as well as safety and special applications. Prerequisite: program admission.

44035 MRI Clinical Education I (3)

Students observe and become familiar with MRI equipment and procedures and apply knowledge of physics, MRI safety and patient care. Students begin to perform some procedures under direct supervision of technologists. IP grade permissible. Prerequisite: program admission.

44036 MRI Clinical Education II (3)

Continuation of RIS 44035. Students apply knowledge of physics, patient care, anatomy and pathology when performing clinical competency exams as well as quality assurance procedures. Some applications to special procedure exams. IP grade permissible. Prerequisite: RIS 44035.

44037 MRI Clinical Education III (3)

Continuation of RIS 44036. Students use critical thinking skills in performing MRI exams in the clinical setting and solve problems in a more independent manner. Students complete all required clinical competency exams. IP grade permissible. Prerequisite: RIS 44036.

44038 Radiation Therapy Physics III (3)

Includes determination of radiation intensity, use of high-energy beams, linear accelerators, other high energy machines, geometry of photon beams, clinical application in treatment planning and safety. IP grade permissible. Prerequisite: RIS 44018.

44040 Radiation Therapy Clinical Education II (1)

Continuation of RIS 34030 with emphasis on clinical practice of treatment techniques and planning. Students are assigned to clinical education site for approximately 24 hours per week. IP grade permissible. Prerequisite: RIS 34030.

44041 Radiation Therapy Quality Management (2)

Provides overview of quality management programs and continuing quality improvement in radiation therapy. Topics include validity of quality assurance checks, chart checks, image checks, testing on simulators, linear accelerators and brachytherapy sources. IP grade permissible. Prerequisite: RIS 44018.

44043 Radiation Therapy Principles/Practice III (2)

Content examines the health care market with emphasis on current trends in radiation therapy. Focuses on operational issues such as human resource regulations, accreditation agencies, billing and reimbursement and Medicare. IP grade permissible. Prerequisite: RIS 44013.

44050 Radiation Therapy Clinical Education III (1)

Continuation of RIS 44040 with added emphasis on critical thinking, problem solving and clinical competency. Students are assigned to clinical education site for approximately 24 hours per week. IP grade permissible. Prerequisite: RIS 44040.

44060 Radiation Therapy Clinical Education IV (1)

Continuation of RIS 44050 with added emphasis on critical thinking, problem solving and clinical competency. Students are assigned to clinical education site for approximately 24 hours per week. IP grade permissible. Prerequisite: RIS 44050.

44070 Radiation Therapy Clinical Education V (1)

Continuation of RIS 44060 with added emphasis on clinical practice, treatment procedures, simulation and treatment planning. Students are assigned to clinical education site for approximately 24 hours per week. IP grade permissible. Prerequisite: RIS 44060.

44072 Obstetrics and Gynecology Sonography II (3)

Embryonic and fetal development throughout gestation; fetal measurements, normal fetal anatomy and physiology; and abnormal sono graphic appearances of the fetus will be covered as well as invasive obstetric procedures and antepartum testing. Prerequisite: RIS 34062.

44074 Vascular Sonography (2)

Anatomy, physiology and hemodynamics of the cerebrovascular and peripheral venous systems; normal and abnormal sonographic vascular appearances; Doppler instrumentation and scanning techniques will be covered. Prerequisites: RIS 34044, 34083, 44073, 44083. Corequisite: RIS 44085.

44075 Ultrasound Clinical Education IV (3)

Provides clinical education and experience at a clinical site to allow students the opportunity to practice skills necessary to obtain high quality sonographic images, to alter protocols based on patients and to identify image quality problems. IP grade permissible. Prerequisite: permission. Corequisite: RIS 34082 and 44084.

44083 Pathophysiology for Medical Imaging (3)

Provides students with basic information on the causes of diseases and the body’s response to disease, as well as the medical imaging modalities that will demonstrate them. Prerequisite: permission.

44084 Ultrasound Image Evaluation (1)

Presentation of sono graphic findings in specific disease processes, with evaluation of image quality and emphasis on diagnostic features of pathologic entities. Prerequisites: RIS 34083, 34094, 34082, 44072, 44083. Corequisite: RIS 44075.

44085 Ultrasound Clinical Education V (3)

Provides clinical education and experience at a clinical site to allow students the opportunity to practice skills necessary to obtain high quality sonographic images, to alter protocols based on patients and to identify image quality problems. IP grade permissible. Prerequisite: permission. Corequisite: RIS 44074.

44088 Research in Medical Imaging (3)

Fundamental concepts and procedures for systematic collection, analysis, critique and application of qualitative and quantitative data in medical imaging. Prerequisite: Majors only; senior standing.

REAL ESTATE AND RELATED TECHNOLOGIES (RERT)*

11000 Real Estate Principles and Practices (3)

Introduction to listing, selling, real estate math, legal descriptions of property and contracts. Prerequisite: none.

11001 Real Estate Law (3)

Review of basic Ohio laws covering the functions of an agency and the legal aspects of real estate transactions. Prerequisite: RERT 11000 or permission.

11003 Real Estate Financing (2)

Covers types of institutions, instruments and procedures involved in financing real estate transactions. Covers nature and characteristics of mortgage loans and nature of the mortgage market. Prerequisite: RERT 11000.


21000 Real Estate Appraisal (2)  
Emphasizes methodology of appraising urban real property and appraisal techniques. Presents market approach to residential appraisal. Prerequisite: RERT 11000.

21003 Special Topics in Real Estate (2)  
Seminar involving discussion of current issues and solutions to special problems in real estate investment, management and brokerage operations. Prerequisites: RERT 11000, 11001, 11003, 21000.

RECREATION, PARK AND TOURISM MANAGEMENT (RPTM)

16000 Foundations of Recreation and Leisure (3)  
Historical examination of the park and recreation movement; sociological, economic, psychological and political considerations for the delivery of leisure and recreation services in contemporary society. Prerequisite: none.

26000 Computer Applications in Recreation and Sport (3)  
This course focuses on the personal computer and its general function and uses in a recreation and sport environment. Students learn a wide variety of applications and programs pertinent to the recreation and sport industry. Prerequisite: junior standing or permission.

26010 Community Development in Recreation (3)  
Explores the contemporary and historical roles, organization and services of public and nonprofit leisure service providers. Includes various theoretical perspectives on community organization and development, as well as methods available to the recreation practitioner to facilitate the development of recreation services in communities. Prerequisite: RPTM 16000 or permission.

26030 Recreation Group Leadership (3)  
Group leadership concepts, methods and techniques. Practical experience in planning and conducting recreational activities for a variety of populations. Prerequisite: RPTM 16000. Special fee: $4/credit hour—subject to change.

26060 Introduction to Global Tourism (3)  
(Cross-listed with GEOG 22040) Introduction to travel and tourism around the world, including tourism technologies, cultural and natural environments as attractions, benefits of travel, travel ethics and sustainable development. Prerequisite: none.

26080 Introduction to Therapeutic Recreation (3)  
Introduction to the profession of therapeutic recreation. Includes history, philosophy, settings and populations served and an overview of therapeutic recreation process. Prerequisite: RPTM 16000.

26081 Principles of Outdoor Recreation (3)  
Introduction to outdoor recreation, including the history, economics, resources, management, education and environmental aspects. Prerequisite: RPTM 16000.

26082 Principles of Outdoor Recreation Tech. (3)  
Principles of outdoor recreation technology and environmental aspects. Prerequisite: RPTM 26000.

26084 Principles of Outdoor Recreation Tech. (3)  
Principles of outdoor recreation technology and environmental aspects. Prerequisite: RPTM 26000.

36010 Recreation, Leisure and Aging (3)  
Knowledge and understanding of leisure and aging. Planning and implementing recreational programs and activities for enriching the lives of older persons. Prerequisite: RPTM 26030 or permission.

36040 Inclusion of People with Disabilities in Leisure Services (3)  
An examination of attitudes toward people with disabilities, characteristics of various disability groups, the role and responsibility of leisure service providers to be inclusive of all individuals and techniques for adapting programs. Prerequisite: RPTM 26030 or permission. This course may be used to satisfy the diversity requirement.

36060 Commercial Recreation and Tourism (3)  
Principles of commercial recreation and tourism services, including entrepreneurship, economic concepts of the for-profit recreation industries and management skills. Prerequisite: RPTM 26060.

36075 Program Design and Evaluation (3)  
Programming leisure services within a socio-cultural context, involving understanding and assessing client behavior and needs, proficiency in program design and implementation and knowledge of evaluation methods reflective of a service-centered and benefits approach. Prerequisites: RPTM 26030 or permission.

36080 Principles of Therapeutic Recreation (3)  
Introduction to the empirical basis of therapeutic recreation programs. Integration of theory into program plans for developing or disabilities. Prerequisite: RPTM 36080.

36092 Practicum in Therapeutic Recreation (1)  
(Repeatable for total 3 credit hours) A 60-hour field experience in a therapeutic recreation setting. Must be approved by instructor prior to registration. S/U grading. IP grade permissible. Prerequisites: RPTM 16000, permission and leisure studies major or minor.

36192 Practicum in Leisure Services Management (1)  
(Repeatable for total 3 credit hours) A 60-hour field experience in a leisure services setting. Must be approved by the instructor prior to registration. S/U grading. IP grade permissible. Prerequisites: RPTM 16000, permission and leisure studies major or minor.

16000 Foundations of Recreation and Leisure (3)  
Historical examination of the park and recreation movement; sociological, economic, psychological and political considerations for the delivery of leisure and recreation services in contemporary society. Prerequisite: none.

36075 Program Design and Evaluation (3)  
Programming leisure services within a socio-cultural context, involving understanding and assessing client behavior and needs, proficiency in program design and implementation and knowledge of evaluation methods reflective of a service-centered and benefits approach. Prerequisites: RPTM 26030 or permission.

46040 Therapeutic Recreation Program Techniques (3)  
(Cross-listed with ELS 56040) Intervention/facilitation techniques employed in therapeutic recreation practice. Integration of theory into program plans used in therapeutic recreation for treatment and leisure education services for people with illnesses or disabilities. Prerequisite: RPTM 36080.

46041 Advanced Therapeutic Recreation Program Techniques (3)  
Advanced intervention/facilitation techniques employed in therapeutic recreation practice. Professional issues related to therapeutic recreation practice. Prerequisite: RPTM 46040.

46060 Administration of Leisure Services (3)  
Administrative practices of private and public leisure service agencies. Organization, philosophy, personnel and fiscal management, public relations and legal concerns are examined. Prerequisites: RPTM 26000, 36040, 36075 and 36092 or 36192 or permission.
REHABILITATION COUNSELING (RHAB)
47712  Introduction to Rehabilitation (3)
Introductory course surveys philosophy, history and legislation in rehabilitation, which is defined as a process, social movement and public mandate. Particular emphasis is given to the role and function of the rehabilitation counselor in the private and public sectors. Prerequisite: junior or senior standing.

RUSSIAN (RUSS)
For placement and credit in foreign language courses see Arts and Sciences—Foreign Language Requirement—Placement and Credit.

The following course is taught in English and does not presuppose a preparation in the language: Russian 32501.

12201  Elementary Russian I (4)
An introduction to the Russian language in the context of Russian cultures. Prerequisite: none.

22202  Intermediate Russian II (4)
Continued development of speaking, listening, reading and writing skills using a variety of cultural materials. Prerequisite: RUSS 12202 or equivalent.

22610  Russian Morphology and Vocabulary Building (3)
A systematic presentation of the extensive root, prefix and suffix system, which provides the basis for rapid acquisition of Russian vocabulary. Prerequisite: RUSS 22202 or equivalent.

32210  Intensive Russian Grammar (3)
A systematic approach to Russian grammar and syntax. Prerequisite: RUSS 22202 or permission.

32211  Composition and Conversation (3)
Grammar review and practice in composition and conversation. Prerequisite: RUSS 22202.

32215  Russian Phonetics and Diction (3)
Study of the Russian sound system with special emphasis on pronunciation and intonation. Application of the international phonetic alphabet to Russian. Prerequisite: RUSS 22202.

42093  Variable Title Workshop in Russian Language and Literature (1-6)
Workshops individually designed to provide instruction and training in specific areas of Russian studies. S/U grading. Prerequisite: departmental permission.

42095  Special Topics in Russian Language and Literatures (1-4)
Topic to be announced in Schedule of Classes. Repeated registration permitted when content varies. Prerequisite: senior standing or permission.
**SECONDARY EDUCATION (SEED)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>32146</td>
<td>Introduction to Content Area Reading (2)</td>
<td>This course emphasizes the development and adaptation of reading and study strategies applicable to the content areas; techniques for incorporating reading into subject matter instruction. Includes 25 field/clinical hours. Prerequisite: ADED 32142 or junior standing in art education (K-12).</td>
</tr>
<tr>
<td>32147</td>
<td>Language, Literacy and Learning (3)</td>
<td>Issues central to teaching English: language development in adolescents; reading and composing for varied purposes; relationships between language and learning; multicultural perspectives on the curriculum. Prerequisites: AED 32142 and advanced standing or permission. Corequisite: SEED 42292. This course may be used to satisfy the writing-intensive requirement with approval of major department.</td>
</tr>
<tr>
<td>32272</td>
<td>Teaching of Speech (4)</td>
<td>Methods of teaching speech communication, radio-TV-film and theatre in secondary school curricula. This course includes 55 field/clinical hours. Prerequisites: advanced standing and ADED 32142 or permission.</td>
</tr>
<tr>
<td>32275</td>
<td>Social Studies Education and the Social Sciences (3)</td>
<td>Beginning methods course for teaching social studies. Concentrates on instructional strategies, techniques and content for teaching the social sciences at the secondary level. This course includes 51 field/clinical hours. Prerequisites: AED 32142 and advanced standing.</td>
</tr>
<tr>
<td>40093</td>
<td>Variable Title Workshop in Secondary Education (1-4)</td>
<td>Various topics designed to respond to issues, trends and specialized needs of secondary schools. SAU grading. Prerequisite: permission.</td>
</tr>
<tr>
<td>42157</td>
<td>Teaching with Microcomputers: Secondary Classroom (3)</td>
<td>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.</td>
</tr>
<tr>
<td>42196</td>
<td>Individual Project in Secondary Education (2-4)</td>
<td>IP grade permissible. Prerequisite: permission.</td>
</tr>
<tr>
<td>42272</td>
<td>Teaching of Computer Science in the Secondary School (4-6)</td>
<td>Methodology and materials for effective teaching of secondary school computer science and computer use. Prerequisites: CS 43001 and 33101, ADED 32142.</td>
</tr>
<tr>
<td>42275</td>
<td>Teaching Social Studies in Secondary Schools (3)</td>
<td>Advanced methods course for teaching social studies. Focuses on planning and preparation for the student teaching experience. This course includes 51 field/clinical hours. Prerequisite: SEED 32275.</td>
</tr>
<tr>
<td>42292</td>
<td>Field Work Practicum (1-4)</td>
<td>Designed to meet the individual needs of education students who require additional field clinical experiences prior to student teaching. Prerequisites: permission, junior or senior standing.</td>
</tr>
<tr>
<td>43325</td>
<td>Multi-Modal Literacies in the Secondary Classroom (3)</td>
<td>Explores the pedagogies of reading and composing with a variety of print and nonprint texts. Focuses on the impact of media culture on adolescent learners. Utilizes new literacies to enhance learning in the content area. Prerequisite: advanced standing.</td>
</tr>
<tr>
<td>43335</td>
<td>Teaching Language and Composition (3)</td>
<td>Explores linguistic and rhetorical perspectives on the teaching of composition in secondary schools. Prerequisites: advanced standing, ADED 32142, MCED 40007 and SEED 43325 and 43315. Corequisite: ADED 42292.</td>
</tr>
<tr>
<td>47248</td>
<td>Teaching Critical Thinking (2)</td>
<td>Techniques, procedures and materials for developing skills in application of analysis and thinking process. Prerequisites: ADED 32142 and senior standing.</td>
</tr>
</tbody>
</table>

**SOCIOLGY (SOC)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>12050</td>
<td>Introduction to Sociology (3)</td>
<td>Scientific approach to understanding social interaction, institutions and organization. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.</td>
</tr>
<tr>
<td>22100</td>
<td>Sociological Analysis (3)</td>
<td>Fundamental study of sociological analysis designed to provide awareness of theoretical and methodological concepts necessary in developing sociological perspective. Prerequisite: SOC 12050.</td>
</tr>
<tr>
<td>22570</td>
<td>Understanding Differences and Inequality (3)</td>
<td>An introduction to the cultural and structural factors creating and sustaining educational, economic and political inequality by race/ethnicity, gender, class and sexual orientation with an emphasis on issues of poverty and immigration. Prerequisite: none.</td>
</tr>
<tr>
<td>22778</td>
<td>Social Problems (3)</td>
<td>Contemporary American and global social problems and issues are analyzed from sociological perspectives. Several cases are used to illustrate the emergence, development and decline of problems in social context. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirements (LER) and diversity requirements.</td>
</tr>
<tr>
<td>24011</td>
<td>Interpersonal Relationships and Families (3)</td>
<td>(Cross-listed with HDFS 24011) Exploration of the sociological nature of families across the life span, focusing on structure, diversity and life-course processes, such as dating, mate selection, cohabitation, marriage, parenthood, divorce, remarriage, singlehood, widowhood, parent-child interactions, sexual orientation, inequality and difference. Prerequisite: none.</td>
</tr>
</tbody>
</table>

*Courses offered only at Regional Campuses.*
31092 Practicum in Sociology (1-3)  
Individual research experience in sociology. S/U grading; IP grade permissible. Prerequisites: SOC 32210 and junior standing or permission.

