

COURSE DESCRIPTIONS

Note: This list reflects the course descriptions and information for the 2004-2005 academic year. Please see the website: www.bluegrass.kctcs.edu/lcc/reg for the most up-to-date information. The following list includes those classes most frequently taught at the Cooper, Regency Road, and Winchester campuses of Bluegrass Community and Technical College. The following courses are not taught every semester. Students should consult a current *Schedule of Classes* for a list of courses and the hours they are offered.

Accounting

ACC 201 Financial Accounting I (3)
This course is designed to provide an introduction to financial accounting from the users' perspectives. Its primary purposes are to promote understanding of financial accounting information for decision-making purposes and to focus on financial accounting's role in communicating business results. Prerequisite: Sophomore standing.

ACC 202 Managerial Uses of Accounting Information (3)
An introduction to the use of accounting data within an organization to analyze and solve problems and to make planning and control decisions. This course is designed for non-accounting majors. Prerequisite: ACC 201 or BE 161 and BE 162.

ACC 211 Financial Accounting Lab (1)
A laboratory-based approach to introductory financial accounting applications, with the primary focus on the accounting cycle. The primary objective is to promote an understanding of how accounting information is identified, recorded, and processed for financial reporting. Prerequisite: ACC 201. Enrollment priority will be given to accounting and finance majors.

Air Force Studies

AFS 111 Aerospace Studies I (1)
A course designed to provide the student with a basic understanding of the nature and principles of war, national power, and the Department of Defense role in the organization of national security. The student also develops leadership abilities by participating in a military organization, the cadet corps, which offers a wide variety of situations demanding effective leadership. Corequisite: AFS 112

AFS 112 Leadership Laboratory I (1)
A course designed for development of basic skills required to be a manager, including communications, human relations, and administration of equal opportunity. Credit will not be granted toward the hours requirements for the degree. Pass/fail only. Corequisite: AFS 111.

AFS 113 Aerospace Studies I (1)
A course designed to provide the student with a basic understanding of the contribution of aerospace power to the total U.S. strategic offensive and defensive military posture. The student also develops leadership abilities by participating in a military organization, the cadet corps, which offers a wide variety of situations demanding effective leadership. Prerequisite: AFS 111

AFS 114 Leadership Laboratory I (1)
A continuation of AFS 113. A course designed to develop managerial skills including superior/subordinate relationships, communications, customs and courtesies, basic drill movements and career progression requirements. Credit will not be granted toward the hours requirements for the degree. Pass/fail only. Corequisite: AFS 113.

AFS 211 Aerospace Studies II (1)
Introduces the study of air power from a historical perspective; focuses on the development of air power into a primary element of national security. Leadership experience is continued through active participation in the cadet corps. Lecture, 1 hour; leadership, laboratory, one hour. Prerequisite: AFS 111, 113 or PAS approval.

AFS 212 Leadership Laboratory II (1)
A course designed for development of advanced skills required to be a manager/leader, including leadership studies, public speaking, group dynamics, motivation and preparation for field training. Credit will not be granted toward the hours requirements for the degree. Pass/fail only. Corequisite: AFS 211.

AFS 213 Aerospace Studies II (1)
Provides a foundation for understanding how air power has been employed in military and non-military operations to support national objectives. Examines the changing mission of the defense establishment, with particular emphasis on the United States Air Force. Leadership experience is continued through participation in the cadet corps. Lecture, one hour; leadership laboratory, one hour per week. Prerequisite: AFS 111, 113 or PAS approval.

AFS 214 Leadership Laboratory II (1)
A continuation of AFS 213. A course designed to develop supervisory management skills to include communications, techniques of critique, social actions, personnel evaluation procedures, problem solving, role playing and field training preparation. Credit will not be granted toward the hours requirements for the degree. Pass/fail only. Corequisite: AFS 213.

African American Studies

AAS 260 Afro-American History to 1865 (3)
A study of the Black experience in America through the Civil War. An examination of the African heritage, slavery, and the growth of the Black institutions. (Same as HIS 260.)

AAS 261 Afro-American History 1865- Present (3)
This course traces the Black experience from Reconstruction to the Civil Rights Movement of the 1960's. The rise of segregation and the ghetto and aspects of race relations are examined. (Same as HIS 261.)

AAS 264 Major Black Writers (3)
A cross-cultural and historical approach to written and oral works by major Black authors of Africa, the Caribbean and the United States. The course includes writers such as Chinua Achebe (Africa), Wilson Harris (Caribbean), and Toni Morrison (USA). (Same as ENG 264.)

American Military Studies

AMS 101 Introduction to the Army (2)
This introductory level course is designed to give students an appreciation for the role the Army currently plays in our society. The course covers the history of the Army and the roles and relationships of the Army within our society. The course also covers some of the basic skills necessary for today's leaders to include oral presentation, time management, map reading, basic rifle marksmanship and squad tactics.

AMS 102 Introduction to Leadership (2)
This course is designed to acquaint the student with the fundamental skills necessary to be a leader, both in military and civilian context. Course also covers basic military map reading skills.

AMS 211 Advanced Leadership I (2)
This course focuses on both theoretical and practical aspects of leadership. Students will examine topics such as written and oral communication, effective listening, assertiveness, personality, adult development, motivation, and organizational culture and change.

AMS 212 Advanced Leadership II (2)
This course focuses principally on officership, providing an extensive examination of the unique purpose, roles, and obligations of commissioned officers. It includes a detailed investigation of the origin of our institutional values and their practical application in decision making and leadership.

Anthropology

ANT 101 Introduction to Anthropology (3)
This course introduces the student to the study of human cultures, past and present. It offers a comprehensive introduction to anthropology, emphasizing the concepts and methods of the major sub-fields, i.e., cultural, biological, archaeology, and linguistics. V

ANT 130 Introduction to Comparative Religion (3)
Comparative study of major world and selected regional religions with emphasis on analysis of belief, ritual, artistic expression and social organization. Eastern and Western religions are considered. (Same as RS 130.) V

ANT 160 Cultural Diversity in the Modern World (3)
Directed at non-majors, this course is intended to introduce the student to the diversity of human cultural experience in the contemporary world. Goals of the course include gaining an appreciation for the common humanity and uniqueness of all cultures; to gain a sensitivity toward stereotypes and ethnocentrism, and to understand the distinctions between "race," ethnicity and racism. The course features extended descriptions of the cultural dynamics of the culture(s) with which the instructor has worked. V

ANT 220 Introduction to Cultural Anthropology (3)
The study of the lifeways and beliefs of different peoples. The objectives of the course are to foster an appreciation for the variety of cultural traditions found throughout the world, and to introduce students to anthropological concepts and methods of inquiry. V

ANT 221 Native People of North America (3)
A survey of the aboriginal Indian cultures of North America, and of the impact of four centuries of British, French, Spanish, and Russian contact on the Indian communities. The course will include consideration of the status of Indians in present-day North America. V

ANT 240 Introduction to Archaeology (3)
Introduces the theories, techniques, and strategies used by archaeologists to recover and interpret information about past cultures.