32096 Individual Investigation in Sociology (1-3)  
Readings and/or research supervised by member of sociology faculty. Prerequisites: SOC 12050, junior standing and permission of instructor.

32210 Researching Society (3)  
Survey of methods and techniques of research; research design and data gathering instruments; qualitative and quantitative analysis. Prerequisites: SOC 12050 and junior standing, or permission.

32220 Data Analysis (3)  
The use of quantitative methods in the analysis of data from social research. Emphasis on descriptive statistics. Prerequisites: SOC 12050 and junior standing, or permission. Corequisite: SOC 32221.

32221 Data Analysis Laboratory (1)  
Analysis of sociological data utilizing statistical and electronic data processing tools. Corequisite: SOC 32220.

32400 Individual and Society (3)  
Foundations of social psychology; process of socialization; development of social and personal identities; small group and collective behavior; theories of deviance. Prerequisite: SOC 12050 and junior standing or permission.

32510 Sociology of Work (3)  
Consideration of world of work across time and cultures with special emphasis on American society. Impact of work on individuals and other social institutions. Prerequisites: SOC 12050 and junior standing, or permission.

32560 Sociology of Families (3)  
Social history of the American family. Examination of how race, ethnicity, sexual orientation, class, gender and age contribute to variation in the experience and structure of family life in the U.S. Prerequisites: SOC 12050 and junior standing, or permission. This course may be used to satisfy the diversity requirement.

32565 Sociology of Gays/Lesbians (3)  
Examination of sexual identities, societal attitudes and debates, and differences of gender, race, age, and class in gay/lesbian communities, using both social movements and life span perspectives. Prerequisite: SOC 12050 and junior standing, or permission. This course may be used to satisfy the diversity requirement.

32569 Minorities in America (3)  
Study of such major American minorities as blacks, American Indians, Spanish-speaking Americans and American Jews. Prerequisites: SOC 12050 and junior standing, or permission.

32570 Inequality in Societies (3)  
Sociological analysis of stratification and inequality in societies, and the social structures that produce and maintain them. Particular emphasis on the intersections of race, class and gender in American society. Prerequisite: SOC 12050 and junior standing or permission. This course may be used to satisfy the diversity requirement.

32610 Birth, Death, and Migration (3)  
Determinants and consequences of population change, with emphasis on mortality, fertility and migration. Prerequisites: SOC 12050 and junior standing, or permission.

32673 Urban Processes and Life Styles (3)  
Examination of emergence, nature and problems of urbanization through analysis of ecology, organization, social psychology of urban life. Prerequisites: SOC 12050 and junior standing, or permission.

32762 Deviant Behavior (3)  
Overview of classical and contemporary theories and perspectives on the nature, causes and societal management of deviant behavior. Application of theories and perspectives to modern and historical social problems, methods of punishment and policy trends in social control. Prerequisite: SOC 12050 and junior standing, or permission.

32763 Death and Dying (2)  
Theoretical perspectives and research in human death and dying. Emphasis on applied concerns in medical and helping professions. Topics include social death, death as taboo, medicalization and rationalization of death and dying and disenfranchised grief. Prerequisite: SOC 12050 and junior standing, or permission.

32802 Internship in Sociology (3)  
Application of sociological knowledge in the work setting. Assist professionals in sites including social services, hospitals, industry and government. Prerequisites: junior standing, sociology major or minor, 2.50 GPA and permission.

32803 Variable Title Workshop in Sociology (1-6)  
Concentrates on professional or disciplinary concerns. Specific content to vary according to needs of client groups. S/U grading. Prerequisite: permission.

32861 Family Diversity (3)  
Consideration of family diversity with an emphasis on multicultural perspectives. Socio-historical contexts are considered, and the student will develop an understanding of the institution of marriage and family. Prerequisites: SOC 12050 and junior standing, or permission.

32862 Internship in Sociology (3)  
Application of sociological knowledge in the work setting. Assist professionals in sites including social services, hospitals, industry and government. Prerequisites: junior standing, sociology major or minor, 2.50 GPA and permission.

32905 Special Topics in Sociology (3)  
(Repeatable for a total of 12 hours for majors) Offered irregularly when unusual resources and/or opportunities permit. Topic announced when scheduled. Prerequisites: SOC 12050 and junior standing, or permission.

32906 Special Topics in Sociology (1-3)  
(Repeatable for a total of 12 hours for majors) Offered irregularly when unusual resources and/or opportunities permit. Topic announced when scheduled. Prerequisites: SOC 12050 and junior standing, or permission.

33040 Sociology of Aging (3)  
Application of sociological knowledge in the work setting. Assist professionals in sites including social services, hospitals, industry and government. Prerequisites: junior standing, sociology major or minor, 2.50 GPA and permission.

34247 Adolescence in Society (3)  
Consideration of the social, cultural and historical forces that shape the experience of this period of the life cycle. Includes examination of gender, class and race differences in adolescence and the significance of youth movements with an emphasis on music as a dominant expression of youth culture. Prerequisites: SOC 12050 and junior standing, or permission.

42095 Special Topics in Sociology (3)  
(Repeatable for a total of 12 hours for majors) Offered irregularly when unusual resources and/or opportunities permit. Topic announced when scheduled. Prerequisites: SOC 12050 and junior standing, or permission.

42126 Sociological Theories (3)  
An examination of classical, modern and postmodern approaches to social theory. Prerequisites: SOC 12050 and junior standing, or permission. This course may be used to satisfy the writing-intensive requirement with approval of major department.

42244 Interpreting Social Data (3)  
Emphasis on organizing, analyzing and interpreting actual sociological research data making use of basic descriptive and inferential statistics and computer programs. Prerequisites: SOC 32210 or 32220 and permission.

42315 Sociology of Changing Gender Roles (3)  
An examination of the institutions, institutional linkages and social processes that contribute to change and stability of traditional gender roles and the consequences of change. Prerequisites: SOC 12050 and junior standing, or permission. This course may be used to satisfy the diversity requirement.

42359 Social Movements (3)  
Investigation of various movements for social change. Examines the origins, developmental characteristics and the purposes of classic and contemporary movements. Prerequisite: SOC 12050 and junior standing or permission.

42400 Self and Identity (3)  
Examines theories and research on the origin and behavioral consequences of identities, self-concept and self-esteem; also examines the relationships between identities and emotions and between self-concept and mental health. Prerequisite: SOC 12050 and junior standing, or permission.

42421 Childhood in Society (3)  
How socio-historical circumstances shape the perception and experience of childhood as a distinct life stage. The process of childhood socialization in Western societies, particularly in the U.S. An exploration of the distinct role of socializing agents - parents and siblings, school, peers and media. Prerequisites: SOC 12050 and junior standing, or permission.

42478 Adolescence in Society (3)  
Consideration of the social, cultural and historical forces that shape the experience of this period of the life cycle. Includes examination of gender, class and race differences in adolescence and the significance of youth movements with an emphasis on music as a dominant expression of youth culture. Prerequisites: SOC 12050 and junior standing, or permission.
42558  Wealth, Poverty and Power (3)  Sociological examination of economic stratification; focuses on the translation of class into power via politics, education and collective struggle. Prerequisite: SOC 12050 and junior standing, or permission

42561  Sociology of Religion (3)  Social context of religious ideologies and structures with special reference to religion in America. Prerequisites: SOC 12050 and junior standing, or permission.

42563  Sociology of Health and Health Care (3)  Sociological analysis of health and illness behavior; utilization of health care professions; and the organizational, community and societal systems which deal with health and illness. Prerequisites: SOC 12050 and junior standing, or permission.

42564  Bureaucratic Organizations (3)  Analysis of structure and functioning of complex organizations in their cultural context. Prerequisites: SOC 12050 and junior standing, or permission.

42565  Race and Ethnic Studies (3)  Sociological principles underlying racial and ethnic relations in the United States. Emphasis on social factors of prejudice, discrimination and assimilation affecting all groups. Prerequisite: SOC 12050 and junior standing, or permission. This course may be used to satisfy the diversity requirement.

42575  Family Patterns: a World Perspective (3)  Cultural variability with respect to courtship, family relationships, child rearing and other patterns in primitive and literate societies. Prerequisites: SOC 12050 and junior standing, or permission. This course may be used to satisfy the diversity requirement.

42577  Sociology of Family Violence (3)  Sociological analysis of theories, research and social policy concerning family violence: child abuse and neglect, spouse abuse, marital rape, sexual abuse of children. Prerequisite: SOC 12050 and junior standing, or permission.

42870  Interdisciplinary Seminar in Social Gerontology (3)  Examines the particular role of the practitioner unique to gerontology using case study, cross-cultural comparisons and research analysis. Prerequisite: major or minor in gerontology program or permission.

42879  Aging in Society (3)  Analysis of demographic, sociological and sociopsychological dimensions of aging. Prerequisites: SOC 12050 and junior standing or permission. This course may be used to satisfy the diversity requirement.

43200  Social Structure and Individual Lives (3)  Examines conceptualizations for and evidence concerning the effects of social structure on various dimensions of individual lives. Prerequisite: SOC 12050 and junior standing, or permission.

SPANISH (SPAN)  Courses

18201  Elementary Spanish I (4)  An introduction to the Spanish language in the context of Hispanic cultures. Prerequisite: none.

18202  Elementary Spanish II (4)  A continuation of the introduction to the Spanish language in the context of Hispanic cultures. Prerequisite: SPAN 18201 or equivalent.

28201  Intermediate Spanish I (3)  Continued development of speaking, listening, reading and writing skills using a variety of cultural materials. Prerequisite: SPAN 18202 or equivalent.

28202  Intermediate Spanish II (3)  Continuation of SPAN 28201; credit may be given for SPAN 28202 or 28206, but not for both. Prerequisite: SPAN 28201 or equivalent.

28206  Spanish Reading for Comprehension (3)  Further develops skills and techniques for understanding written Spanish, conducted in English. Credit not applicable toward Spanish major or minor. Students may obtain credit in SPAN 28202 or 28206, but not both. Prerequisite: SPAN 28201.

28207  Business Spanish I (3)  Terminology, organization and modes of communication prevalent in modern Spanish business world. Presentation of materials is followed by practical exercises organized in situational units. Prerequisites: SPAN 28202 and appropriate score on MLA Level II exam.

28208  Business Spanish II (3)  Terminology, organizations and modes of communication prevalent in modern Spanish business world. Presentation of materials is followed by practical exercises organized in situational units. Prerequisite: SPAN 28207.

28209  Field Study (1-6)  (Repeatable for a total of 6 hours) For residence and/or field research in a Spanish-speaking community. Prior to registering for this course, students must obtain departmental approval. IP grade permissible. Prerequisite: one year of college language or equivalent.

28212  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: SPAN 28202.

38211  Spanish Grammar and Composition (3)  This course provides an intensive grammar study and further written practice to help advanced intermediate students express complex ideas in Spanish. Prerequisite: SPAN 28202 or permission.

38213  Spanish Reading and Conversation (3)  This course provides reading techniques and develops oral skills to help advanced intermediate students express complex ideas in Spanish. Prerequisite: SPAN 38211 or permission.

38215  Spanish Phonetics and Diction (3)  Study of the modern Spanish sound system with special emphasis on pronunciation and intonation. Prerequisite: SPAN 38211 or permission.

38231  Translation Practice: Spanish (1)  Translation practice with Spanish texts using principles and techniques learned in the lecture class. To be taken concurrently with MCLS 30230. Corequisite: MCLS 30230.

38240  Conversation for Business and Special Purposes: Spanish (3)  Introduction to the special vocabulary of business and other special subject areas. Introduces the concept of language for special purposes and emphasizes the use of special vocabularies in conversations in business and other settings. Prerequisite: SPAN 38213 or permission.

38330  Early Spanish Literature (3)  Outline of development, reading of representative works, to 1700. Prerequisite: SPAN 38211. This course may be used to satisfy the writing-intensive requirement with approval of major department.

38331  Recent Spanish Literature (3)  Outline of development, reading of representative works, 1700-present. Prerequisite: SPAN 38211. This course may be used to satisfy the writing-intensive requirement with approval of major department.

*Courses offered only at Regional Campuses.
38334 Early Spanish-American Literature (3)
Outline of development, reading of representative works, including indigenous literature, 1492-1882. Prerequisite: SPAN 38211. This course may be used to satisfy the writing-intensive requirement with approval of major department.

38335 Recent Spanish-American Literature (3)
Outline of the development of modern Spanish-American literature (1882 to the present). Reading of representative works. Prerequisite: SPAN 38211. This course may be used to satisfy the writing-intensive requirement with approval of major department.

38421 Civilization of Spain (3)
General survey of evolution of Spanish civilization from antiquity to present day. Prerequisite: SPAN 38211 or permission.

38424 Culture and Civilization of Latin America (3)
A thematic approach to the study of four or five representative Latin American countries focusing on 19th- and 20th-century Latin American culture and society. Prerequisite: SPAN 38211 or permission.

48093 Variable Title Workshop in Spanish (1-6)
Workshops individually designed to provide instruction and training in specific areas of Hispanic studies. S/U grading. Prerequisite: departmental permission.

48096 Selected Topics in Spanish (3)
(Repeatable for a total of 9 hours) Topic announced in Schedule of Classes. Prerequisite: 9 hours above 20000 level or permission.

48096 Individual Investigation (1-3)
(Repeatable for a total of 6 hours) Allows the advanced, serious student to carry out research/study project on Spanish literature, language or culture. Prior approval of supervising faculty member, department required. IP grade permissible. Prerequisite: 6 hours of upper-division Spanish literature; permission.

48215 Spanish Composition-Advanced (3)
Literary, political and commercial texts examined for style and structure. Class assignments to aid the students' writing style, presentation of grammatical and idiomatic expressions. Prerequisite: SPAN 38213.

48216 Contemporary Hispanic Culture (3)
A study of selected sociological, political, cultural or economic issues in the contemporary Hispanic world. Prerequisite: 6 hours from 30000-level Spanish courses.

48220 Advanced Translation Practice: Spanish (3)
Theory and practice course that discusses translation theory and emphasizes Spanish-to-English translation of selected texts in business, technology, medicine and law. Prerequisite: SPAN 38231. This course may be used to satisfy the writing-intensive requirement with approval of major department.

48240 Business and Special Texts: Spanish (3)
Survey of the typical text types of business in the Spanish culture and language. Practice sessions focus on reading and understanding specialized texts and on the translation and composition of selected special texts in Spanish. Prerequisite: SPAN 38211.

48250 Don Quijote (3)
A penetrating study of Cervantes' masterpiece. Prerequisites: 6 hours from SPAN 38330, 38331, 38334, 38335.

48350 Minor Works of Cervantes (3)
La Numancia, Entremeses, La Galatea, Novelas ejemplares. Prerequisites: 6 hours from SPAN 38330, 38331, 38334, 38335.

48351 Medieval Spanish Prose (3)
The development of medieval Spanish prose, with special emphasis on La Celestina. Prerequisites: 6 hours from SPAN 38330, 38331, 38334, 38335.

48352 Medieval Spanish Poetry (3)
Survey of neoclassicism and romanticism in Spain. Prerequisite: 9 hours of Spanish courses above the SPAN 38211 level or permission.

48354 Golden Age Prose (3)
Study of the development of the various forms of prose fiction during the Spanish Golden Age. Prerequisites: 6 hours from SPAN 38330, 38331, 38334, 38335.

48356 Golden Age Poetry (3)
Outline of the development of modern Spanish-American expression. Prerequisite: 6 hours from SPAN 38330, 38331, 38334, 38335.

48358 Nineteenth-Century Novel (3)
Analysis and critical interpretation of outstanding representatives of 19th-century novel. Prerequisites: SPAN 38421 and 38331 or permission.