ANT 241 Origins of Old World Civilization (3)
A survey of cultural developments in the Old World from the earliest times to the beginning stages of civilization. V

ANT 242 Origins of New World Civilization (3)
Survey of the origin and growth of ancient peoples of the Americas as revealed by archaeological data. V

Architectural Technology

ACH 100 Construction Documents I (3)
This is the first course of a four-semester studio sequence. Proper methods and fundamentals of architectural construction documents and residential construction will be introduced. Drafting conventions utilizing basic hand drafting tools and computer-aided drawing techniques will be studied. Lecture: 2 hours, laboratory: 3 hours.

ACH 110 Survey of the Architectural Profession (1)
In this course, the student will gain an understanding of the language of architecture and develop an appreciation for building design strategies through direct analysis. In addition, various career opportunities in architecture and related professions will be explored.

ACH 120 Theory and History of Architecture I (3)
The development of architecture as it is related to world culture with an emphasis on design, structure, materials, eco-social, and political factors are considered.

ACH 150 Construction Documents II (3)
This is the second course of a four-semester studio sequence. Students develop architectural construction documents for multi-level framed construction. Students will further develop an understanding of programming, schematics, design development, and construction document production using current computer-aided technology. Emphasis will be placed on building codes and related discipline coordination. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: ACH 100 or consent of instructor.

ACH 160 Building Materials and Construction I (3)
The essentials of the theory of selected building materials (Construction Specifications Institute, Divisions 2-7) and their assembly in appropriate systems are presented with particular attention to component selection and behavior under various loads, climatic conditions and fire.

ACH 161 Building Materials and Construction II (3)
The essentials of the theory of selected building materials (Construction Specifications Institute, Divisions 7-16) and their assembly in appropriate systems are presented with particular

attention to component selection and behavior under various loads, climatic conditions and fire.

ACH 170 Theory and History of Architecture II (3)
A survey of the architectural periods from the neo-classic to the present is presented. This course is a continuation of ACH 120.

ACH 175 Introduction to Systems (3)
An overview of the various systems found in buildings and the influences that shape architectural design and construction is presented.

ACH 180 Selected Topics in Architectural Technology (Topic) (1-3)
The subject matter of this course may vary from semester to semester as new technology is developed and new issues evolve and/or to address local architectural issues. This course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor.

ACH 185 Computer-Aided Drafting I (3)
Students learn how computer hardware and software are used in preparing architectural documents. Lecture: 2 hour; laboratory: 3 hours.

ACH 194 Visual Composition (3)
In this course, the student will study the aesthetic principles found in both two-dimensional and three-dimensional compositions. These principles will be applied in exercises involving drawing, model construction and creative writing. Lecture: 1 hour, laboratory: 4 hours.

ACH 200 Construction Documents III (3)
This is the third course of a four-semester studio sequence. Students study the methods by which commercial buildings are designed and constructed. Basic skills are developed relating to the implementation of determinants in this process such as program analysis, applicable codes, construction methods and materials as well as computer applications. Through the completion of a series of structured projects including the preparation of a set of architectural construction documents for a medium-sized building, students apply the knowledge necessary to achieve these goals. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: ACH 150 and ACH 185 or consent of instructor.

ACH 225 Structures (3)
Students study structural materials and systems including the design of simple structural components. Prerequisite: ACH 175 and MAH 125, or consent of instructor.

ACH 250 Construction Documents IV (3)
This is the fourth course of a four-semester studio sequence. Students prepare a set of advanced construction documents using current computer-aided drafting techniques. Emphasis will be placed on design principles and site development for a commercial construction project. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: ACH 200 or consent of instructor.

ACH 260 Office Practice (3)
This course is intended to serve as a capstone course in the Architectural Technology program. Emphasis is placed on preparing students for the workplace by focusing on the professional, legal, and business aspects of the architectural and construction industries. Case studies are reviewed and

projects are prepared by students with the goal of introducing them to a broader set of circumstances that affect how decisions are made in the practice of architecture. Prerequisite: ACH 110 and ACH 200 or equivalent.

ACH 275 Mechanical and Electrical Systems (3)
Students engage in a qualitative and quantitative study of environmental control systems used in buildings. Prerequisite: ACH 175 and MAH 125, or consent of instructor.

ACH 285 Computer –Aided Drafting II (3)
Students learn how to modify selected computer aided drafting software to enhance construction document production. Integration of other software will also be discussed. Prerequisite: ACH 185 or consent of instructor.

ACH 290 Building Codes I (3)
Students will analyze the content and format of current building codes. The necessity for building codes, problems in interpretation and application as well as legal aspects will be discussed. The main objective is to familiarize students with the basic provisions and procedures associated with building code administration. Prerequisite: ACH 150 and ACH 160, or consent of instructor.

ACH 291 Construction Management (3)
Students examine the principles and current practices of construction management with emphasis on project organization, scheduling and cost control. Prerequisite: ACH 150, ACH 160 and ACH 161, or consent of instructor.

ACH 292 Building Codes II (3)
This course will be continuation of ACH 290, Building Codes I, with a more in-depth study of current building codes. Prerequisite: ACH 290 or consent of instructor.

ACH 293 Presentation Techniques (3)
Students will explore a variety of presentation and rendering techniques used in the architectural profession. Design skills and the understanding of spatial relationships will be further developed. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: ACH 100 or consent of instructor.

ACH 294 Specification Writing (3)
This course provides an in-depth study of the importance of specifications in the design and construction process. Students will engage in research, evaluate the quality of building materials, study the methods of writing specifications, and gain exposure to industry-standard software in preparing a variety of specifications. Prerequisite: ACH 150, ACH 160, ACH 161, or consent of instructor.

ACH 297 Estimating Techniques (3)
Students investigate the factors affecting the cost of construction, labor productivity, materials, overhead and profit, including area and volume computations. Current methods of cost estimating will be applied. Lecture: 2.5 hours, laboratory: 1 hour. Prerequisite: ACH 150 and MAH 125; or consent of instructor.

ACH 298 Computer 3D Modeling (3)
Students learn how computer hardware and software are used in preparing 3D architectural drawings and client-oriented presentations. Prerequisite: ACH 150 and ACH 185 or consent of instructor.

Anatomy

ANA 209 Principles of Human Anatomy (3)

The structure of the human body will be examined at various levels: cellular, tissues and organ systems. The gross anatomical arrangement of the body will be studied in a system-by-system format relating structure to function and the fundamentals of human embryology/malformation with adult anatomy. The central nervous system will be emphasized. Prerequisite: Introductory biology or zoology.

Art

A-H 105 Ancient Through Medieval Art (3)

Survey of the development of art and architecture with primary emphasis on cultures of Egypt, Western Asia, Greece, Rome, and medieval Europe. VII

A-H 106 Renaissance Through Modern Art (3)

Historical development of Western art and architecture from the 14th century through the present. VII

ART 100 Introduction to Art (3)

This course is open to all University students interested in an understanding and appreciation of the visual arts. The formal and expressive qualities of major art forms are examined through lectures and presentations. VII

Arts and Sciences

A&S 100 Special Introductory Course: Title TBA (1-6)

This course permits the offering at the introductory level of special courses of an interdisciplinary, topical, or experimental nature. Each proposal must be approved by the Dean of the College of Arts and Sciences. A particular title may be offered at most twice under the A&S 100 number. Students may not repeat under the same title. May be repeated to a maximum of 12 credits. Prerequisite: Will be set by instructor.

Astronomy

AST 191 The Solar System (3)

A course emphasizing the nature, origin and evolution of planets, satellites and other objects in the Solar System. Topics also include historical astronomy, the naked eye phenomena of the sky and modern solar system discoveries made by spacecraft. This course may be taken independently of AST 192. IV

AST 192 Stars, Galaxies and the Universe (3)

A course covering the universe outside the Solar System. A principle theme is the origin and evolution of stars, galaxies and the universe at large. Topics also include black holes, quasars and the big bang model of the universe. This course may be taken independently of AST 191. IV

Biological Sciences

BIO 102 Human Ecology (3)

A study of the interrelationships of man, populations, space, energy, food, mineral resources and other life on earth. Not for life science majors. IV

BIO 103 (BIO 112) Basic Ideas of Biology (3)

Introductory biology. Discussion topics are those relevant to both plants and animals—cell structure and function, molecules important to living things, metabolism, heredity, environment. Not for life science majors. IV

BIO 110 Introduction to Human Biology and Health (3)

A course describing basic anatomical and physiological functions of various body cells, tissues and organs and their interrelationships as a functioning whole. It also deals with basic information as to maintenance of health; brief description of the major and common diseases affecting man—their control and prevention.

BIO 111 General Biology Laboratory (1)

Laboratory studies in the structure and function of cells, plants and animals; ecology; heredity; and evolution. IV

BIO 150 Principles of Biology I (3)

The first semester of an integrated one-year sequence (BIO 150 and BIO 152) that is designed to develop an appreciation of biological principles necessary to explore life at the cellular and molecular levels. Similarities and differences in structure and function of simple and complex cells will be covered along with theories on the origin and evolution of biological systems. Prerequisite: CHE 105, or Math ACTE score of 26 or above plus concurrent enrollment in CHE 105, or chemistry placement test passed plus concurrent enrollment in CHE 105. IV

BIO 151 Principles of Biology Laboratory I (2)

An introductory laboratory in which biological systems are investigated at the cellular and molecular levels. Laboratory: four hours per week. Prerequisite: This course is a companion to the BIO 150 lecture course, but it need not be taken concurrently. IV

BIO 152 Principles of Biology II (3)

The second semester of an integrated one-year sequence (BIO 150 and 152) that is designed to develop understanding and appreciation for the diverse forms of plant and animal life, and their relationships to each other and to their environment. Structure and function relationships will be explored at many levels of organization: cell, tissue, organ, organism, population and community. Prerequisite: CHE 105, or Math ACTE score of 26 or above plus concurrent enrollment in CHE 105, or chemistry placement test passed plus concurrent enrollment in CHE 105. IV

BIO 153 Principles of Biology Laboratory II (2)

An introductory laboratory course in which biological systems are investigated at the organismal, population and community levels. Laboratory: four hours per week. Prerequisite: CHE 105, or Math ACTE of 26 or above plus concurrent enrollment in CHE 105, or chemistry placement test passed plus concurrent enrollment in CHE 105. IV

BIO 208 (BIO 226) Principles of Microbiology (3)

This course introduces fundamental microbiological principles and techniques. Emphasis is placed upon structural, functional, ecological and evolutionary relationships among microorganisms, principally viruses, rickettsiae bacteria, fungi and algae. Prerequisite: High school chemistry recommended. IV

BIO 209 Introductory Microbiology Laboratory (2)
Laboratory exercises in general microbiology. Laboratory: four hours per week. Prerequisite: One unit of chemistry or consent of instructor; BIO 208 should be taken concurrently. IV

BSL 110 (BIO 137) Human Anatomy and Physiology I (4)
The interrelationship of structure and function of each body system will be presented in two semesters. The first semester will include basic chemistry, cell structure, cell physiology, metabolism, tissues, and integumentary, skeletal, muscular, and nervous systems. Prerequisites: Reading, English and Mathematics assessment exam scores above the KCTCS developmental placement level or successful completion of the prescribed developmental course(s) or consent of instructor. Lecture 3 hours, laboratory: 2 hours. IV

BSL 111 (BIO 139) Human Anatomy and Physiology II (4)
The second semester continues the study of the interrelationships of organ systems, including the endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory, and urinary systems. Lecture: 3 hours, laboratory: 2 hours. Prerequisite: BSL 110. IV

BSL 214 Medical Microbiology* (4)
The characteristics of microorganisms and their relation to health and disease are studied. Lecture: 3 hours, laboratory: 3 hours. Prerequisite: BSL 110 and BSL 111, or equivalent. IV
*Formerly BSL 212

BSL 295 Independent Investigation in Biology (1-3)
The investigation of a specific topic or problem in the field of the biological sciences appropriate for students at the sophomore level. May be repeated for a maximum of six credits. Laboratory varies with credit. Prerequisite: Permission of instructor.