48360 Twentieth-Century Spanish Drama (3)
Representative works of leading Spanish dramatists of the 20th century. Prerequisites: SPAN 38421 and 38331 or permission.

48364 Generation of '98 and After (3)
Intensive reading of representative works with examination of the history leading to this group. Prerequisites: SPAN 38421 and 38331 or permission.

48366 The Novel of the Mexican Revolution (3)
A critical sociocultural and literary examination of selected Mexican novels that explore a variety of responses to the first major 20th-century mass upheaval in Latin America known as the Mexican Revolution. Prerequisites: 6 hours from SPAN 38330, 38331, 38334, 38335.

48370 Modernismo in Spanish-America (3)
Ruben Dario and other writers of the modernista movement; works include modernist poetry, short story and essay. Prerequisites: 6 hours from SPAN 38330, 38331, 38334, 38335.

48372 Spanish-American Novel I (3)
A cultural and literary analysis of selected major Spanish-American novels written between 1900 and 1950. Prerequisite: 6 hours from SPAN 38330, 38331, 38334, 38335.

48373 Spanish-American Novel II (3)
A cultural and literary analysis of selected major Spanish-American novels written from 1950 to the present. Prerequisite: 6 hours from SPAN 38330, 38331, 38334, 38335.

48374 Modern Spanish-American Drama (3)
Analysis of selected plays from various Spanish-American countries. Prerequisites: 6 hours from SPAN 38330, 38331, 38334, 38335.

48376 Contemporary Spanish-American Short Story (3)
The development of the Spanish-American short story from 1917 to the present. Prerequisites: 6 hours from SPAN 38330, 38331, 38334, 38335.

48378 U.S. Latina/o Writers (3)
The course focuses on a representative selection of literary pieces in Spanish by recent U.S. Latino writers. Develops oral and listening skills in Spanish and strengthens critical thinking on various cultural and literary matters. Prerequisite: SPAN 38211, 38213 and one of the following—SPAN 38330, 38331, 38334 or 38335.

48422 Early Spanish-American Discourse (3)
This course provides a critical analysis of cultural and literary issues on texts dealing with early Colonial Spanish-American expression. Prerequisite: SPAN 38213 and 38334 or permission.
SPAN

Spanish-American Indian Discourse (3)
This course provides a critical analysis of cultural and literary issues in selected excerpts of the Span-
ish-American Indian expression from pre-
Columbian to Colonial times. Prerequisite: SPAN
38213 and 38334 or permission.

SPED

SPECIAL EDUCATION (SPED)

19201 American Sign Language I (4)
(Cross-listed with ASL 19201) An introduction to
American Sign Language and deaf culture. Develop-
ment of beginning visual-receptive ASL skills and
introductory expressive skills. Prerequisite: none.

19202 American Sign Language II (4)
(Cross-listed with ASL 19202) A continuation of the
introduction to American Sign Language and deaf
culture. Continued development of basic visual-
receptive ASL skills and expressive skills. Prerequi-
site: ASL 19201, SPED 19201 or equivalent.

23000 Introduction to Exceptionalities (3)
Introduction to student exceptionalities, service deliv-
er/placement options and multidisciplinary team
process. Focus on identification of characteristics,
definition and identification procedures of students with exceptionalities. Fifteen clinical hours. Prerequi-
site: none. This course may be used to satisfy the
diversity requirement.

29201 American Sign Language III (3)
(Cross-listed with ASL 29201) Development of ASL
fluency in expressive and receptive mode to interme-
diate level. Continue to increase awareness of deaf
cultural values, customs and conversational habits.
Prerequisite: ASL 19202, SPED 19202 or equivalent.

29202 American Sign Language IV (3)
(Cross-listed with ASL 29202) Development of ASL
fluency in expressive and receptive mode to begin-
ing advanced. Continue to increase awareness of
deaf cultural values, customs and conversational habits. Prerequisite: ASL 29201, SPED 29201 or equivalent.

39201 American Sign Language V (3)
(Cross-listed with ASL 39201) Development of ASL
fluency in expressive/receptive modes to advanced
levels to enable communication at conversational
speed with unfamiliar deaf individuals. Focus on dif-
ferences in sign according to gender and age.
Increased awareness of deaf cultural values, cus-
toms, conversational habits. Prerequisites: educa-
tion major or minor and ASL 39202 or SPED 39202.
Students must be approved for upper-division coursework.

39202 American Sign Language VI (3)
(Cross-listed with ASL 39202) ASL fluency expres-
sive and receptive modes to advanced levels: enable
fluent communication with unfamiliar deaf individu-
als using culturally, situationally, gender and regis-
ter-specific conversational repair strategies when
needed. Increased awareness of deaf cultural val-
ues. Prerequisites: education major or minor and
ASL 39201 or SPED 39201. Students must be
approved for upper-division coursework.

40093 Workshop in Special Education (1-5)
Topics of special interest to students desiring to intensify their knowledge in particular areas. Pre-
senters include Kent State University faculty and
other institutions. Offered irregularly. S/U grading;
IP grade permissible. Prerequisite: none.

43010 Family and Professional Collaboration (3)
This course provides knowledge and strategies for
working with family members of exceptional individu-
als and members of related professions which pro-
vide services to them. Use of collaborative,
interdisciplinary and interagency models in special
education. Twenty-hour clinical and 10-hour field
work. Prerequisites: SPED 23000 and admission to advanced study.

43020 Assessment in Special Education (3)
Use/interpretation normal- and criterion-referenced
and informal curriculum-based assessments for stu-
dents with mild/moderate disabilities. Empha-
ses on assessment and treatment plans for students with severe conditions. Includes 10-hour field and 20-
hour clinical work. Prerequisites: SPED 43030 with minimum C (2.0) grade, admission to advanced study, ECED 40105, 40126 and 40147. Special fee: $20/credit hour—subject to change. This course may be used to satisfy the writing-intensive require-
ment with approval of major department.

43030 Classroom and Behavior Management I:
Theory and Techniques (3)
Theory and techniques associated with establishing,
implementing, assessing and maintaining proce-
dures for modifying classrooms to enhance learning
and behavior of children/youth with disabilities.
Includes 25 field hours. Prerequisites: SPED 23000 and admission to advanced study.

43031 Classroom and Behavior Management II:
Application and Teaching Social Skills (3)
Application of the theory and techniques introduced
in SPED 43030. Uses case-based instruction and
field-based experiences to address points of assess-
ment, intervention, adaptation, monitoring and gen-
eralizing affective and social behavior. Includes 40
hours of field work. Prerequisites: SPED 43030 and admission to advanced study.

43040 Language and Reading in Special
Education (3)
Instructional approaches to teaching reading/language
arts to students with disabilities. Emphasis on adapting instructional techniques, materials, assess-
ments to meet the needs of learners with disabilities. Includes 15-hour clinical and 15-hour field work.
Prerequisites: SPED 43050 or 43051 and ECED
40105, 40126 and 30123 or MCED 40006 and admission to advanced study.

43050 Characteristics of Students with
Mild/Moderate Intervention Needs (3)
Definitions, causes and characteristics and social
and educational implications of learning, develop-
mental and emotional/behavioral disorders of stu-
dents identified with mild/moderate disabilities.
Methods of assessment and interventions; current
issues. Ten-hour clinical and 10-hour field work. Prerequisite: SPED 23000.

43051 Characteristics of Students with Moderate/
Intensive Intervention Needs (3)
Overview of specific facets and causes of severe
disabilities, physical/psychological aspects,
family/societal responses, political trends, etiology
and medical implications, educational and vocation-
al programming, assessment and treatment plan-
ing, assistive technology. Ten-hour clinical and
10-hour field work. Prerequisite: SPED 23000.

43060 Curriculum/Methods Classroom
Instruction: Mild/Moderate Intervention (3)
Curriculum development, programming, delivery for
students with mild to moderate disabilities. Intro-
duction to transition planning. Emphasis on func-
tional curriculum and adapting instructional
techniques, materials, assessment to meet needs.
Includes 33 hours of field and clinical work. Prereq-
sites: SPED 43030, 43050, all ECED and MCED
methods courses and admission to advanced study.

43061 Curriculum/Methods Classroom
Instruction: Moderate/Intensive Intervention (3)
Curriculum programming, instructional strategies
and related assessment techniques for functional,
academic skills using life span model. Emphasis on
community-based instruction, authentic assess-
ment and ecological evaluations. Includes 33 hours of field work. Prerequisites: SPED 43030, 43051, all
ECED and MCED methods courses and admission to advanced study.

43062 Curriculum Methods II: Mild/Moderate
Intervention (3)
Delivery and adaptation of evidence-based practices
for students with mild/moderate disabilities. Empha-
sis on achievement in general curriculum. Training
to mentor other professionals. Prerequisites: SPED
43020, 43030 and 43060. Corequisites: SPED
44092, 44040 and admission to advanced study.

*Courses offered only at Regional Campuses.
Course Descriptions

SPED

43063 Curriculum Methods II: Moderate/Intensive Intervention (3)
Meeting academic, socialization, health, motor skills, communication needs in inclusive setting. Working with paraprofessionals to provide community-based instruction, assessment, observation, record-keeping, IEPs and ITPS, lesson plans. Prerequisites: SPED 43020, 43030 and 43061. Corequisites: SPED 44192, 43040 and admission to advanced study.

43070 Planning and Programming for Transitions (3)
Addresses life span community participation and the planning, support development, and services available to accomplish it. Introduction to community agencies and adult services. Ten-hours of clinical and 15-hours of field work. Prerequisites: SPED 43050 or 43051 and admission to advanced study.

43080 Assistive Technology for Students with Disabilities (3)
Examines application of high and low technology assistive devices for students with intensive intervention needs. Analysis of technology needs; selection/development of technology; training/evaluation of technology use by students. Includes 20 hours of clinical work. Prerequisites: SPED 43050, 43051 and admission to advanced study.

43092 Deaf Residential School Internship (1-3)
(Cross-listed with ASL 49092) Weeklong internship at a residential school for the deaf; 24-hour interaction with deaf students and adults. Students stay on campus. Conduct, interaction, sign language skills, maturity, responsibility and performance is evaluated by staff at the school. S/U grading. Prerequisites: ASL 29202 or SPED 29202 and SPED 43009 and admission to advanced study.

43100 Survey of the Interpreting Profession (3)
Issues and concerns facing educational interpreters; legal mandates and constraints; ethical guidelines and their application to educational environments; roles/responsibilities, including sign interpreting/ transliterating, team membership, classroom and building roles and negotiating the educational environment. Prerequisite: none.

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

43102 Interpreting Processes Deaf/Hard-of-Hearing I (3)
Beginning-level interpreting course addressing voice-to-sign and sign-to-voice processes using simultaneous and consecutive strategies: ASL, SEE, Signed English, Total Communication signing. Preschool, primary, elementary, students developmentally delayed through gifted academic levels. Prerequisites: ASL 29202 or SPED 29202 and education major or minor. Students must be approved for upper-division coursework.

43103 Interpreting Processes Deaf/Hard-of-Hearing II (3)
Intermediate/advanced level interpreting course voice-to-sign and sign-to-voice processes using simultaneous and consecutive strategies: ASL, SEE, Signed English, Total Communication signing. Focus on middle school/high school/postsecondary students developmentally delayed through gifted academic levels. Prerequisites: ASL 39201 or SPED 39201 and SPED 3102, 43105 and education major or minor. Students must be approved for upper-division coursework.

43104 Advanced Voice-to-Sign Interpreting (3)
Continued advanced-level skill development in voice-to-sign processes using simultaneous and consecutive strategies: Advanced ASL, SEE, Signed English, Total Communication. Dialect, idiom, idiosyncratic language usage and patterns, regional/local variations: age, gender, register variations. Prerequisites: ASL 39202 or SPED 39202 and SPED 3103 and education major or minor. Students must be approved for upper-division coursework.

43105 Signed English and Other Systems (3)
(Cross-listed with ASL 49105.) Receptive and expressive use of English-based sign language systems; ASL root words, prefix/suffix use, simultaneous speaking and signing. Explanation and demonstration of Cued speed; exploration of the research related to individuals who use Cued speech. Prerequisites: ASL 29202 or SPED 29202 and SPED 43100 and education major or minor. Students must be approved for upper-division coursework.

43106 Classroom Setting Interpreting (3)
Issues and challenges of classroom-based educational interpreting. Mainstreaming, inclusion, resource room, and self-contained academic and nonacademic class preparation and interpreting environments. Off-campus practicum four hours each week to observe and assist with classroom interpreting. Prerequisite: ASL 19202 or SPED 19202 and SPED 43100.

43107 Nonclassroom Setting Interpreting (3)
Issues and challenges of nonclassroom-based educational interpreting. Student participation with IEP-designated related services; professional consultations; assessment interpreting; miscellaneous interpreting. Off-campus practicum four hours a week to observe and assist with classroom interpreting. Prerequisites: ASL 29201 or SPED 29201 and SPED 43100.

43108 American Sign Language Linguistics and Usage (3)
(Cross-listed with ASL 49108) Analytical study of American Sign Language syntactic, semantic, morphology, and pragmatics; comparison of spoken languages and ASL using the Stokoe system; impact of educational setting characteristics on linguistic processes. Prerequisites: ASL 29202 or SPED 29202 and SPED 43100 and education major or minor. Students must be approved for upper-division coursework.

43109 Cued Speech and Oral Interpreting (3)
Introduction to Cued speech using hand shapes and hand positions to differentiate between homophonic sounds; theoretical background and development history; oral interpreting homophonous sounds; synonym selection processes; positioning, lighting, and related concerns and issues. Prerequisites: ASL 29202 or SPED 29202 and SPED 43100 and education major or minor. Students must be approved for upper-division coursework.

43110 Discourse Analysis for Interpreters (3)
Spoken English and ASL usage is studied as they appear in conversational, situational and interpreted contexts. Analysis of discourse and self-analysis of classroom discourse are targeted. Prerequisites: SPED 43100, 43102, 43106 and 43107. Corequisite: SPED 43101.

43111 The Professional Interpreter (3)
Covers current trends in the field regarding situational and ethical issues. Demand/control schema and ethics are the focus to prepare students for the national certification test. Prerequisites: SPED 43100, 43106, 53100 and 53106.

43112 Practicum in Educational Interpreting (1-2)
(Repeated registration permitted) Field-based practicum experience provides preservice educational interpreters with opportunity to participate with currently practicing master educational interpreters. Students placed in education-based settings. University supervisor and teacher mentor observe and assess student skill. Prerequisites: ASL 29202 or SPED 29202 and SPED 43100 and education major or minor. Students must be approved for upper-division coursework.
43309 Introduction to Deaf Studies (3)
Introductory survey course provides informational base and understanding of experiences of deaf people as a cultural minority. Includes etiology and prevalence data, service delivery systems, diagnosis and assessment of issues, and communication systems. Includes 20 hours of field work. Prerequisite: none. This course may be used to satisfy the writing-intensive requirement with approval of major department.

43310 Language Instruction for Deaf/Hard-of-Hearing Students (3)
Language problems commonly demonstrated by deaf/hard-of-hearing students and the educational assessment and intervention strategies that are used to address them. Prerequisites: SPED 43309 with minimum B (3.0) grade and SP&A 34104. Corequisite: SPED 43392 and admission to advanced study.

43311 Instructional Strategies for Deaf/Hard-of-Hearing Students with Special Needs (3)
IEP and transition planning strategies and program content for deaf/hard-of-hearing students w/ADHD, BD, DD, VI, DB, LD, OMI, TBI, chronically health impaired/medically fragile, gifted. Curriculum and lesson development and adaptation for impacted areas. Prerequisite: admission to advanced study. Corequisite: 1 credit hour of SPED 43392.

43313 Literacy Assessment and Intervention for Deaf/Hard-of-Hearing Students (6)
Theoretical overview integrated linguistics curriculum. Reading theories; difficulties for students with significant hearing loss and auditory processing difficulties; instructional planning; materials design; ongoing assessment strategies. Course includes a practicum placement. Prerequisites: SPED 43310 with minimum grade B (3.0); SPED 19201 and 19202 or ASL 19201 and 19202 with minimum B (3.0) grade; C&I 47095 or ECED 31023 or ECED 40126; and admission to advanced study. Corequisite: 1 credit hour of SPED 43392. Special fee: $8.33/credit hour—subject to change.

43316 Preschool Education of the Hearing Impaired (3)
Developing instruction training programs for parents and hearing impaired infants (0-3 years). Teaching speech, language, speech reading, use of residual hearing at preschool level. Prerequisite: senior standing.