BSL 299 Selected Topics in Biology, Subtitle required (1-3)
Recent trends and discoveries in selected areas of biology will be presented in a seminar format. Emphasis will be placed on discussion and critical thinking. May be repeated with different subtitle for a maximum of six credits. Prerequisite: Permission of instructor.

Business Management and Marketing

Previously Business Technology

MGT 120 Personal Finance (3)
Information needed to make intelligent choices and take effective action in the management of personal resources is provided. Topics include financial planning, buying, borrowing, saving, budgeting, investing, insurance, and taxes.

MKT 155 Personal Selling (3)
The professional selling process which involves a series of interrelated activities is introduced. Emphasis is placed on planning and delivery of sales presentations. The six selling steps are examined - prospecting, qualifying, presenting, answering objections, closing, and the after-sale service. Students demonstrate effective sales techniques through simulation and role playing.

MGT 160 Introduction to Business (3)
Business careers, terminology, and the interrelationships and complexities of business are introduced and examined in this survey course.

MGT 200 Small Business Management (3)
Students are introduced to the many facets of establishing, operating and/or owning a small business. Topics include legal forms of business organization, finance, accounting, insurance, governmental regulations and assistance, economics, marketing, and management principles. Prerequisite: BE 160 or B&E 100, or consent of instructor.

MGT 256 Operations Management (3)
Concepts and methods for economical planning and control of activities required for transforming a set of inputs into specified goods or services are introduced. Emphasis is given to forecasting, decision analysis, cost analysis, design of production systems, production/marketing relationships, operations planning and control, and the importance of global competitiveness. Prerequisite: BE 283 or consent of instructor.

MGT 267 Introduction to Business Law (3)
The student is introduced to the state and federal court systems, tort and criminal law, law of contracts, partnerships, sale of goods, government regulations, bailments and negotiable instruments.

MGT 274 Human Resource Management (3)
The student is introduced to the basic methods of recruiting, selecting, training, compensating, and maintaining a productive workforce. Concepts of effective employee relations including collective bargaining, contract administration, and safety and health programs are introduced. Techniques for systematic human resource planning and development of policies consistent with government regulations are emphasized. Prerequisite: BE 283 or consent of instructor.

MKT 282 Principles of Marketing (3)
The marketing function is introduced and applied to various types of business organizations with attention to the marketing concept. Topics include the marketing mix of product, price, promotion, and distribution decisions; international marketing; and social responsibility. Prerequisite: BE 160 or B&E 100, or consent of instructor.

MGT 283 Principles of Management (3)
The functional framework of planning, organizing, leading, and controlling is utilized to introduce the management process. The interdisciplinary nature of management theory is introduced also, with the inclusion of relevant aspects of human behavior and rational decision making. Prerequisite: BE 160, B&E 100 or consent of instructor.

MGT 284 Applied Management Skills (3)
A capstone course in which management theories and techniques are applied with emphasis on the action-skills that managers need for success. Course topics include delegating, motivating employees, team-building, conflict management, coaching and managing change. Prerequisite: BE 283 or prior supervisory experience.

MGT 288 Self-Management (3)
The need for managers to be self-directed before they can manage successfully the work of others is emphasized.

Contemporary approaches to developing the behavioral skills needed to improve personal effectiveness are explored. Topics include personal planning and goal setting, time management, stress management, interpersonal and human relations skills.

MKT 290 Advertising and Promotion (3)
The principles of advertising will be introduced to the student. Topics will include economic and social aspects; advertising research; media strategy; consumer behavior; and legal issues in advertising. Prerequisite: BE 282.

MKT 291 Retail Management (3)
Retail structure, merchandising, promotions, store control, and decision making are examined in this course. Fundamental principles of store organization, consumer behavior, and customer service are addressed. Retailing trends, opportunities, and problems are included also.

MKT 293 Buying and Merchandising (3)
Decision making strategies are used to solve problems inherent in merchandise selection. Analysis of financial statements and their relationship to buying situations are included, along with cost control and the establishment of sales goals and objectives. Mark-ups, reduction planning, unit cost control, and other computations are emphasized. Lecture: 2 hours, laboratory: 2 hours. Prerequisite: BE 291.

MGT 299 Selected Topics in Management: (Topic) (1-3)
Technological developments, new business issues, and/or local management topics are presented and studied. Lecture: 1-3 hours (variable). Prerequisite: Consent of instructor.

MKT 299 Selected Topics in Marketing: (Topic) (1-3)
Technological developments, new business issues, and/or local marketing topics are presented and studied. Lecture: 1-3 (variable). Prerequisite: Consent of Instructor.

Chemistry

CHE 104 Introductory General Chemistry (3)
A study of the general principles including laws of definite and multiple proportions, stoichiometry, gases, electronic structure, chemical bonding, periodic relationships, oxidation-reduction, acid bases, chemical equilibrium and acid/bases. Intended for students interested in a one-semester course in general chemistry and recommended for students seeking careers in nursing, nutrition and allied health science fields. Not open to students who have already completed both CHE 105 and 107. Prerequisite: A working knowledge of algebra such as is acquired in two years of high school algebra, CHE 105, or MA 108R, or a composite ACTE score of 22 or above. IV

CHE 105 General College Chemistry I (3)
A study of the principles of chemistry and their application to the more important elements and their compounds. Not open to students who have already completed both CHE 104 and 106, but is open to students who have completed just CHE 104. Prerequisite: Math ACTE of 21 or above, or MA 109 (or Math placement test), or Chemistry placement test, or the community college course CHE 102R or CHM 100. IV

CHE 106 Introduction to Inorganic, Organic and Biochemistry (4)
A continuation of CHE 104. A study of selected aspects of inorganic, organic and biochemistry including the chemistry of metals and nonmetals, introduction to organic functional group

chemistry, proteins, nucleic acids and lipids. Lecture: 3 hours, laboratory: 3 hours per week. Not open to students who have already completed CHE 105 and 107. Not recommended for students seeking careers in medicine, science, dentistry, engineering, veterinary science, agricultural sciences, education, or allied fields for which the recommended sequence is CHE 105-107-115. Prerequisite: CHE 104 or the community college course CHM 100. IV

CHE 107 General College Chemistry II (3)
A continuation of CHE 105. A study of the principles of chemistry and their application to the more important elements and their compounds. Not open to students who have completed only CHE 104 but is open to students who have completed both CHE 104 and 106. Prerequisite: CHE 105 or both CHE 104 and 106. IV

CHE 115 General Chemistry Laboratory (3)
An introductory laboratory course dealing with chemical and physical properties; qualitative analysis, and an introduction to quantitative analysis. Lecture: one hour; laboratory: four hours. Prerequisite or concurrent: CHE 107. IV

CHE 230 Organic Chemistry I (3)
Fundamental principles and theories of organic chemistry. Prerequisite: CHE 107 and 115. IV

CHE 231 Organic Chemistry Laboratory I (2)
Laboratory for CHE 230 or CHE 236. Laboratory: 6 hours. Prerequisite or concurrent: CHE 230 or CHE 236. IV

CHE 232 Organic Chemistry II (3)
A continuation of CHE 230. Prerequisite: CHE 230. IV

CHE 233 Organic Chemistry Laboratory II (2)
Laboratory for CHE 232. Laboratory: 6 hours. Prerequisite: CHE 231. Prerequisite or concurrent: CHE 232. IV

CHM 101 Chemistry: A Cultural Approach (3)
Designed to introduce nonscience majors to the main concepts of chemistry, CHM 101 emphasizes the relationship between chemistry and other areas of learning. Prerequisite: MA 108R or MAH 125 or equivalent. IV

CHM 104 Introductory General Chemistry Laboratory (1)
Measurements, chemical and physical properties, qualitative analysis, and quantitative analysis are covered in this introductory general chemistry laboratory. Laboratory: 2 hours. Prerequisite: CHE 104 or concurrent. IV

CHM 105 General Chemistry Laboratory I (2)
This laboratory and recitation course deals with chemical and physical properties, qualitative analysis and quantitative analysis. Lecture: 1 hour, laboratory: 3 hours. Prerequisite: Concurrent registration or credit in CHE 105 or equivalent. IV

CHM 107 General Chemistry Laboratory II (2)
This laboratory and recitation course deals with chemical and physical properties, qualitative analysis and quantitative analysis. Lecture: 1 hour, laboratory 3 hours. Prerequisite: CHM 105 and concurrent registration or credit in CHE 107 or equivalent. IV

Civil Engineering Technology

CET 150 Civil Engineering Graphics (3)

This course provides the opportunity for the student to learn the basic theory necessary to generate and understand typical civil engineering working drawings. The student will develop graphic communication skills using current industry standard software. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: CAD 100 or ACH 185.

CET 200 Civil Engineering Materials (3)

The course will provide a practical look at current practice in the use of materials for civil engineering applications. Students will learn test procedures, design considerations, and overall evaluation methods for these materials. The course will include the study of soils, aggregates, concrete, and asphalt cement. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: ACH 160.

CET 210 Structural Analysis and Design (3)

The course will cover building structure for civil engineering technology students, including different types of building loads and their effect upon the various materials used by architects, engineers and technologists. The students will be introduced to quality construction techniques utilizing steel, concrete and reinforced concrete. Industry manuals, specifications and computer programs will be utilized to familiarize the student with current technology. Prerequisite: ACH 225.

CET 220 Intermediate Surveying (4)

The course will include the application of surveying practices for route surveying for highways, construction staking, and topographic surveys. Students will perform deed research and evaluation, convert outdated deed descriptions into current measurements, and prepare record plats. Lecture: 3 hours, laboratory: 3 hours. Prerequisite: CE 211.

CET 260 Hydrology and Drainage (3)

Students will be introduced to the fundamentals of hydrology, including hydraulics of open and closed systems, water quality and drainage. Characteristics of pressures and flows in pipes, storm water runoff, culvert and ditch flow will be studied. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: ACH 160, ACH 225, and PHY 211, or consent of instructor.

CET 280 Highway Design (3)

Students will be introduced to the fundamentals of highway design. Different components involved in designing a typical highway, including planning, surveying, mapping, and preliminary and final design will be explored using computer design software. Lecture: 2 hours, laboratory: 3 hours per week. Prerequisite: CAD 100 or ACH 185, MA 109, and CE 211.

CET 295 Independent Problems (1-4)

A problem or special project, approved by the instructor, will provide an opportunity for independent study for Civil Engineering Technology students. This course may be repeated to a maximum of six credits. Lecture: Variable. Laboratory: Variable. Prerequisite: Consent of instructor.

Classical Languages and Literature

CLA 131 Medical Terminology from Greek & Latin (3)

Latin and Greek roots, prefixes, and suffixes as found in medical terminology. Primarily for pre-medical, pre-dental, pre-nursing and pre-veterinary students, but others will be admitted for help in vocabulary building.

Communications

COM 101 Introduction to Communications (3)

An introduction to the process of communication as a critical element in human interaction and in society. Designed to enhance effective communication and informed use of the mass media. V

CMS 142 Communications Practicum (1-4)

Student works a minimum of two hours each week with the college newspaper. Independent Study.

CMS 153 Newspaper Internship (4)

Student works for a newspaper a minimum of 160 hours. Prerequisite: JOU 204. Independent Study.

COM 181 Basic Public Speaking (3)

A course designed to give the student platform experience in the fundamentals of effective speaking. II

COM 252 Introduction to Interpersonal Communication (3)

Examines basic verbal and nonverbal elements affecting communication between individuals in family, peer group, and work contexts. Course requires participation in activities designed to develop interpersonal communication skills. Topics include: strategy development, relationship and conversation management, effective listening, conflict management, defensive communication, communication anxiety, cultural/sex differences in communication style. II

COM 281 Communication in Small Groups (3)

A study of communication processes in small group situations. Topics include conflict, leadership, and decision making. Students will participate in group discussions and develop skills in analyzing group performance. II

COM 287 Persuasive Speaking (3)

A study of the processes involved in attitude change, with emphasis on the preparation and delivery of persuasive messages.

Computer -Aided Design

CAD 100 Introduction to Computer-Aided Design (3)

An emphasis will be placed on techniques of computer drafting: construction of straight and curved lines; orthographic and axonometric views and sections; dimensions, tolerances, and notes; as well as an introduction to the terminology associated with CAD. Basic computer operations involving move, copy, delete, and save are included, along with drawing manipulation involving translation, rotation, zooming, panning, and windowing. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: ME 105 or ET 102 or consent of instructor.