43319 Instructional Approaches and Placements for Deaf/Hard-of-Hearing Students (3)
Theory, practice, communication approaches including student/family/staff competencies required for use of oral/aural, total communication and bi-educational programs. Prerequisite: admission to advanced study. Corequisite: 1 credit hour of SPED 43392.

43324 Curriculum Methods and Materials for Deaf/Hard-of-Hearing Students (3)
Strategies to assess, instruct, evaluate conceptually based lessons on social studies, science and mathematics. Adaptations of existing units to address learning/linguistic needs of deaf/hard-of-hearing students. Prerequisite: admission to advanced study. Corequisite: 1 credit hour or SPED 43392.

43392 Practicum: Deaf Education (1-9)
This practicum course occurs in conjunction with all deaf education method classes and in the final semester of the interpreter program. Students are required to have 30 field hours per registered credit hour. S/U grading; IP grade permissible. Prerequisites: admission to advanced study and permission of advisor.

43529 Nature and Needs of Gifted Children (3)
Personal characteristics, abilities and potentials of gifted through review of related research. Evaluation of research findings and implications for psycho-educational development. Prerequisites: PSYC 11762 and sophomore standing.

43530 Instructional Processes for Gifted Children (3)

43534 Social and Emotional Components of Giftedness (3)
Affective growth of gifted persons is reviewed through research literature and analysis of case studies. Reviews adjustment problems of gifted youth and adults. Prerequisites: PSYC 11762 and sophomore standing.

43981 Student Teaching in Special Education (4-9)
Provides opportunity to demonstrate skills in teaching. Students placed in education-based settings; assume total teaching responsibilities of students with exceptionalities for 200 clock hours under the supervision of the school-based mentor teacher and the university supervisor. S/U grading; IP grade permissible. Prerequisites: admission to advanced study and all professional education coursework. Corequisite: SPED 49525.

43992 Field Experience in Special Education (2-4)
Provides opportunity to observe master teachers and begin working with students. Students are placed in education-based settings and work with a team of professionals to understand techniques for providing services to students with exceptionalities. Five seminar meetings. S/U grading; IP grade permissible. Prerequisites: admission to advanced study and all professional education coursework.

43996 Individual Investigation in Special Education (1-10)
S/U grading; IP grade permissible. Prerequisite: permission.

44092 Field Experience for Mild/Moderate Intervention Specialist (2-3)
Field assignments in conjunction with mild/moderate coursework. Evaluates students in personal conduct, communication skills, instructional design and methods, and impact on student learning aligned with CEC standards. Prerequisites: SPED 43992, 43920 and 43060. Corequisites: SPED 43062, 43040 and admission to advanced study.

44192 Field Experience for Moderate/Intensive Intervention Specialist (2-3)
Field assignments in conjunction with moderate/intensive coursework. Evaluates students in personal conduct, communication skills, instructional design and methods, and impact on student learning aligned with CEC standards. Prerequisites: SPED 43992, 43020 and 43061. Corequisite: SPED 43065, 43040 and admission to advanced study.

49525 Inquiry Seminar into Professional Practice (3)
Focus on effective, ethical and responsible implications of professional practice. Provides vehicle to articulate and demonstrate professional competencies, commitment and ethical decision making for providing services to students. Prerequisites: admission to advanced study and all professional education coursework. Corequisite: SPED 49981.

Note: Field experience includes seminars, participation and evaluation under supervision of experienced personnel.

SPEECH PATHOLOGY AND AUDIOLOGY (SP&A)
10001 Auditory Comprehension: Skills and Strategies (1)
Introduction to models and listening and their applicability to college lecture situations. Misconceptions, barriers, self-evaluation concepts, memory techniques, and note-taking strategies are included. Prerequisite: none.

*Courses offered only at Regional Campuses.
10002 Introduction to Communication Disorders (2)
An introduction to speech-language and audiology. Etologies and manifestations of disorders of the speech, language and hearing process. Prerequisite: none.

22002 Voice, Articulation and Phonetics (3)
Personal improvement course for the development of voice, articulation and pronunciation through study of structures of speech mechanism with intensive drills and practice. Prerequisite: none.

33101 Hearing Science (3)
Acoustics, psychoacoustics, bioacoustics, anatomy and physiology of the ear. Prerequisite: none.

34102 Applied Phonetics (3)
Basic principles of speech production and phonetic transcriptions of English with the International Phonetic Alphabet; emphasis on General American Dialect. Prerequisite: none.

34103 Anatomy and Physiology of Speech (3)
Functional anatomy and physiology of the respiratory, phonatory, articulatory and neural systems as they are used in speech production by talkers with normal and abnormal speech. Prerequisite: none.

34104 Speech and Language Development (3)
Normal development and linguistic analysis of language systems including phonology, morphology, syntax, semantics and pragmatics. Prerequisite: SP&A 34102, ENG 31001 or permission.

34105 Phonemic Bases of Speech and Language (3)
Fundamental processes related to production and perception of spoken language, with parallels to writing and reading; particular application to normal and hearing-impaired children and adolescents. For nonmajors only. Prerequisite: none.

34106 Articulatory and Phonological Disorders (3)
Assessment and remediation of disorders of articulation and phonology. Prerequisites: SP&A 34102, 34104 or permission.

34107 Language Disorders in Children and Adolescents (3)
Introduction to assessment and intervention procedures associated with language disorders in children and adolescents. Prerequisites: SP&A 34104 or permission.

40104 Communication Disorders in Children and Adolescence (3)
Orientation to etologies and remediation of communication disorders found in pediatric and adolescent populations. Prerequisite: Not open to majors in speech pathology and audiology.

43300 Speech of the Hearing Impaired (3)
Basic principles, variables and techniques for understanding, evaluating and improving expressive communication of hearing impaired individuals. Prerequisites: SP&A 33101, 34102 (speech pathology majors), 34105 and 43600 (education majors).

43402 Audiometry (3)
Measurement of human hearing by pure-tone and speech audiometry; evaluation of middle ear function by immittance audiometry; screening techniques; pathologies of the conductive and sensorineural systems. Prerequisite: SP&A 33101 (grade of C [2.0] or better or equivalent).

43404 Aural Rehabilitation (3)
Basic principles, variables and techniques for understanding, evaluating and improving receptive communication of hearing-impaired individuals. Prerequisites: SP&A 33101, 34102, 43402 (speech pathology and audiology majors), 43600 (education of hearing impaired majors).

43492 Clinical Preparation in Audiology (2)
laboratory exercises and practical experiences in audiometric procedures, test interpretation, counseling and management of the hearing-impaired. Corequisite: SP&A 43402.

43506 Special Issues in Audiology (3)
Readings and discussion of classic and current research on the evaluation of hearing disorders. Prerequisite: SP&A 43402.

43600 Fundamentals of Educational Audiology (3)
Auditory development and function/dysfunction; auditory assessment and family counseling; selection and fitting of personal and classroom amplification; care and maintenance of amplification systems; collaboration of professionals in audiology and education; communication approaches according to varying levels of hearing loss; classroom environments conducive to auditory and academic learning. Prerequisite: junior standing.

44104 Communication Disorders in Children and Adolescence (3)
Orientation to etologies and remediation of communication disorders found in pediatric and adolescent populations. Prerequisite: Not open to majors in speech pathology and audiology.

44108 Speech Science (3)
Consideration of physiological and acoustic characteristics of normal speech production and perception with implications for speech and hearing disorders. Prerequisites: SP&A 34102, 34106 or equivalent.

44110 Neuro Processes (3)
Anatomy and physiology of the nervous system underlying human neuromotor movements. Topics include: definition and fundamental concepts,afferent and efferent systems, cortical anatomy and function, cranial nerves, theories of brain function and neural maturation and learning. Prerequisite: SP&A 34103 or permission of the instructor.

44112 Age-Related Changes in Communication (3)
Nonpathological age-related changes in speech, language, and voice. Topics include: structural changes in orofacial, laryngeal and respiratory mechanism; sequence for speech, language and voice in the elderly; effects of age on swallowing; facilitating conversational interactions with elderly individuals. Prerequisite: none.

44130 Communication Disorders of the Aging (2)
Hearing, speech and language disorders in geriatric population. Symptoms, causes and treatment: normal changes in hearing, language and speech accompanying aging process. Prerequisite: senior standing or permission. Majors: elective credit only.

44310 Clinical Procedures (3)
Examination of evaluative and therapeutic procedures used with communicatively impaired children and adults. Prerequisite: SP&A 34103 or 34106, or senior standing.

44492 Clinical Preparation in Speech-Language Pathology (2)
Fundamental evaluation and management procedures of individuals with communication disorders, including supervised observation. Corequisite: SP&A 44310. This course may be used to satisfy the writing-intensive requirement with approval of major department.

SPORT ADMINISTRATION (SPAD)

25092 Practicum I in Sport Administration (1-3)
A 105-hour field experience in a sport management setting. Repeated registration permitted to a 3-credit-hour maximum. S/U grading; IP grade permissible. Prerequisites: permission and sport administration major or minor.

35021 Governance in Sport (3)
Issues of governance in amateur and professional sports. Prerequisite: MKTG 25010 or permission.
35025  Facility Management (3)
Overview of planning, staffing, marketing and managing sport facilities and complexes. Primary emphasis is on management, personnel and operations. Prerequisite: junior or senior standing.

35092  Practicum II in Sport Administration (3)
A 105-hour field experience in a sport management setting. Repeated registration permitted to a 3-credit-hour maximum. S/U grading; IP grade permissible. Prerequisites: permission and sport administration major or minor.

45022  Event Planning and Production (3)
(Cross-listed with ELS 55022) Students learn the proper planning process that all sport events undergo. Students then apply these concepts in actual events that they develop and hold. Prerequisites: junior or senior standing and MKTG 25010 or permission.

45023  Sport Marketing (3)
Designed around market planning, the course examines how to formulate market ideas, incorporate market research, select segmentation, targeting and positioning strategies, implement sales and promotion strategies and assess control processes within the sport and entertainment industry. Prerequisite: MKTG 25010 or permission.

45024  Sport in Global Perspective (3)
Students critically analyze how sport relates to general features of globalization and understand the connection between global and local politics, including ethnic, religious, gender, environmental and sociospatial politics. The underlying assumption is that sport is part of a growing network of global interdependencies that bind human beings together. Prerequisite: senior standing.

45026  Sport and the Media (3)
An introduction to current scholarship and issues concerning sport and the media, including analysis of media representations with attention to gender, race, sexuality and disability; an examination of the structure of sports journalism and production; and a general analysis of the role of mediated sport in culture. As such, the roles of institutions, producers, texts and audiences and their relationships to each other are examined. Prerequisite: junior or senior standing.

45027  Public Relations and Promotion in Sport (3)
Issues in public relations and promotion of sport, including advertising, crisis management, sales promotion and atmospherics. Prerequisite: MKTG 25010 or permission.

45030  Sport Enterprise (3)
The capstone for sport administration majors. Designed around business planning for sport, the course examines how to formulate business ideas, select a legal form of organization, locate financing sources, assess the market, develop a human resource management system and establish budget control. Prerequisites: senior standing and permission. This course may be used to satisfy the writing-intensive requirement with approval of major department.

45091  Seminar for Internship Preparation (1)
Prepares students for the internship experience in sport administration. Students must successfully complete this course before registering for internship. Prerequisites: senior standing and permission.

45092  Internship in Sport Administration (6-12)
Supervised full-time experience providing knowledge of overall agency operation in approved sport management setting. Fifty contact hours per credit hour. S/U grading; IP grade permissible. Prerequisites: SPAD 45091, senior standing and permission.

TECHNOLOGY (TECH)

10001  Information Technology (3)
Introduction to the operation and use of computer systems in technology-related applications. Laboratory assignments include the use of microcomputers for solving technical problems. Prerequisite: none. Special fee: $3.33/credit hour—subject to change.

11071  Woods Technology I (3)
Provides experience in fundamental hand and machine processes in wood fabrication. Projects are designed, planned and constructed by the student according to curricular needs and interests. Prerequisite: none. Special fee: $16.66/credit hour—subject to change.

11083  Technical Drawing and Sketching (3)
State-of-the-art experiences and fundamentals of sketching, lettering, blueprint reading, orthographic projection, dimensioning, sectioning, single and double auxiliaries, isometric, oblique, perspectives and fasteners. Prerequisite: none.

13580  Engineering Graphics I (3)
Technique of engineering drawing, lettering, instrument use, freehand drawing, orthogonal projection, sections, single and double auxiliaries, dimensioning, screw threads, charts and graphs. Prerequisite: none. Special fee: $3.33/credit hour—subject to change.

15000  Introduction to Aeronautics (3)
Introduction to aeronautical and aerospace technology including historical development, underlying science and technical applications. The past, present and future social-economic, technical and political impacts of aviation are also explored. Prerequisite: none.

15100  Women and Minorities in Aviation (3)
Course examines the roles and contributions of women and minorities in aviation and the historical, social, technological and political impact they have had on aviation and the aerospace industry. Prerequisite: none.

15740  Elements of Flight Theory (5)
Basic instruction in all areas which gives the student aeronautical knowledge required for a private pilot certificate. IP grade permissible. Corequisite: TECH 15741 or permission.

15741  Private Pilot Flight (3)
Flight course designed to fulfill FAA requirements for private pilot certificate. IP grade permissible. Prerequisite: TECH 15000, 2.5 GPA. Corequisite: TECH 15740. Special fee: $2,036.66/credit hour—subject to change.

20001  Energy/Power (3)
Study of basic thermodynamic laws and how they apply to the conversion and transfer of heat energy into useful power. Prerequisite: TECH 21021 or equivalent. Special fee: $6.66/hr.—subject to change.

20002  Materials and Processes (3)
Study and practice addressing the nature of basic manufacturing materials and the processes by which they are converted into manufactured products. Includes laboratory experience. Prerequisite: none. Special fee: $13.33/hr.—subject to change.

20004  Electrical Circuits I (3)
Introduction to electric circuit analysis. Voltage, current, resistance, power. Analysis of series and parallel networks. Network theorems, mesh and nodal analysis. Capacitor and inductor circuits. Includes laboratory. Prerequisite: TECH 10001; MATH 12001 or equivalent. Special fee: $3.33/credit hour—subject to change.

21021  Survey of Electricity and Electronics (4)
Survey of DC and AC circuits, electronic devices, amplifiers, sensors and transducers, digital circuits, motors, generators and controls. Includes laboratory. Not intended for industrial technology majors. Prerequisite: MATH 12001 or corequisite MATH 11022. Special fee: $2.50/credit hour—subject to change.

*Courses offered only at Regional Campuses.
Course Descriptions

21046 Graphic Communications Technology I (3)
An orientation to layout, composition and press operations as applied to the graphic communications processes of lithography, screen and relief printing. Prerequisite: none. Special fee: $5/cr.hr.—subject to change.

22095 Special Topics in Technology (1-4)
(Reposted registration permitted) Various special topics to be announced in the Schedule of Classes, offering current topics in technology-based areas of study. IP grade permissible. Prerequisite: permission.

22100 Training Topics in Technology (1-4)
(Reposted registration permitted) Specialized instruction oriented primarily to the theoretical base and application of current technology that developed by experts in the specific technology. This course is repeatable as the specific topics will vary. Prerequisite: permission.

23224 Electrical Circuits II (3)
Intermediate electric circuit analysis. Reactance, impedance, network theorems and analysis. Resonance in series and parallel circuits. Applications. Includes laboratory. Prerequisite: TECH 20004. Special fee: $3.33/credit hour—subject to change.

23581 Computer-Aided Engineering Graphics (3)
Study of working drawings, descriptive geometry, geometrical tolerancing, structural/veindiments, cams, gears, piping, and considerable time with the Hewlett Packard 900 CAD system. Prerequisites: TECH 10001, 13580. Special fee: $5/cr.hr.—subject to change.

25250 Elements of Aviation Weather (3)
Aviation weather provides an up-to-date and expanded course for professional pilots and others whose interest in weather is primarily in its application to flight. Prerequisite: TECH 15000 or permission.

25743 Commercial Pilot Flight I (2)
Advanced flight course providing flight instruction for the commercial pilot. Primary emphasis is on cockpit resource management, advanced navigational practices and basic instrument instruction. Prerequisite: TECH 15740, 15741 or permission. Special fee: $3,402.50/credit hour—subject to change.

31015 Construction Technology (3)
Laboratory, lecture and field experience which relate to the construction industry and its relationship to our society. Prerequisite: TECH 13580 or 11083. Special fee: $17.33/credit hour—subject to change.

31016 Manufacturing Technology (3)
Classroom, laboratory and field experiences involving the major aspects of a manufacturing enterprise, including product design, production, financing and marketing. Prerequisite: TECH 10001, 13580, 20002.