CAD 200 Intermediate Computer-Aided Design (3)
Students will develop familiarity with standard symbols associated with one or more application areas. Competency will be developed in advanced techniques of drafting, including complex curves, layering, and the production of three-dimensional wire models - with and without hidden lines. The students also will learn to calculate lengths and areas associated with the drawings, and will write simple programs in an appropriate high-level language to interface with the existing CAD software. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: CAD 100 or consent of instructor.

Computer & Information Technologies

Previously Computer Information Systems

CIT 103 Computer Literacy (1)
Commonly used capabilities of computers are explored with emphasis on computer basics and terminology as well as software packages. Students also gain hands-on experience with common productivity software, email, and Internet access. Not available for credit to persons who have previously satisfied the computer literacy requirement.

CIT 105 Introduction to Computing (3)
An overview of computer information systems. Concepts include terminology, computer hardware, software, and networks as well as the impact of computers on society, ethical issues in computing, and trends in information processing. Students use a microcomputer with systems software and applications software, including a word processor, electronic spreadsheet, database management system, and web page editor to process data and present useful information. Prerequisite: CIS 103 or successful completion of the CIS placement exam or consent of instructor.

CIT 110 Operating Systems Concepts (3)
A conceptual and practical overview of operating systems is covered. Topics include: user interfaces such as graphical user interfaces and command syntax interfaces; task management; file systems; network connectivity and resource sharing; and operating systems installation and maintenance. Students will be exposed to multiple operating systems. Hands-on experience with hardware and software is provided. Prerequisite: CIS 105 or consent of instructor.

CIT 120 Program Design (3)
The design of language-independent computer programs for solving common business-oriented problems is covered. Programming logic and programming structures common to all languages are emphasized. Prerequisite: CIS 105 or concurrent; and MA108R; or consent of instructor.

CIT 130 Microcomputer Applications (3)
Students use a microcomputer and current word processing, spreadsheet, database, and presentation software to solve common business problems. Basic features of each software application are covered, as well as requirements, capabilities, and limitations. Prerequisite: CIT 105 or consent of instructor.

CIT 140 JavaScript I: JavaScript and the Web (3)
In this course, students will code and execute JavaScript programs. JavaScript can be used to create dynamic behavior in elements of a Web page. Programs involve controlling the behavior of forms, buttons, and text elements, and can be used

to write special-purpose calculators or create forms whose fields have built-in error checking. Prerequisite: Admission into the CIT program, CIT 150 or consent of instructor.

CIT 141 VBScript I : VB Scriptt Fundamentals (3)
In this course, students will code VBScript programs. Students will develop both client-side and server-side Internet applications as well as standalone scripts. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 143 COBOL I (3)
Students code and execute error-free programs in the COBOL language, a level I programming language, including proper documentation. The program development will use orderly, structured methodology. Programs will involve sequential input/output, report formatting, editing of data, numeric calculations, single level control breaks, and processing tables. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 145 Perl I: Perl Fundamentals (3)
Students design, code, execute, and test scripts in the Perl programming language. Topics include Perl variables, operators, and control structures as well as pattern matching, introductory Perl objects and modules, and Perl application scripts. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 148 Visual Basic I (3)
Students design, code, test, and execute programs in this level I programming language. Topics also include menus, dialogue boxes, child window controls (push buttons, radio buttons), the graphical user interface, mouse input, fonts, and printing. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 149 Java I: Java Fundamentals (3)
Students code and execute applications in the Java programming language. Topics include standard control structures in Java applications, methods, arrays, object-oriented programming, and developing graphical user interfaces. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 150 Internet Technologies (3)
This course will provide students with a thorough study of traditional and emerging Internet technologies. Topics include Internet fundamentals, Internet applications, Internet client/server information delivery systems, and Internet client/server computing. Students will have hands-on experience with a number of Internet applications, including rudimentary programming in an Internet environment. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 160 Data Communications and Networking (4)
Data communications and networking concepts including hardware, software, and transmission media; access methods and protocols; and network configurations are included. System design considerations are addressed. Emphasis is on local area networks; students will install a simple local area network. This is the first course in the Cisco Networking Academy Curriculum. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 170 Introduction to Database Design (3)

This course introduces the standards for designing relational databases. Design criteria include first, second, and third normal forms to eliminate modification anomalies. Discussions review the capabilities of three major types of data models -hierarchical, network, and relational - as they apply to hypothetical sets of data objects. Experiences include the creation of a logical design, and translation into a physical database using the relational model. Queries will be performed using both a host language interface and Structured Query Language. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 171 SQL 1 (3)

The course is designed to provide students with an extensive introduction to database manipulation technology. The class covers the SQL and PL/SQL programming languages. Students create and maintain database objects, and store, retrieve and manipulate data. Students create PL/SQL blocks of reusable application code. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 211 Microsoft Windows Client Operating System (3)

This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows client operating systems on stand-alone computers as well as on client computers that are part of a workgroup or domain. This course will also help prepare students for exams in the Microsoft certification exam series. Prerequisites: Admission into the CIT program and CIT 160; or consent of instructor.

CIT 212 Microsoft Windows Server Operating System (3)

This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows server operating systems and to provide file, print and terminal services. This course will also help prepare students for exams in the Microsoft certification exam series. Prerequisites: Admission into the CIT program and CIT 211; or consent of instructor.

CIT 213 Netware System Administration (3)

This course is designed to provide students with the necessary knowledge and skills to perform competently in the role of network administrator or system manager. Students completing this course will be able to perform basic and fundamental network management tasks on a Novell NetWare network. Lecture: 2 hours, laboratory: 2 hours. Prerequisites: Admission into the CIT program and CIT 160, or consent of instructor.

CIT 214 Advanced Netware System Administration (3)

This course is designed to provide students with the knowledge and skills to design, configure, and administer a complex network. The course is designed to provide advanced skills and abilities to handle more challenging network situations than were presented in the basic administration course. Lecture: 2 hours, laboratory: 2 hours. Prerequisite: Admission into the CIT program and CIT 213, or consent of instructor.