31020 Automated Manufacturing (3)
Theory and operation of computer controlled machine tools, robots and processes. Prerequisite: none.

31032 Power Technology (3)
Principles of energy conversion and power application. Overview of basic heat engines, machines and transmission devices. Alternative energy systems and conservation techniques. Prerequisites: TECH 20004 and 20001.

31047 Graphic Communications Technology II (2)
Advanced course in graphic communications processes with emphasis on procedures involved in special effect lithographic techniques, multiple imposition, pin registration and production operations. Prerequisite: TECH 21046.

31055 Plastics Technology I (1)
Design and development of ideas in plastics; study of the plastic industry, occupations, materials, products and processes. Prerequisite: junior or senior standing.

31065 Cast Metals (3)
Principles and processes of metal casting with a focus on current industrial practices. Includes laboratory experience with nonferrous metals and industrial tours. Prerequisite: TECH 20002. Special fee: $13.33/credit hour—subject to change.

31067 Machining Technology I (3)
Lecture and laboratory experiences in basic machine tool principles and processes. Prerequisite: none.

31071 Woods Technology II (2)
Emphasis on basic woodworking machinery processes, fundamental construction and materials. Project design and development. Prerequisite: TECH 11071. Special fee: $20/credit hour—subject to change.

31087 Design for Technology (3)
Design as creative process. Individual and group experiences in problem solving. Relevance to art, industry and education. Prerequisite: TECH 13580 23581, 31016. Special fee: $21.66/semester—subject to change.

32002 Materials and Processes II (3)
Advanced study and practice in materials and processes. Emphasis will be upon developing skills and knowledge in producing a product and conducting problem-solving activities. Prerequisite: TECH 20002. Special fee: $13.33/credit hour—subject to change.

32100 Fundamentals of Radiation Technology (3)
Study of the generation and application of radiation to everyday and industrial applications. Includes sound, RF and microwaves, light and ionizing radiation. Prerequisite: MATH 11022, 12301 or 19002.

32101 Polymers I (4)
Description of various plastics, outline of polymer chemistry, identification tests, polymerization, molecular growth and molecular weight, extrusion, injection molding, thermoforming, compression molding and related topics. Prerequisite: none.

32102 Polymers II (3)
Comprehensive review of resin systems and fiber reinforcement for use in production of FRP products; fabrication procedures; comparative properties. Prerequisites: TECH 32101.

33016 PC/Network Engineering and Troubleshooting (3)
A course covering the service, maintenance, upgrade and optimization of personal computers. Specification, installation and maintenance of local area networks will be covered. Students will learn communication protocols and network architecture. Two lectures and two labs. Prerequisite: EERT 22014.

33031 Programmable Logic Controllers (3)
An introduction to programmable logic controllers (PLC's) covering hardware, ladder logic programming, networking and communications, programming timers, counters and sequencers and an introduction to human machine interfaces (HMIs). Prerequisites: TECH 10001, 21021.

33032 Hydraulics/Pneumatics (3)
Fluid properties, hydraulic design, viscosity, hydraulic components, pumps, systems and circuits, maintenance and safety, pneumatics, air systems control and design. Prerequisites: MATH 12001; PHY 23101 or 13001. Special fee: $6.66/credit hour—subject to change.
33005 Special Topics: Applied Science and Technology (1-3)
Special topics of immediate interest in applied science and technology. Repeated registration permitted. Prerequisite: junior standing and permission.

33111 Strength of Materials (3)
An analytical study of the relationship between the external forces applied to elastic materials and the resulting deformations and stresses. Prerequisite: PHY 13001 or equivalent course.

33220 Analog Electronics (3)
Introduction to nonlinear devices. Diodes and applications. Bipolar and field effect transistors. Biasing techniques, applications in amplifier circuits and as electronic switches. Includes laboratory. Prerequisite: TECH 23224. Special fee: $3.33/credit hour—subject to change.

33222 Digital Design and Applications (3)
Introduction to digital electronics systems and applications. Topics include number systems, logic gates, switching algebra, combinational and sequential logic circuit analysis and minimization techniques. Includes laboratory. Prerequisite: TECH 22004 or 21021. Special fee: $5/credit hour—subject to change.

33223 Electronic Communication (3)
Electronic circuits and systems with emphasis on their application in communications systems. Prerequisite: TECH 33220 or permission.

33225 Industrial Control Systems (3)
The application of electronics to the control of industrial machines and processes. Includes laboratory. Prerequisite: TECH 33220.

33363 Metallurgy and Materials Science (3)
Scientific study of modern manufacturing materials (metals, plastics and ceramics) and the laboratory test methods used to determine their manufacturing specifications and properties. Prerequisite: junior standing.

33580 Engineering Graphics for Electronics (3)
Use of CAD techniques in the generation of electronic circuit schematics and related drawings. Includes the design and implementation of printed circuit boards. Includes laboratory. Prerequisites: TECH 13580, 33220.

33700 Quality Techniques (4)
Process variability, process monitoring, statistical methods using control charts for variables and attributes, acceptance sampling plans, process capability, process adjustment, design of experiments and process improvement. Prerequisite: high school algebra.

34000 Computer Animation II (3)
Continuation of the study and technology applications of computer animation with emphasis on camera usage and the production of a comprehensive animation project involving the Animation Thought Process (ATP). Prerequisite: CADT 22004.

34001 Computer Animation III (3)
Continuation of practical technology applications of computer animation with emphasis on scripting code writing, systems time variables and fluent realism factors within the ATP. Prerequisite: TECH 34000.

34002 Advanced CAD II (3)
Continuation of CADT 22000 with an emphasis on the use of a Parametric-based CAD software (PRO-ENGINEER) for the design and modeling of industrial products. Prerequisites: MERT 12001 and CADT 22000; or TECH 23581; or permission. Special fee: $50/credit hour—subject to change.

34003 Animation Theory (3)
A comprehensive course on the history and current status and future of animation featuring the masters of animation, their landmark achievements and the processes they unveiled. Claymation, Stop-Motion, Anime, Commercial and Forensic animations will be covered. Prerequisite: none.

34004 Technology of Light, Color, Design and Layout (3)
A course dealing with the study of the technical principles and applications of light, color, design and layout to the production of computer animation for engineering materials and products. Prerequisite: CADT 22004.

35001 Aircraft Fabrication (3)
The study and laboratory practice of government-approved procedures used in the fabrication, repair and testing of certified aircraft. Prerequisites: TECH 15000, MATH 12001 and PHY 13001.

35020 Aircraft Propulsion Systems (3)
A study of reciprocating engines, aircraft propellers and turbine engines. Course investigates basic theory, component function, performance characteristics and propulsion-related systems. Prerequisites: TECH 15000, MATH 12001, and PHY 13001/13002 or PHY 23101/23102; or permission.

35040 Aircraft Systems I (3)
Introduction to various aircraft systems including electrical, mechanical and hydraulic systems and their performance as applied to aircraft. Prerequisites: TECH 15000, MATH 12001 and PHY 13001/13002 or PHY 23101/23102; or permission.

35095 Special Topics in Aeronautics (1-3)
Specialized offerings of interest in response to emerging or needed curricular needs in aeronautics. Topics will be announced in the Schedule of Classes. Repeat registration permitted. Prerequisite: aeronautics sophomore or permission.

35101 Helicopter Theory and Operation (2)
Study of the helicopter that includes rotor system dynamics, control functions, major components, operation and performance. Prerequisite: TECH 15000.

35150 Aircraft Structures (3)
Aircraft structural design investigations dealing with theory and applications in aviation. Prerequisites: TECH 15000, MATH 12001 and PHY 13001/13002; or permission. Special fee: $16.66/credit hour—subject to change.

35340 Air Transportation Systems (3)
Descriptive course in airline operations as seen from the air carrier’s business perspective. Emphasis is on business practices and techniques unique to aviation. Prerequisite: TECH 15000 or permission.

35341 Air Traffic Control (3)
Study of the fundamental concepts of air traffic control and airspace management in the National Airspace System (NAS), with an emphasis on the interaction between terminal and en route traffic control functions. Prerequisites: TECH 15000, 15740 and 25250.

*Courses offered only at Regional Campuses.
35644 Instrument Flight Theory (3)
Comprehensive instruction presenting theoretical and practical aspects of instrument and weather flying. Prerequisites: TECH 15740 and 25250. Corequisite: TECH 35645; or permission. Special fee: $5/semester—subject to change.

35645 Instrument Pilot Flight (2)
Comprehensive flight course for the professional pilot candidate to meet the requirements of the FAA instrument rating. Prerequisites: TECH 35644, 35645 or permission. Corequisite: TECH 35644. Special fee: $3,647.50/credit hour—subject to change.

35647 Commercial Pilot Flight II (2)
Comprehensive flight course for the professional pilot candidate with emphasis on commercial flight maneuvers and instrument flight review. IP grade permissible. Prerequisites: TECH 35644, 35645 or permission. Special fee: $2.650/credit hour, Fixed Wing—subject to change.

35648 Commercial Pilot Theory (2)
Comprehensive instruction covering all areas necessary to exercise the privileges of a commercial pilot. Prerequisite: TECH 35644, 35645 or permission.

35647 Commercial Pilot Flight III (2)
Comprehensive flight course for the professional pilot candidate to meet the requirements of the FAA commercial pilot certificate. Major emphasis on complex aircraft operations. Prerequisites: TECH 35644 and 35645. Corequisite: TECH 35746; pre/corequisite: TECH 35647. Special fee: $2,672.50/credit hour—subject to change.

36008 Ergonomics in Computer Systems (3) *
This course introduces students to ergonomics, usability design, assessment methods and safety for the development of computer systems. Prerequisites: ENG 20002, PSYC 11762, junior standing.

36095 Special Topics in Computer Technology (2 or 3) *
Various special courses will be announced in the Schedule of Classes under this course number with different section numbers. Prerequisite: permission.

36301 Advanced C++ Programming (4)
Laboratory course using C++: classes and data abstraction, stream I/O, inheritance, standard template library. Microsoft foundation classes, system programming concepts using Unified Modeling Language. Prerequisite: COMT 20001.

36310 Multimedia Development Tools (3)
Course focuses on advanced technologies for Web development, including DHTML, plug-ins, etc. Students will learn to create more interactive and dynamic Web sites. Prerequisites: COMT 21011 and COMT 21036 or COMT faculty permission.

36311 Advanced Java Programming (4)
Laboratory course using Java abstract data types and objects, object-oriented/event-driven design, file organization and access and systems programming concepts. Prerequisite: COMT 20011.

36320 Computer Forensics (3)
This lecture/laboratory course emphasizes hands-on skills in incident response, forensic preparation, and data recovery and analysis. Prerequisites: COMT 21002 or equivalent.

36330 Local Area Network Security Fundamentals (3)
This lecture/laboratory course will examine the primary issues involved in securing resources in a LAN including threat assessment, countermeasures, best practices, security protocols, cryptography and management-related issues. Prerequisite: COMT 21002 or equivalent.

36336 Web Scripting II (3)
This course will focus more in depth on selected scripting topics needed to create interactive and dynamic Web sites. Prerequisites: COMT 21036 or COMT faculty permission.

36401 Applications of Technology Management Software (3)
Combination of computer and business applications for managing technology within an organization. Focus is on using emerging computer software programs for the enhancement of decision making. Course is two hours lecture, one hour lab. Prerequisite: BMRT 11000, COMT 12000, MATH 11011 or full-time applied-business faculty permission.

36415 Customer Service Technology (3)
Analysis and definition of customer satisfaction with an emphasis on quality customer service that includes technique for assessing company service efforts and developing customer satisfaction programs. Prerequisite: junior standing; BMRT 11000 or faculty permission.

36595 Special Topics in Microsoft Certification (3)
Special topics courses which prepare students for Microsoft professional certifications. Repeat registration permitted. Prerequisite: permission. Special fee: $400/semester—subject to change.

36620 Coordinating Technical Projects (3)
Organization and coordination of project-based management functions utilizing project management software to visualize what has been planned. Prerequisite: junior standing.

41001 Methods in Technology Education (3)
Methods of teaching curriculum development and evaluation which are unique to the profession of technology education. Prerequisite: 30 hours of technology education. This course may be used to satisfy the writing-intensive requirement with approval of major department.

41002 Organization in Technology Education (2)
Principles and practices involved in housing, organizing, maintaining and operating industrial arts/technology education courses. Prerequisite: junior standing.

41051 Foundations and Contemporary Theories of Technology Education (3)
This course explores the history, contemporary theories and practices of technology education. Included are site visits to exemplary technology education programs. Prerequisites: none.

41052 Technology Education for Elementary School (3)
Using discussion, laboratory experience and field experiences, this course explores technology education as it relates to all content areas of the K-12 curriculum. Prerequisite: none. Special fee: $2.16/credit hour—subject to change.

41055 Industrial Practice (1-8)
(Repeatable for a total of 8 hours) Practical experience in industry of cooperative work-study nature. Prerequisite: junior standing.

41093 Variable Title Workshop in Technology (1-3)
(Repeat registration permitted.) Specialized instructional unit oriented toward the application of current technology concepts. S/U grading, IP grade permissible. Prerequisite: permission.

41096, 41196 Individual Investigation in Technology Education (1-4)
(Repeatable for a total of 4 hours) Individual investigation course. IP grade permissible. Prerequisites: Student must have completed 50 hours of technology education and have an approved proposal with faculty member prior to registering for this course.
42100  Training Topics in Technology (1-4)  
(Repetitive registration permitted) Specialized advanced instruction oriented primarily to the theoretical base and application of current technology developed by experts in the specific technology. This course requires substantial base knowledge and is repeatable as the specific topics will vary. Prerequisite: permission.

42200  Radiation Processing of Materials (3)  
Study of the effects of electrons and gamma rays on materials of technological interest and how radiation changes physical properties. Experiments deal with the effects of radiation in different materials. Prerequisites: PHY 12201, 12202, or PHY 13001, 13002; MATH 13002 or MATH 19001, 19002.

42400  Radiation Dosimetry and Safety (3)  
Basic concepts of dosimetry and its units as applied to radiation technology, including theory of dosimeter response. Safety principles and practices followed in radiation environments, including terminology, policies and procedures to minimize exposure to radiation. Prerequisite: TECH 42200.

42500  Laboratory in Radiation and Materials (3)  
Laboratory investigation into the effects of radiation on materials, including dosimeters. Methods employed include spectroscopy, thermal analysis, optical microscopy and mechanical properties. Prerequisites: TECH 42200 and 42400.

43000  Advanced Animation Development (2)  
This project-based course is a continuation of TECH 34001 with emphasis on preproduction consideration, character design, advanced modeling tools, texturing and post-animation production. Prerequisite: TECH 34001.

43001  Technology of Media and Film Production (2)  
A course dealing with the technical and business aspects of pre- and postproduction planning for multimedia, video or film projects. Covers a systematic approach to content organization and development, scripting, visualization proposal development contracts, budgets and legal issues. Prerequisite: TECH 34001, TECH 34004.

43002  Graphics Design Technology (3)  
A course of study in the technology of creating knowledge and effects using computer graphics concepts to create photo-realistic composite images and to restore and enhance a wide array of images. Prerequisite: CADT 22004.

43003  Multimedia and Virtual Reality II (2)  
A continuation of CADT 22005. The course deals with technical advanced concepts in multimedia and virtual reality in product development using Lingo to craft a production that fits any delivery environment. Prerequisite: CADT 22005.

43004  UNIX Scripting with Applications (2)  
A course in the use of UNIX scripting for animation and multimedia development. Prerequisite: COMT 21095 (ST: Object Oriented Language) or equivalent; TECH 43001.

43026  Microprocessor Systems (3)  
Introduction to the architecture, operation and applications of an advanced microprocessor, focusing on assembly language programming and interfacing of standard programmable peripherals. Prerequisite: TECH 33222, 46330. Special fee: $3.33/credit hour—subject to change.

43080  Industrial and Environmental Safety (3)  
Examines the Occupational Safety and Health Act and fundamentals of industrial safety programs. Prerequisite: none.

43096  Individual Investigation in Applied Science and Technology (1-3)  
Work-study of an individual nature on a topic in applied science and technology. IP grade permissible. Prerequisite: junior standing and permission.

43132  Manufacturing Engineering Project (2)  
Problem selected by students and instructors to develop students in desired specialty or strengthen their knowledge of applied science and technology. IP grade permissible. Prerequisite: permission.

43220  Electrical Machinery (3)  
Principles of operation and application of motors, generators, transformers and other magnetic devices; electrical power generation, distribution and use. Prerequisite: TECH 23224.

43221  Control Systems and Robotics (3)  
Theory and application of open loop and closed loop systems in measurement, manufacturing, simulation, aircraft flight control and other areas. Prerequisites: TECH 43026; MATH 12003. Special fee: $3.33/credit hour—subject to change.