CIT 217 Unix Administration (3)

This course provides students with the knowledge and skills necessary to perform post- installation and day-to-day administration tasks in a single-domain or multiple-domain Unix based network. Lecture: 2 hours, laboratory: 2 hours.

Prerequisite: Admission into the CIT program and CIT 160; or consent of instructor.

CIT 218 Advanced Unix Administration (3)

This course provides the core foundation for supporting the Unix operating system. The goal of this course is to provide support professionals with the skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Unix. Lecture: 2 hours, laboratory: 2 hours. Prerequisite: Admission into the CIT program and CIT 217, or consent of instructor.

CIT 220 Systems Analysis and Design (3)

This course introduces the student to the key concepts, skills and techniques needed to become effective systems professionals who work with others to create business-oriented computer information systems. Emphasis is placed on planning and analysis phases of the traditional system development life cycle, and the latest systems analysis modeling tools and techniques. Prerequisites: Admission into the CIT program and ENG 102 or concurrent; or consent of instructor. A Level I Programming Language recommended.

CIT 230 Advanced Microcomputer Applications (3)

Students use advanced features of current word processing, spreadsheet, database management and presentation software. Integration between the various software packages is performed and students investigate other software applications and their uses in the business environment. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 234 Advanced Spreadsheet Applications (3)

Advanced functions of a current spreadsheet software package will be covered, including data tables, scenarios, financial functions, creating and using template files, using hyperlinks, multiple worksheets and 3D formulas, creating and using command buttons and macros to automate repetitive tasks, and using data management features to sort, perform queries, and extract useful information. Emphasis will also be given to integration among various software applications. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 236 Advanced Database Applications (3)

Advanced features of a current database software package will be covered, including creating and editing custom forms and reports, creating and using macros, and creating application systems and switchboard modules. Emphasis will also be given to integration among various software applications. Prerequisite: Admission into the CIT program or consent of instructor.

CIT 243 COBOL II (3)

In this Level II Programming Language course, students code COBOL programs involving direct access data files, interactive screen design, table manipulation, multiple-level control breaks, top-down design, and modular construction. They create and execute a system of programs using structured COBOL techniques including proper documentation. Prerequisite: Admission into the CIT program, CIT 143, and MA 109, or consent of instructor.

CIT 245 Perl II: Perl and the Web (3)
A continuation of CIT 145, this Level II programming language course focuses on the use of the Perl programming language in a Web server environment. Topics will include ethics and the Web, advanced Perl programming constructs including objects and modules, Web form processing using Perl, security issues, and applications to e-commerce. Prerequisite: Admission to the CIT program, CIT 145 and CIT 150; or consent of instructor.

CIT 248 Visual Basic II (3)
Students build applications using Visual Basic, a Level II programming language. Application development is introduced with an emphasis on application design, record-handling routines, and database engine operations. Students work with objects from Microsoft Office, create ActiveX documents, and build Internet applications with these documents. Prerequisite: Admission into the CIT program and CIT 148 and MA 109, or consent of instructor.

CIT 249 Java II: Java and the Web (3)
A continuation of CIT 149, this Level II programming language course focuses on Java client/server programming for the internet. Topics will include interfacing with HyperText Markup Language (HTML) documents, applets, Java Database Connectivity (JDBC), servlets, and networking. Prerequisite: Admission into the CIT program, CIT 149 and CIT 150; or consent of instructor.

CIT 253 Data-Driven Web Technologies (3)
This course will provide students with the knowledge and skills to design, implement, and manage a database-driven web site. Topics will include the study of databases and web servers in e-commerce, transaction processing, and client-side and server-side Web scripting. Students will be involved in the creation of a database driven Web site. Prerequisite: Admission to the CIT program, CIT 150, CIT 170; or consent of instructor.

CIT 255 Internet Security and Server Administration (3)
The course provides students with an in-depth study of functions performed by web servers. Tasks performed by web administrators are discussed. Security risks unique to Internet services as well as solutions to these risks are presented. Students have hands-on experience with setting up a web server and troubleshooting web server problems. Prerequisite: Admission into the CIT program, CIT 253, CIT 212 OR CIT 218; or consent of instructor.

CIT 260 Network Hardware Installation and Troubleshooting (3)
This course is designed to provide students with the knowledge and skills necessary to design, install, configure, and troubleshoot cabling systems and equipment used to connect a local area network. Lecture: 2 hours, laboratory: 2 hours. Prerequisite: Admission into the CIT program and CIT 160, or consent of instructor.

CIT 261 Microsoft Windows Directory Services Administration (3)
This course provides students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows Directory Services. The course also focuses on implementing Group Policy and understanding the Group Policy tasks required to centrally manage users and computers. This course will also help prepare students for exams in the Microsoft certification exam series. Prerequisites: Admission

into the CIT program, CIT 212 and CIT 269; or consent of instructor.

CIT 262 Microsoft Windows Net Infrastructure (3)
This course provides students with the knowledge and skills necessary to install, configure, manage, and support a network infrastructure using a Microsoft Windows server operating system. This course will also help prepare students for exams in the Microsoft certification exam series. Prerequisites: Admission into the CIT program, CIT 212 and CIT 269; or consent of instructor.

CIT 263 Advanced Topics Microsoft Windows (1-6)
Concepts and/or skills from special areas of interest in Microsoft Windows operating systems are covered in this course. Topics vary from semester to semester at the discretion of the instructor. Lecture, lab: 1-6 hours. Prerequisites: Admission into the CIT program, CIT 212; or consent of instructor.

CIT 269 Internet Protocols (3)
This course provides students with the knowledge and skills to install, configure, manage, and troubleshoot internetworks using TCP/IP and its associated protocols. Prerequisites: Admission into the CIT program and CIT 160; or consent of instructor.

CIT 271 SQL II (3)
This course is designed to provide students with the knowledge and skills needed to write PL/SQL procedures. The procedures will incorporate SQL statements to create and manage PL/SQL program units and database triggers. Students will work in both the Procedure Builder and SQL*Plus environments. Students will use advanced features of PL/SQL to design and interface with the database and other applications. Prerequisite: Admission into the CIT program and CIT 171, or consent of instructor

CIT 280 Internship (3)
The student is provided on-the-job experience in computer information systems, requiring a minimum of 120 clock hours of appropriate experience approved by the faculty member (40 clock hours per credit). Learning contract, signed by the student, faculty member, and supervisor, is required. Course is offered on pass-fail basis only. Prerequisite: Admission into the CIT program and consent of instructor.