43500  Computer-Aided Manufacturing (3)  
The application of computers to the preparation of machine tool control programs. Prerequisite: TECH 10001, 20002. Special fee: $13.33/credit hour—subject to change.

43580  Computer-Aided Machine Design (3)  
Application of the principles of mechanics and strength of materials, with computer assistance, to the design and selection of machine components under both static and dynamic loads. Prerequisites: TECH 10001, 33111, 34002; MATH 12002; PHY 13001.

43700  Computer Integrated Manufacturing (3)  
Study of the computer-integrated manufacturing system as it relates to product design, estimating, inventory, machining and assembly, quality control and distribution. Prerequisite: TECH 43550. Special fee: $13.33/credit hour—subject to change.

45030  Aircraft Systems II (3)  
Application and performance of various electrical, mechanical, hydraulic and computer systems as applied to aircraft. Prerequisites: TECH 35040 or permission. This course may be used to satisfy the writing-intensive requirement with approval of major department.

45096  Individual Investigation in Aeronautics (1-3)  
Work-study of an individual nature on a topic relating to professional aviation. Repeatable for a total of 6 hours. IP grade permissible. Prerequisite: sophomore standing and permission.

45121  Advanced Aerospace Propulsion (3)  
A study of gas turbine and rocket engines as aerospace propulsion systems. Includes laboratory experience related to component function and system performance. Prerequisites: aerospace technology major and TECH 35020; or permission.

45130  Physiology and Human Factors of Flight (3)  
A study of the interaction of the human body with flight and those human factors that affect flight operations. Prerequisite: TECH 15000 or permission.

*Courses offered only at Regional Campuses.
45150 Applied Flight Dynamics I (3)
An applied aircraft flight dynamics course that demonstrates aircraft engine and propeller performance with the overall flight performance and stability of the typical light airplane. Includes flight testing laboratory participation. Prerequisites: MATH 11012 or 12002, PHY 13001/13002 or PHY 23101/23102 and TECH 15000; or permission. Special fee: $10/credit hour—subject to change.

45151 Applied Flight Dynamics II (3)
An applied flight dynamics course that demonstrates aircraft performance, dynamics, operating characteristics and propulsion of both light airplanes and high speed, high altitude aircraft. Includes flight testing laboratory participation. IP grade permissible. Prerequisite: TECH 35020, 45150 and PHY 32562: or permission. Special fee: $6.66/credit hour—subject to change.

45250 Aviation Law and Safety (3)
Study of federal, state and local laws that impact aviation. Defines major causes of aircraft accidents. Emphasis on safety and prevention of violations. Includes actual case studies. Prerequisite: TECH 15000 or permission.

45291 Aerospace Senior Seminar (1)
Seminar on selected topics relating to problems, issues and conditions of employment within aviation. SU grading only. Prerequisite: aeronautics senior or permission. Special fee: $25/credit hour—subject to change.

45340 Aircraft Maintenance (3)
Fundamentals of aircraft maintenance and resolving maintenance problems on the flight line. Prerequisites: aerospace senior and permission.

45349 Systems Maintenance and Reliability (5)
Combines theories of systems and operations with practical experience to meet FAA standards for an airframe and powerplant license. 300 hours’ shop experience. Prerequisite: TECH 45340.

45350 Avionics (3)
A study of aviation electronic systems in flight vehicles that pertain to communication, navigation and air traffic control systems. Prerequisites: PHY 13001/13002 or PHY 23101/23102, TECH 15000 and 21021; or permission.

45648 Theory of Flight Instruction (2)
Detailed fundamentals of teaching flight and ground instruction and the analysis of flight techniques, to meet requirements of FAR’s Part 61.185 (a). Prerequisite: TECH 35746, 35747. Corequisite: TECH 45649; or permission.

45649 Flight Instructor/Airplanes (2)
Flight course with emphasis on instructing techniques in aircraft from right seat. Includes student evaluation techniques to meet FAR requirements for CFI. IP grade permissible. Prerequisite: TECH 35746, 35747. Corequisite: TECH 45648. Special fee: $2,630/credit hour, Fixed Wing—subject to change.

45651 Flight Instructor—Instruments (2)
Flight course with emphasis on flight instructing techniques involved with instrument flight and ATC procedures. Student evaluations included. IP grade permissible. Prerequisites: TECH 45648 and 45649. Special fee: $1,392.50/credit hour, Fixed Wing—subject to change.

45653 Multi-Engine Pilot Flight (1)
The course provides the required ground and flight instruction necessary to qualify students for the multi-engine rating from the FAA. IP grade permissible. Prerequisite: TECH 35747. Special fee: $3,735/credit hour—subject to change.

45655 Advanced Multi-Engine Pilot Flight (1)
Ground flight instruction for proficiency and required hours in preparation for multi-engine instruction. IP grade permissible. Prerequisite: TECH 45653. Special fee: $2,599/credit hour—subject to change.

45657 Multi-Engine Flight Instructor (1)
This course provides the necessary ground and flight instruction to professionally qualify students for the multi-engine instructor rating by the FAA. IP grade permissible. Prerequisites: TECH 45655 or equivalent, and TECH 45649. Special fee: $2,740/credit hour—subject to change.

45659 Basic Aerobatic Flight (1)
Consists of 15 hours of ground school and 15 hours of flight training reviewing commercial maneuvers and introducing basic aerobatic maneuvers and related classroom theory. Prerequisites: 2.25 GPA, TECH 25645; and permission. Special fee: $728/credit hour—subject to change.

45700 Aircraft Design (4)
Preliminary design of a fixed-wing aircraft for a specific mission: weight estimates; wing planform, airfoil and propulsion selection; airframe configuration and layout design; performance analysis; and overall systems integration. Prerequisites: PHY 13001/13002 or PHY 23101/23102, TECH 15000 and 21021; or permission. Corequisites/prerequisites: TECH 45030, 45350, 45150; or permission. Special fee: $12.50/credit hour—subject to change.

45710 Turbine Engine Theory and Operation (2)
An in-depth study of the theory, operation and performance of turbine/turboprop engines and associated systems. Prerequisite: instrument rating, TECH 35020; or permission.

45711 Turbine Engine Theory and Operation Laboratory (1)
Laboratory using a turboprop flight simulator to provide instruction and demonstration of the operating characteristics and procedures associated with turbine/turboprop engines. Prerequisite: Instrument rating, TECH 35020; or permission. Pre- or corequisite: TECH 45710 or permission. Special fee: $350/credit hour—subject to change.

45720 Crew Resource Management (2)
An in-depth study of the common principles of aviation Crew Resource Management (CRM) and human factors as utilized by air transport flight crews. IP grade permissible. Prerequisite: instrument rating, TECH 45130; or permission.

45721 Crew Resource Management Laboratory (1)
Flight simulator-based laboratory that includes flight simulator experiences that integrate CRM and LOFT in a multi-crew environment. IP grade permissible. Prerequisite: instrument rating, TECH 45130; or permission. Corequisite/prerequisite: TECH 45720 or permission. Special fee: $140/credit hour—subject to change.

45730 Applied Transport Category Aircraft Systems (3)
Course examines various systems in use on air transport aircraft. The course emphasis is on the principles, operation and limitations of complex, integrated systems found in modern aircraft. Prerequisite: TECH 35020, 35040, 45030; or permission.

45740 Flight Management and Electronic Display Systems (3)
Course examines various advanced avionics systems used on air transport type aircraft. The course emphasis is on the principles, operation and limitations of integrated avionics related to the “glass cockpit” found on modern aircraft. Prerequisite: TECH 35040, 45030, 4550; or permission.

45791 Aviation Security and Policy Seminar (3)
Examines policies, practices, procedures and regulatory provisions developed to create and enhance security in civil aviation with a special emphasis on airlines, airports, airspace and agencies responsible for civil aviation security. Prerequisite: TECH 35340, 35341, 35342, 45250. This course may be used to satisfy the writing-intensive requirement with approval of major department.

46020 Applications of Artificial Intelligence (3)
Examines AI techniques that can be used to enhance, replace or help build applications packages. Topics include expert systems, natural language interfaces. Prerequisite: COM/IT 21004 or MATH 43105.
46301 Student Teaching (3)
Provides a 10-week student teaching experience in technology education program. S/U grading; IP grade permissible. Prerequisites: admission to advanced standing, all professional courses, minimum 75% required TECH courses, 100 hours of technology visits. Corequisite: TECH 49625.

46092 Cooperative Education (2-3)
(Repeatable once) A university-industry work-study plan in which students alternate periods of study at the university with periods of employment in industry. Prerequisite: permission.

46308 Developing Desktop Applications (3)
Course focuses on designing and implementing desktop applications. Topics include use of component objects, online help, advanced debugging, and package deployment. Prerequisite: COMT 21005 or COMT faculty permission.

46309 Developing Distributed Applications (3)
Course focuses on interface design and establishment of transaction-based client/server database applications using distributed objects, server object components, SQL and Web technologies. Prerequisite: TECH 46308 or COMT permission.

46310 Technology of Operating Systems (3)
Lab-oriented course covering installation, configuration, tuning and communication among state-of-the-art desktop operating systems, using available system tools, utilities and files. Prerequisite: ENG 20002 or ITAP 26638 and COMT 21002; or full-time COMT faculty permission.

46311 Technology of Networking (3)
Advanced topics of enterprise network management, including DNS/WINS/IP addressing, routing basics, subnet masking, firewalls, storage redundancy techniques; and general tuning/optimizing/troubleshooting/recovery strategies. Prerequisite: ENG 20002 or ITAP 26638 and COMT 21002; or full-time COMT faculty permission.

46321 Web Database Integration (3)
Laboratory course focused on integrating databases in Web sites. Current topics include using object-oriented technology, structured query language and large-scale database engines. Prerequisites: COMT 21005 and 21086 or equivalent.

46330 Visual Basic Programming in Engineering Technology (3)
This course will cover the concepts of object-oriented, event-driven programming with hands-on application of those concepts to solve engineering-related problems, utilizing the current version of Visual Basic. Prerequisite: TECH 10001, MATH 11011 and PHY 13001; permission.

46331 Local Area Network Security and Firewalls (3)
This lecture/laboratory course will examine the primary issues involved in defining and configuring a local network defense perimeter including LAN security analysis, implementing firewalls and intrusion detection systems. Prerequisite: TECH 36330 or equivalent.

46409 Strategic Management of Technology and Innovation (3)
An examination using case studies and readings of the management of technology and innovation through perspectives at the product line, business unit and corporate levels. Prerequisite: Permission: BRMT 11009 or M&IS 24163; 45 earned hours.

46418 Labor Studies in Technology (3)
This course will include the history of the labor movement, interrelationships of labor with business and industry, labor law, contemporary labor problems that emphasize how unions are organized, contracts, arbitration and management issues. Prerequisite: junior standing.

49625 Inquiry into Professional Practice (3)
Seminar during student teaching to explore issues and techniques appropriate to teaching technology education. Corequisite: TECH 46301.

**THEATRE (THEA)**

11000 The Art of the Theatre (3)
Using the life-centered nature of theatre as a medium of analysis, this course is designed to develop critically engaged audience members who are aware of the impact, significance and historical relevance of the interconnection between culture and theatre performance. Prerequisite: none. This course may be used to satisfy the Liberal Education Requirement (LER) and diversity requirement.

11017 Oral Interpretation (2)
Theory and practice in art of interpreting literature orally; selection of material, literary analysis and solo performance techniques. Three lecture-laboratory hours per week; Special projects as assigned. Prerequisite: none. Special fee: $15/credit hour—subject to change.

11522 Introductory Lighting (3)
An introduction to the art of lighting design, historical and technical perspectives. Emphasis on principles of design within a collaborative process. Two lecture hours plus 2 laboratory hours per week. Prerequisite: controlled.

11524 Introductory Costuming (3)
Principles, theories and basic skills of costume design and technology. Emphasis on aesthetics, the design process, fabric, construction techniques and craft materials. Two lecture hours plus two laboratory hours per week. Prerequisite: controlled. Special fee: $3.33/credit hour—subject to change.

21016 Makeup for Stage and Screen (3)
Study of stage, TV and photographic makeup techniques and materials. Four lecture-demonstration-laboratory hours per week; special projects as assigned. Prerequisite: none. Special fee: $15/credit hour—subject to change.

21017 Oral Interpretation (2)
Theory and practice in art of interpreting literature orally; selection of material, literary analysis and solo performance techniques. Three lecture-laboratory hours per week. Prerequisite: THEA 11340 or permission.

21111 Script Analysis (3)
Principles, theories and techniques of play script analysis for theatrical production. Prerequisite: controlled.

21303 Acting Process (3)
Fundamentals of naturalistic acting and interaction; development of spontaneity, believability and a sense of truth; game playing and basic stage technique. Prerequisites: THEA 11303 and permission.

21306 Musical Theatre Performance I (3)
(Repeatable for up to 12 hours.) Performance-oriented class that will focus on techniques and styles of performance in musical theatre and cabaret from Gilbert and Sullivan to present. Prerequisite: musical theatre major.
THEA

21501 Sophomore Portfolio Review (1)
Preparation and review of a portfolio of work, judged by the design/technology faculty at the beginning of the spring semester. Student must pass to remain in the B.F.A. design/technology program. S/U grading. Prerequisite: sophomore standing, B.F.A. design/technology student or candidate and at least two of the following—THEA 11522, 11524 and 11622.

21521 Theatrical Drafting (3)
Drafting techniques for all design/technology students. Includes plans, elevations, sections, detailed drawings, light plots. Prerequisite: THEA 11622. Special fee: $11.66/credit hour—subject to change.

21621 Scene Painting (3)
Techniques of scene painting; emphasis on a variety of techniques through practical projects. Prerequisite: THEA 11622 or permission. Special fee: $43.33/credit hour—subject to change.

21700 Movement I (3)
Beginning exploration in movement for the actor: body awareness, relaxation, alignment and physical conditioning. The basic study of space, energy, time, level, direction and range. Prerequisites: THEA 11303 and permission.

21800 Voice I (3)
Breathing, physical alignment, sound and text explorations designed to develop relaxed, free and fully connected voice production for the actor. Proper use and care of the voice. Prerequisite: THEA 11303 and permission.

21892 Entertainment Arts and Technology Internship I (5)
(Repeatable up to 10 hours.) Intensive professional experience in aspects of entertainment arts and technologies. Prerequisite: sophomore standing or permission.

22092 Practicum I: Design/Tech (3)
(Repeatable for a total of 99 hours) Practical experience in theatre production under faculty supervision. S/U grading; IP grade permissible. Available for lower-division students only. Required of all theatre majors. Prerequisite: freshmen/sophomores only.

22292 Practicum I: Theatre Management (3)
(Repeatable for a total of 12 hours) Practical experience in theatre management under faculty supervision. Prerequisite: freshmen/sophomores only.

31112 History of Theatre and Drama I (3)
Theatre history and drama in Europe from antiquity through the Renaissance. Prerequisites: THEA 21111 and junior standing.

31113 History of Theatre and Drama II (3)
Theatre history and drama in Europe and the United States from 1660 to 1900. Prerequisite: THEA 31112.

31114 History of Theatre and Drama III (3)
Theatre history and drama in Europe and the United States from 1900 to the present. Prerequisite: THEA 31112 and 31113.

31303 Character and Scene Study I (3)
The development of character in the realistic scene. Prerequisites: THEA 21303 and permission.

31304 Character and Scene Study II (3)
Further character and scene exploration; spontaneity and creative choice making. Prerequisites: THEA 31303 and permission.

31401 Directing (3)
Theoretical and practical work in the process of play direction: the director’s mission; play analysis and design collaboration; the rehearsal process. Prerequisites: THEA 11303, 21111 or permission.

31501 Junior Portfolio Review (1)
Review of a portfolio of theatre and related work, and a review of the student’s academic progress and coursework judged by the design/technology faculty at the beginning of the spring semester. Student must pass to remain in the B.F.A. design/technology program. S/U grading. Prerequisite: junior standing and B.F.A. design/technology student or candidate.

31522 Lighting Design (3)
Exploration of the tools of the lighting designer applied to design choices; frequent paper design projects. Prerequisites: THEA 11622 or permission. Special fee: $10/credit hour—subject to change.

31524 Costume Design (3)
Theory and practice of costume design. Emphasis on play text analysis, formation of concepts, use of design elements and principles, period styles. Prerequisite: THEA 11524 or permission. Special fee: $18.33/credit hour—subject to change.

31525 Costume Technology (3)
Basic patterning and construction techniques used in theatrical costuming; emphasis on flat and draped patterning. Prerequisite: THEA 11524 or permission. Special fee: $15/credit hour—subject to change.

31568 Scenic Technology (3)
Basic history, theory and application of theatrical practice in set scenery, properties and electrics. Three lecture hours per week and laboratory arranged. Prerequisite: THEA 11622, THEA 21521, or permission. Special fee: $20/credit hour—subject to change.

31622 Scene Design (3)
Theory and practice of scene design. Emphasis on script analysis, formation of concepts, use of design elements and principles in period styles and genres. Prerequisite: THEA 11622 or permission. Special fee: $16.66/credit hour—subject to change.

31701 Movement II (3)
Continue movement work and physical conditioning focusing on the qualities of characterization with masks. Application of text to physical characterizations. Prerequisites: THEA 21503, 21700 and permission. Special fee: $33.33/credit hour—subject to change.

31801 Voice II (3)
Continuation of Voice I. Explorations involve various texts and incorporation of voice principles at a more detailed level. Prerequisites: THEA 21301, 21800 and permission.

41017 Reader’s Theatre (2)
Theory and practice of group interpretation through the medium of Readers Theatre; selection, adaptation and performance techniques. Three lecture-laboratory hours per week. Prerequisite: THEA 21017.

41026 Playwriting (3)
(Repeatable for a total of 6 hours) Principles underlying playwriting for the contemporary theatre; analysis of short play form. Prerequisite: none. This course may be used to satisfy the writing-intensive requirement with approval of major department.

41027 Advanced Playwriting (3)
(Repeatable for a total of 6 hours) Application of principles of playwriting to the longer play and to variations from traditional realism; play analysis and composition. Prerequisite: THEA 41026.

41093 Variable Title Workshop in Theatre (1-6)
S/U grading. Prerequisite: none.
**THEA 41095** Special Topics (1-3)  
(Repeatably for a total of 6 hours) Selected research topics in theatre; to be elected only after all coursework in study area completed. IP grade permissible. Prerequisite: permission.

**THEA 41096** Independent Study in Theatre (1-3)  
(Repeatably for a total of 6 hours) Selected research topics in theatre; to be elected only after all coursework in study area completed. IP grade permissible. Prerequisite: permission.

**THEA 41110** Theatre Criticism (2)  
Four productions in the region will be used as a means of studying aesthetic and socio/historical contexts involved in the theatre event. Developing writing skills through essays about the productions will be an important part of the course. Prerequisite: junior/senior standing. This course may be used to satisfy the writing-intensive requirement with approval of major department.

**THEA 41113** Theatre in a Multicultural America (3)  
A study of theatre and drama in the Native American, Hispanic-American, African-American and Asian-American communities in the United States from 1980 to the present. Prerequisite: none. This course may be used to satisfy the diversity requirement.

**THEA 41114** Gay and Lesbian Theatre (3)  
Studies of how the gay and lesbian community has been represented in theatre. Frameworks will include the history of the community, political issues, identity questions and gender theory. Prerequisite: junior standing. This course may be used to satisfy the diversity requirement.

**THEA 41133** Theatre and Drama in America I (3)  
History of theatre and drama in America from the beginning to 1900. Prerequisites: THEA 31112 and 31113. Permission of instructor required.

**THEA 41134** Theatre and Drama in America II (3)  
The history of theatre and drama in America from 1900 to the present. Prerequisites: THEA 31112 and 31113; permission of instructor.

**THEA 41191** Variable Content Seminar: Theatre History / Literature / Theory (3)  
Seminar in theatre history and literature providing an in-depth focus on selected topics such as: African-American theatre, women in theatre, politics and theatre, theatre in a multicultural society, costume history on stage/screen. Prerequisite: THEA 31112.

**THEA 41303** Styles of Acting I (3)  
Characterization and the demands of theatrical style in comedy. Imaginative exploration, physical commitment, and the creation of a comic truth in Greek and Roman, Commedia, Moliere and others. Prerequisites: THEA 3103 and/or permission.

**THEA 41304** Styles of Acting II (3)  
Continued exploration of theatrical style and period. Elizabethan and Jacobean theatre with particular emphasis on Shakespearean performance. Prerequisites: THEA 41303 and/or permission.

**THEA 41305** Professional Aspects: Performance (3)  
A study of the practical demands and requirements of a professional acting career with particular emphasis on audition skills. Also covered: pictures and resumes, making rounds, professional unions, casting directors, agents and managers, the job market and career prospects. Prerequisites: junior standing and/or permission.

**THEA 41306** Professional Aspects: Design and Technology (3)  
A study of the practical demands and requirements of a professional career in design and technology, including portfolio development, resumes, unions, job market, financial matters and career prospects. Use of computers as a resource and tool emphasized. Prerequisite: junior standing and/or permission. Special fee: $8/credit hour—subject to change.

**THEA 41307** Musical Theatre Performance II (3)  
Advanced work in musical theatre performance techniques for junior and senior level students. Course content includes selecting appropriate musical theatre audition material and developing contrasting selections from the musical theatre repertory. Preparation for musical theatre auditions is included. Prerequisite: THEA 21306 or permission.

**THEA 41309** Senior Project (2)  
An individual or group performance project developed with the acting faculty. Prerequisites: THEA 41304 and permission.

**THEA 41401** Advanced Directing (3)  
Advanced work in directing for the theatre. Topics include the director as creative/interpretative artist and the director and the actor; students direct individual projects. Prerequisites: THEA 11303, 31401 and permission.

**THEA 41501** Senior Portfolio Review (1)  
Review of a portfolio of theatre and related work, and a review of the student’s academic progress, coursework and professional potential judged by the design/technology faculty at the end of the fall semester. Student must pass to remain eligible for the B.F.A. design/technology degree. S/U grading. Prerequisite: senior standing and B.F.A. design/technology student.

**THEA 41521** Advanced Lighting Technology (3)  
Advanced study of the technologies used in lighting designs; instrument design, optics, dimmer and control systems, projection techniques and special effects. Prerequisites: THEA 11322 and/or permission. Special fee: $10/credit hour—subject to change.

**THEA 41522** Design Studio: Lighting (3)  
Advanced study of lighting design, emphasizing artistic style and concept through a variety of design problems. Prerequisite: THEA 11322 or permission. Special fee: $10/credit hour—subject to change.

**THEA 41523** Sound Design and Technology I (3)  
Sound design for the theatre, sound production, and sound reinforcement techniques. Introduction to electronic equipment: mixing consoles, amplifiers, speakers. Prerequisite: permission.

**THEA 41524** Design Studio: Costume (3)  
Advanced study in costume design. Genres and styles in the context of performance spaces with an emphasis on research, practical considerations of costume production and communication between designer/shop personnel and designer/director. Prerequisites: THEA 31525. Special fee: $15/credit hour—subject to change.

**THEA 41525** Props and Crafts (3)  
Examination of the processes related to the creation and procurement of scenic and costume props. Prerequisites: THEA 31525, 31622 and/or permission. Special fee: $26.66/credit hour—subject to change.

**THEA 41527** Sound Design and Technology II (3)  
Studies in sound design, sound production and reinforcement for live performance. Advanced software applications will be explored. Prerequisite:THEA 41523 and permission.

**THEA 41528** Theatre Sound Reinforcement (3)  
Studies in the theories and practice of audio mixing in support of live vocal and musical performance. Topics include wired and wireless microphones and real-time digital processing of audio. Prerequisite: THEA 41523 and permission.
### Course Descriptions

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 41529</td>
<td>Advanced Wig and Makeup Techniques Stage and Screen (3)</td>
<td>Advanced study of wig and makeup design and execution with an emphasis on standards in the profession. Prerequisite: junior standing and/or permission. Special fee: $26.66/credit hour—subject to change.</td>
</tr>
<tr>
<td>THEA 41530</td>
<td>Automated Stage Lighting Programming (3)</td>
<td>Studies in the application of automated lighting techniques to live performance emphasizing artistic style and concept through a range of programming problems. Prerequisite: junior standing and permission.</td>
</tr>
<tr>
<td>THEA 41560</td>
<td>Theatre Fabrication Technology (3)</td>
<td>History of technical production practice, materials theory and application in scenic construction technology. Prerequisite: THEA 11622, 21521 or permission. Special fee: $26.66/credit hour—subject to change.</td>
</tr>
<tr>
<td>THEA 41620</td>
<td>History of Period Styles for Theatre Designers (3)</td>
<td>A survey of visual styles as related to historical and contemporary culture from antiquity through the 20th century with an emphasis on its application to theatrical design. Prerequisite: one of the following—THEA 31522, 31524 or 31622 and/or permission.</td>
</tr>
<tr>
<td>THEA 41621</td>
<td>Presentation Media (3)</td>
<td>Advanced process techniques in rendering, model building and design presentation for the scenic, costume and lighting designer in traditional and new media. Prerequisites: junior standing, THEA 11522, 11524, 11622, 21521 and/or permission. Special fee: $15/credit hour—subject to change.</td>
</tr>
<tr>
<td>THEA 41622</td>
<td>Design Studio: Scenery (3)</td>
<td>Advanced study in scenic design, explores genres, styles and performance spaces, including practical considerations. Prerequisite: THEA 31622 or permission. Special fee: $16.66/credit hour—subject to change.</td>
</tr>
<tr>
<td>THEA 41623</td>
<td>Television Production: Lighting (3)</td>
<td>Studies in the process and application of designing lighting for studio and event-based television production. Prerequisites: THEA 11522 and permission.</td>
</tr>
<tr>
<td>THEA 41701</td>
<td>Advanced Movement I (3)</td>
<td>Development of advanced movement skills and the actor’s instrument. Emphasizes the elements of time, weight, focus and flow. Prerequisites: THEA 31701 and permission.</td>
</tr>
<tr>
<td>THEA 41726</td>
<td>Theatre Management (3)</td>
<td>Principles and practices of managing theatrical-producing organizations. Problems of finance, personnel, policy, program building and public relations. Production participation as assigned. Prerequisite: junior standing.</td>
</tr>
<tr>
<td>THEA 41736</td>
<td>Production and Stage Management (3)</td>
<td>Detailed investigation of the methodology used in stage managing a professional theatrical production including paperwork, rehearsals and calling a show. Prerequisite: permission.</td>
</tr>
<tr>
<td>THEA 41801</td>
<td>Advanced Voice/Speech I (3)</td>
<td>The use of exercise and specific text work to explore centering as it relates to the vocal, physical and emotional process of the actor. Focus on extremes of emotional sounds and the removal of barriers and nonuseful vocal habits/speech patterns. Incorporation of personal vocal/physical warm-up into actor’s process. Prerequisites: THEA 31601 and permission.</td>
</tr>
<tr>
<td>THEA 41882</td>
<td>Entertainment Arts and Technology Internship II (5)</td>
<td>(Repeatable up to 10 hours) Intensive advanced professional experience in aspects of entertainment arts and technologies. Prerequisite: junior standing or permission.</td>
</tr>
<tr>
<td>THEA 41992</td>
<td>Theatre Production Internship (1-6)</td>
<td>(Repeatable for a total of 12 hours) Intensive advanced training in practical aspects of production. Periodic seminars, laboratory sessions and performance in a theatre company. S/U grading; IP grade permissible. Prerequisites: junior standing and permission.</td>
</tr>
<tr>
<td>THEA 42092</td>
<td>Practicum II: Design/Tech (3)</td>
<td>(Repeatable for a total of 99 hours) Advanced practical experience in theatre production under faculty supervision. S/U grading; IP grade permissible. Available for upper-division students only. Required of all theatre majors. Prerequisite: juniors/seniors only.</td>
</tr>
<tr>
<td>THEA 42192</td>
<td>Practicum II: Performance (3)</td>
<td>(Repeatable for a total of 99 hours) Advanced practical experience in theatre performance under faculty supervision. S/U grading; IP grade permissible. Available for upper-division students only. Required of all theatre majors. Prerequisite: junior/senior standing.</td>
</tr>
<tr>
<td>THEA 42292</td>
<td>Practicum II: Theatre Management (3)</td>
<td>(Repeatable for up to 12 hours) Advanced practical experience in theatre management under faculty/staff supervision. Available for upper-division students only. Prerequisite: none.</td>
</tr>
<tr>
<td>THEA 10001</td>
<td>University Orientation (1)</td>
<td>Assist students in making the transition to the university, improving and refining academic skills, participating in the advising system and selecting or confirming a major. Required of all entering freshmen. S/U grading. Prerequisite: none.</td>
</tr>
<tr>
<td>THEA 10002</td>
<td>Adult Student Orientation (1)</td>
<td>This course focuses on balancing adult roles and responsibilities with college demands. Students will sharpen learning skills and study strategies while making connections with other adult students at Kent State. S/U grading. Prerequisite: none.</td>
</tr>
<tr>
<td>THEA 10003</td>
<td>Reading Strategies for College Success (3)</td>
<td>Development of reading strategies necessary for successful completion of college coursework. Emphasis on improving reading comprehension. Hours do not count toward graduation. Prerequisite: assessment testing or permission.</td>
</tr>
<tr>
<td>THEA 10006</td>
<td>Study Strategies for College Success (3)</td>
<td>Development and application of content-area reading and study strategies for successful completion of college coursework. Emphasis on application of study strategies. Hours do not count toward graduation. Prerequisite: concurrent registration in selected LER course or permission.</td>
</tr>
<tr>
<td>THEA 10005</td>
<td>Special Topics in Undergraduate Studies (1-3)</td>
<td>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. Prerequisite: none.</td>
</tr>
<tr>
<td>THEA 20095</td>
<td>Special Topics in Undergraduate Studies (1-3)</td>
<td>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. Prerequisite: none.</td>
</tr>
<tr>
<td>THEA 20193</td>
<td>Variable Title Workshop in Undergraduate Studies (1-3)</td>
<td>Workshop focused on variable topics. Repeated registration permitted. Prerequisite: none.</td>
</tr>
<tr>
<td>THEA 20201</td>
<td>Student Instructor Training (2)</td>
<td>This course prepares student instructors to pair with a faculty member to teach University Orientation (US 10001). This course meets for 12 weeks, including three Saturdays. S/U grading. Prerequisite: US 10001.</td>
</tr>
</tbody>
</table>
20202 New Student Instructor Seminar (2)
This course is required for all student instructors who are teaching University Orientation. Student development theory, classroom management, communication skills, lesson planning, assertiveness training and orientation course content. S/U grading. Prerequisite: US 20201 or permission.

20203 Theory and Practice of Peer Tutoring (1)
Preparation for tutoring in several academic areas. Emphasis on the student-as-learner. Introduction to current learning theories. Opportunities provided to adapt learning strategy to particular disciplines. Field experience included. Prerequisite: none.

30202 Returning Student Instructor Seminar (2)
This course is required of all student instructors who are paired with a faculty member in teaching University Orientation and who have taught University Orientation previously. Extended training & resource assistance. S/U grading. Prerequisite: US 20202.

40201 University Orientation Intern (3)
Experienced student instructors selected to be student interns are required to take this course. Extended training and skill development for students who assume responsibility for assisting orientation instructors. Prerequisite: US 20202 or permission.

40202 University Orientation Trainer (3)
Experienced student instructors selected to be university orientation trainers are required to take this course. It provides extended training and skill development for those who take on the responsibility of orientation trainer. Prerequisite: US 20202 or permission.

VETERINARY TECHNOLOGY (VTEC)*

10001 Introduction to Veterinary Technology (2)
Introduction to veterinary technician’s career: medical terminology, career choices, occupational safety, human-animal bond, pet loss, euthanasia, animal husbandry and basic nutrition, breed identification and basic animal behavior. Prerequisite: none.

10002 Veterinary Nursing I (3)
Introduction to animal nursing: record keeping, kennel sanitation, animal restraint, syringe and needle identification/handling, injection techniques, physical exams, grooming and administration of medications. Two-hour lecture and three-hour laboratory weekly. Prerequisite: admission to major.

10003 Veterinary Nursing II (3)
Clinical application off site. Emphasis on skills from VTEC 10002: physical exam, medications, blood vessel catheterization, venipuncture, fluid therapy, wound care, dental prophylaxis, first aid, bandaging and CPR. Two-hour lecture and three-hour laboratory weekly. Prerequisites: BSCI 10100, CHEM 10050, HED 14020, VTEC 10002 and 10204. Pre/corequisite: VTEC 10001.

10205 Veterinary Nursing II (3)
Clinical application off site. Emphasis on skills from VTEC 10002: physical exam, medications, blood vessel catheterization, venipuncture, fluid therapy, wound care, dental prophylaxis, first aid, bandaging and CPR. Two-hour lecture and three-hour laboratory weekly. Prerequisites: BSCI 10100, CHEM 10050, HED 14020, VTEC 10002 and 10204. Pre/corequisite: VTEC 10001.

10206 Pharmacology (2)
Regulations controlling the use of drugs and biologicals, classifications and mechanisms of action of pharmaceuticals, dosage calculations, labeling, packaging and dispensing of veterinary products. Two-hour lecture weekly. Prerequisites: BSCI 10100, 10110, CHEM 10052/3, HED 14020, VTEC 10001, 10002 and 10204. Pre/corequisite: VTEC 10205.

20008 Clinical Laboratory II (3)
Continuation and application of skills from VTEC 10204, including hematology, serology, urinalysis, cytology and other laboratory skills. Two-hour lecture and three-hour laboratory weekly. Prerequisites: BSCI 10100, CHEM 10050, HED 14020, VTEC 10002 and 10204. Pre/corequisite: VTEC 10205.

20009 Veterinary Nursing III (3)
Continuation nursing skills and techniques emphasizing large animal species: restraint, venipuncture, behavior, breeds, feedstuffs, food safety, medications, preventive care, surgical procedures and lameness. Two-hour lecture and three-hour laboratory weekly. Prerequisites: BSCI 10100, CHEM 10050, HED 14020, VTEC 10001 and 10205.

20012 Surgery and Anesthesia (3)

20392 Practicum in Veterinary Hospital (5)
Students gain practical experience in a veterinary clinic or an approved clinical site to focus on mastering all clinical skills needed for this career. Prerequisites: BSCI 20001, VTEC 20009, 20010 and 20212. Corequisites: VTEC 20213 and 20214.

VISUAL COMMUNICATION DESIGN (VCD)

13000 Introduction to Visual Communication Design I (2)
Introduction to the design and illustration program in visual communication design as well as the design profession. Focus on historical overview, industry standards, job opportunities, creative design process and skills needed to succeed. Prerequisite: visual communication design major or minor or permission.

13001 Introduction to Visual Communication Design II (3)
Introduction to basic design processes using research, writing, conceptual problem-solving and format organization of two-dimensional space utilizing type and imagery. Prerequisite: VCD 13000. Special fee: $5/credit hour—subject to change.

14000 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: VCD 13001 and ART 14000. Special fee: $3.33/credit hour—subject to change.

17000 Color: Theory and Application (3)
Color and its interaction through a series of nonapplied (abstract) exercises. Prerequisite: none.

*Courses offered only at Regional Campuses.
20009 Sophomore Entrance Examination/Portfolio Review (1)
Visual communication design faculty review a portfolio of work from prerequisite courses and administrator diagnostic examinations of technical and drawing skills and formal organizational ability. S/U grading. Prerequisites for graphic design and illustration majors; VCD 13001, 22000, 22001, 23000, 23001, 23002 and/or permission. Special fee: $5/credit hour—subject to change.

22000 Design/Illustration Techniques I (3)
Introductory course in design/illustration. Object drawing with emphasis toward rendering materials and techniques used in reproduction, perspective, spatial organization and use of reference material. Prerequisites: VCD 13001 and/or permission.

23001 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. Prerequisites: VCD 22000 and/or permission.

23000 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: VCD 23001 and/or permission. Special fee: $11/credit hour—subject to change.

23001 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: minimum B (3.0) grade in VCD 13000 and 13001. Special fee: $4/credit hour—subject to change.

23002 Introduction to 3D Graphic Design (3)
Continuation of Introduction to Graphic Design and Introduction to Typography with application of typography and imagery to 3-D form. Prerequisites: VCD 13001, 23001 and/or permission.

24000 Studio Production Rendering (3)
Familiarizes students with special rendering and model-making techniques of professional design. Prerequisite: none. Special fee: $3.33/credit hour—subject to change.

24001 Product Design (3)
Research and design of singular self-contained objects. Utilization of industrial materials and fabricating techniques emphasizing aesthetics. Prerequisite: VCD 24000. Special fee: $3.33/credit hour—subject to change.

24009 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 in Industrial Design. Prerequisite: VCD 24000. Corequisite: VCD 24001.

27000 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: $4/credit hour—subject to change.

27001 Visual Design for Media: Basic (1)
An introductory lecture course on the theoretical principles of design and their relation to content in magazines, newspapers, television and online media, etc. Course may not be used by visual communication design majors. Prerequisite: none.

28000 Photography (3)
Basic camera techniques to provide a better understanding of photography as a creative skill in visual communication. Prerequisites: VCD 13000 and 13001 or permission. Special fee: $18.33/credit hour—subject to change.

30000 Basic Computer I—Graphic Design/Illustration (1)
Introduction of basic operating system of Macintosh computers, troubleshooting and maintenance skills, the function of the hardware, software and peripheral equipment—printers, scanners, etc., as well as learning basic word processing and layout software. Prerequisite: none.

30001 Basic Computer II—Graphic Design/Illustration (1)
Introduction of basic design software and explanation of the relationship between various tools used by designers; vector graphic programs, use of photo manipulation software, scanning, Web and new media and offset printing. Prerequisite: VCD 30000

30002 Basic Computer III—Graphic Design/Illustration (1)
Application of the fundamentals taught in Basic Computer I and II to explore sophisticated relationships between the three major design software programs; master pages, numbering system, style sheets, and finer typography options and creative use of text shapes, etc. Prerequisite: VCD 30001.

30009 Junior Portfolio Review: Graphic Design/Illustration (1)
Required portfolio review in conference with the visual communication design faculty of work completed in VCD 32000, 32001, 33000 and 33001. Students successfully passing review may continue in the B.A. degree. To change to the B.F.A. degree or B.S./M.A. combined degrees in visual communication design, students must receive a minimum B (3.0) grade in junior portfolio review. Those students not receiving a passing grade in review should see Requirement 3 in program section. Prerequisites: VCD 32000, 33000. Corequisites: VCD 33001 and 32001.

32000 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: VCD 22009 and/or permission.

32001 Illustration II (3)
Illustration as communication: conceptual problem-solving visualizations of ideas utilizing felt tip markers as the medium of expression. Prerequisite: VCD 32000 and/or permission.

33000 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: VCD 20009 and/or permission. Special fee: $12/credit hour—subject to change.

33001 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: VCD 32000, 33000 and/or permission. Special fee: $12/credit hour—subject to change.

34000 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: VCD 24009. Special fee: $3.33/credit hour—subject to change.

37000 Visual Design for Media: Advanced (3)
A laboratory course in which students apply design concepts to computer-generated communication pieces using a layout software program. May not be used toward degree requirements by visual communication design majors. Prerequisite: permission. Special fee: $10/credit hour—subject to change.
Course Descriptions

38001 Photographic Arts (3)
Exploration of basic studio setups and controlled lighting with special emphasis on the interaction of photography and typography in communication. Unique solutions are created through the use of the camera and image manipulation programs. Prerequisites: VCD 13001, 20009, 28000 and 38004. Special fee: $15/credit hour—subject to change.

38003 Photo Technology (3)
(Cross-listed with JMC 32003) A professional course serving visual communication design students within photo-illustration major. Designed to give students an advanced working knowledge of digital and film photographic systems through testing procedures and use of special purpose materials. Prerequisites: VCD 13001, 28000 and visual communication design major or minor or permission. Special fee: $15/credit hour—subject to change.

38004 Advanced Photography (3)
(Cross-listed with JMC 32004) Use of specialized equipment, materials and techniques. Development of conceptual abilities and problem-solving skills. Special equipment furnished. Prerequisites: VCD 13001 and 28000. Special fee: $15/credit hour—subject to change.

38008 Photo-Design Techniques (3)
(Cross-listed with JMC 32008) Use of unusual photographic materials and techniques in design of images for many purposes. Prerequisites: VCD 13001 and 28000. Special fee: $15/credit hour—subject to change.

40003 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: VCD 30009 or permission. Special fee: $12/credit hour—subject to change.

40025 Professional Portfolio: Graphic Design/Illustration (1-2)
Develop a professional portfolio in graphic design and/or illustration through selection and refinement of previously completed classroom work/development of projects in areas of deficiency with emphasis on organization and presentation. Repeatable with permission. Prerequisite: B.F.A. major and/or permission. Special fee: $8/credit hour—subject to change.

40052 Graphic Design—Travel and Field Experience (1-16)
Development of awareness and understanding in the practical application of graphic design and communication through direct field trip experience. S/U grading; IP grade permissible. Prerequisite: permission.

40053 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: $10/credit hour—subject to change.

40092 Internship 1—Graphic Design/Illustration (1)
Preparation for experience in design studio, agency or company involving design responsibilities and procedures to broaden a student's understanding of the profession through real job situations. S/U grading; IP grade permissible. Prerequisite: permission.

40095 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 grade permissible. Prerequisite: VCD 30009 and/or permission. Special fee: $7/credit hour—subject to change.

40096 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. IP grade permissible. Prerequisite: permission.

40192 Internship 2—Graphic Design/Illustration (1-6)
3 credit hours required; maximum of 6 credit hours allowable in B.F.A. degree only. 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. S/U grading; IP grade permissible. Prerequisite: VCD 40092 and permission.

40193 Variable Title Workshop in VCD (1-3)
Workshop setting dealing with intensive examination of special topics in VCD. May be repeated. Prerequisite: permission.

40195 Selected Topics: Graphic Design/Illustration (1-4)
(Repeatable). Variable topics related to GD&I. Prerequisite: permission.

42000 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: VCD 30009 and/or permission.

42002 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: VCD 30009 and/or permission.

42003 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 VCD 30009.

42004 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: VCD 30009.

42051 Calligraphy and Layout (3)
Development of creative techniques and technical proficiency in calligraphy as applied to illustration and graphic design. Prerequisites: VCD 30009 and/or permission.

43000 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: successful completion of VCD 30009. Special fee: $3.33/credit hour—subject to change.

43001 Kinetic and Sequential Graphic Design (3)
The exploration of the use of the computer in kinetic and sequential graphic design. 3-D modeling, and sound. Prerequisites: VCD 30000 and/or permission. Special fee: $10/credit hour—subject to change.

*Courses offered only at Regional Campuses.*
43002  Typographic/Photographic Graphic Design (3)
The use of typography (rather than visual imagery) as the primary design form in solving graphic design communication problems. Prerequisites: VCD 30009 and/or permission. Special fee: $12/credit hour—subject to change.

43003  Corporate Identity/Graphic Design (3)
Use of graphic design forms (typography, photography and illustration) in the development of corporate identification for total advertising programs. Prerequisites: VCD 30009 and/or permission. Special fee: $11/credit hour—subject to change.

43004  Issues for Graphic Design Businesses (3)
Designed to familiarize students with the basic business, marketing, legal and ethical standards in the graphic design industry. Prerequisites: ART 33205 and permission. Special fee: $3.33/credit hour—subject to change.

43005  3-D Graphic Design-Direct Mail/Packaging/Point Purchase (3)
Use of typography, visual images, photography and illustrations in the structure of information for communication on 3-D surfaces (direct mail, packaging and point-of-purchase display). Prerequisites: VCD 30009 and/or permission. Special fee: $10/credit hour—subject to change.

43006  Environmental Design (3)
Aims at coordinating architectural planning, interior design, systems analysis and graphic communications. Prerequisites: VCD 34009. Special fee: $3.33/credit hour—subject to change.

43007  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; VCD 13001 or 27001; ART major, minor or permission. Special fee: $10/credit hour—subject to change.

43051  Experimental Typographic (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 VCD 30009. Special fee: $12/credit hour—subject to change.

44001  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: none. Special fee: $4/credit hour—subject to change.

46000  Web Design and Programming I (3)
(Cross-listed with CS 47105) Course focus is on Web concepts and high quality Web design; CS and VCD principles, tools, architecture, presentation, design and creation of Web sites through teamwork. Course is jointly taught by CS and VCD. IP grade permissible. Prerequisites: CS 10051 and VCD 13001 or permission. Special fee: $6.67/credit hour—subject to change.

46001  Web Design and Programming II (3)
(Cross-listed with CS 47106) An elective course jointly taught by computer science and VCD on advanced Web technologies and multimedia Web design: Web services, security, advanced design, Java servlets, applets, database connectivity, site maintenance, relation of actual Web sites by teamwork. IP grade permissible. Prerequisites: VCD 46000 and/or permission. Special fee: $6.67/credit hour—subject to change.

46003  Digital Typography (2)
Applying typographic rules in digital environments. Organizing large amounts of text in complex architectures and designing viewer controlled space. Exploration of dynamic information, sound and motion sequences. Prerequisite: VCD 27001, 37000 or 23001.

46053  Web Design and Programming Studio (3)
(Cross-listed with CS 47107) A joint computer science and visual communication design project course exploring advanced aspects of Web design and programming. Student may pursue individually defined projects or team projects for real clients. Limited enrollment. Prerequisites: VCD 46001 and permission.

48005  Color Photography (3)
(Cross-listed with JMC 42005) The discipline of color photography is explored through a range of lectures, assignments and critiques. Prerequisites: VCD 38003, 38004 and visual communication design major or permission. Special fee: $18.33/credit hour—subject to change.

48007  Photo Illustration Techniques (3)
(Cross-listed with JMC 42007) Creative photography for advertising and editorial uses. Art director/photographer relationships stressed in given assignments. Critique by professionals in addition to academic evaluation. Prerequisites: VCD 38003, 38004, 48005 and visual communication design major. Special fee: $15/credit hour—subject to change.

48009  Fashion Photography (3)
(Cross-listed with JMC 42009) Instruction in studio lighting, filters and special effects. Emphasis on editorial and advertising fashion photography. Studio and location assignments. Prerequisites: VCD 38003, 38004, 48005 and visual communication major or permission. Special fee: $15/credit hour—subject to change.

48092  Practicum in Photography (1-3)
(Cross-listed with JMC 42092) Individual or group investigation into student-selected areas of photographic field. Prerequisite: upper-division standing or permission. Repeatable for a total of 10 hours. Special fee: $15/credit hour—subject to change.

49098  Senior Research Proposal: Graphic Design and Illustration (1)
Research proposal must be approved by a faculty committee before project is started. Research paper or project must meet the educational and professional criteria of the program. S/U grading; IP grade permissible. Prerequisites: senior standing and/or permission.

49198  Senior Research Paper: Graphic Design/Illustration (2)
Written documentation of a senior project in graphic design or illustration. If Senior Project GD/I, VCD 49199 option is chosen, it must be taken concurrently with Senior Research Paper and presented for final review by a faculty committee. IP grade permissible. Prerequisites: senior standing and VCD 49098 and/or permission. This course may be used to satisfy the writing-intensive requirement with approval of major department.

49199  Senior Project: Graphic Design/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: $7/credit hour—subject to change.
WOMEN’S STUDIES (WMST)

20095 Special Topics in Women’s Studies (1-5)
Repeated registration permitted when topic varies. Study of particular contemporary figures, events and social practices or phenomenon as they relate to women’s studies. This includes women and war, women and work and women and interpersonal violence. Prerequisite: none.

20193 Variable Title Workshop in Women’s Studies (1-6)
Workshop focused on a specific topic within women’s studies. Repeated registration permitted. S/U grading. Prerequisite: none.

30000 Colloquium in Women’s Studies (3)
A critical investigation of the position and category of women from a cross-cultural, historical and interdisciplinary perspective, with special emphasis on major themes and issues in women’s studies. Issues including race, ethnicity and sexuality will be addressed. Prerequisite: junior standing or permission. This course may be used to satisfy the diversity requirement.

30001 Feminist Theory (3)
An examination of important historical and contemporary works of feminist theory and their influence on the development of feminist thought and practice in the U.S. and worldwide. Issues including race, ethnicity and sexuality will be addressed. Prerequisite: none.

30095 Special Topics in Women’s Studies II (1-5)
Repeated registration permitted when topic varies. Study of selected topics in women’s studies organized around historical and theoretical issues and movements. This includes contemporary feminist theory, suffragist movement and third wave feminism. Prerequisite: none.

30196 Women Studies Individual Investigation (1-3)
The design and completion of a scholarly research project related to women’s studies, and the presentation of findings at the end of the term. Typically a capstone course for those completing the women’s studies minor. Arrangements must be made in the semester prior to registration. Prerequisite: permission.

40095 Special Topics in Women’s Studies III (1-5)
Repeated registration permitted when topic varies. Informed study of critical issues in women’s studies from an international or global perspective. Prerequisite: WMST 30000 or 30001.

40193 Variable Title Workshop in Women’s Studies (1-6)
Workshop focused on a specific topic within women’s studies. Repeated registration permitted. S/U grading. Prerequisite: none.

40992 Practicum in Women’s Studies (3)
An assignment at a private, public or nonprofit organization that centers on women’s issues, such as education, health and policy making. Arrangements must be made in the semester prior to registration. Prerequisite: permission.