CIT 281 Routing and Switching (3)
This course provides students with the skills necessary to understand and apply concepts related to networking hardware. This course covers advanced TCP/IP concepts such as IP addressing and subnetting, beginning router configuration, routed and routing protocols. This is the second course in the Cisco Networking Academy Curriculum. Prerequisite: Admission into the CIT program and CIT 160, or consent of instructor.

CIT 282 Advanced Routing and Switching (3)
This course is designed to provide students with the skills necessary to understand and apply advanced networking concepts. This course covers local area network (LAN) switching, virtual local area networks (VLANs), advanced network design concepts, advanced router configuration, and advanced network management projects. This is the third course in the Cisco Networking Academy Curriculum.

Prerequisite: Admission into the CIT program, CIT 281; or consent of instructor.

CIT 283 Wide Area Network Design and Management (3)
This course is designed to provide students with the skills necessary to understand and apply advanced principles and applications in deploying networking hardware. This course covers WAN design, WAN connectivity protocols such as PPP, ISDN, and Frame Relay, as well as advanced network management projects. This is the fourth course in the Cisco Networking Academy Curriculum. Prerequisite: Admission into the CIT program, CIT 282; or consent of instructor.

CIT 290 Information Systems Design and Implementation (3)
This course enhances the student's knowledge of the key concepts, skills and techniques needed to become effective system professionals who work with others to create business-oriented computer information systems. Emphasis is placed on the project design, testing, implementation and support phases of the traditional systems development life cycles. Prerequisite: Admission into the CIT program and CIT 170 and CIT 220 and a Level I Programming Language; or consent of instructor.

CIT 292 Designing Network Solutions (3)
This capstone course covers the major responsibilities of a network systems manager. Topics include the overall planning, installation, evaluation, and maintenance of network systems components including hardware selection, vendor selection, and contract negotiations. Prerequisite: Admission into the CIT program and a Level I Network Technology Specialization sequence; or consent of instructor.

CIT 294 Seminar in Internet Technologies (3)
Students in this course will research, study and discuss current and emerging topics, issues and trends in Internet technologies. Formal class presentations as well as individual and/or group projects involving Internet technologies will be required. Prerequisite: Admission to the CIT program and CIT 253; or consent of instructor.

CIT 295 Independent Problems in Computer Information Systems (1-3)
A problem or special project, approved by the instructor, provides an independent study objective for Computer Information Systems students. This course may be repeated to a maximum of three credits hours. Prerequisite: Admission into the CIT program and consent of instructor.

CIT 299 Special Topics in CIT: (Topic) (1-3)
This course will deal with concepts and/or skills from special areas of interest in computer information systems. Topics vary from semester to semester at the discretion of the instructor. May be repeated with different topics to maximum of 6 credit hours. Lecture: 1-3 hours. Prerequisite: (variable) given when topic is identified, or consent of instructor.

CS 115 Introduction to Computer Programming (3)
This course teaches introductory skills in computer programming using an object-oriented computer programming language. There is an emphasis on both the principles and practice of computer programming. Covers principles of problem solving by computer and requires completion of a number of programming assignments.

CS 215 Introduction to Program Design, Abstraction, and Problem Solving (4)
This course teaches introductory object-oriented problem solving, design, and programming engineering. An equally balanced effort will be devoted to the three main threads in the course: concepts, programming language skills, and rudiments of object-oriented programming and software engineering. Prerequisite: CS 115.

CS 216 Introduction to Software Engineering (3)
Software engineering topics to include: life cycles, metrics, requirements specifications, design methodologies, validation and verification, testing, reliability and project planning. Implementation of large programming projects using object-oriented design techniques and software tools in a modern development environment will be stressed. Prerequisite: CS 215.

Cooperative Education

COE 199 Cooperative Education: (Associate in Applied Science Degree Program) (1-8)
Cooperative Education is a planned and evaluated work experience related to the student's educational objective for which the student receives both financial remuneration and academic credit. One credit hour is awarded for completion of 80 hours of approved work experience and for satisfactory completion of additional required activities. While the maximum amount of credit granted for Cooperative Education experience varies by curriculum, the amount may not exceed eight hours in an Associate in Applied Science Degree program. This course is available only to students enrolled in a Community College System Associate in Applied Science Degree Program which lists Cooperative Education as an approved course, completion of at least twelve credit hours in the program of study, marketable skills in the area in which the student is enrolled, and a minimum cumulative grade point average (G.P.A.) of 2.0.

Criminal Justice Previously Law Enforcement

CJ 101 Introduction to Criminal Justice (3)
Previously LEN 101
An introduction to the philosophical and historical background of law enforcement agencies, processes, purposes and functions. It includes an evaluation of law enforcement today, including current trends and career orientation. Prerequisites: None. 3 credit hours Lecture

CJ 102 Introduction to Corrections (3)
This course is an introduction to the processes, procedures and issues in modern corrections. Prerequisites: None. 3 credit hours Lecture

CJ 105 Police Supervision (3)
Previously LEN 105
This course gives students the basic understanding of the administrative and supervisory roles within a police department. Prerequisites: None. 3 credit hours Lecture

CJ 110 Principles of Asset Protection (3)
This course gives an introductory understanding to private security procedures. Prerequisites: None. 3 credit hours
Lecture

CJ 201 Introduction to Criminalistics (3)
Designed to give the student a basic knowledge of crime scene protection, collection, preservation, and identification of evidence, including proper search, dusting latent prints, casting, fingerprint classification, and use of some laboratory in crime detection and prosecution. Lecture: 3 hours. 3 credit hours
Lecture

CJ 202 Issues and Ethics in Criminal Justice (3)
This course gives an advanced understanding of the issues and problems within criminal justice. Prerequisite- sites: CJ 101. 3 credit hours
Lecture

CJ 203 Community Corrections/Probations & Parole (3)
Previously LEN 207
Community Corrections, probation, and parole and philosophy and design of various programs throughout the country are addressed. Community-based punishments are contrasted and compared to incarceration in terms of goals, costs and perceived benefits. Alternatives to incarceration are discussed in areas such as electronic monitoring and house arrest, intensive supervision, probation and shock incarceration. Special needs offenders and requirements of their supervision are also examined. Prerequisites: CJ 101 or CJ 217. 3 credit hours
Lecture

CJ 204 Criminal Investigations (3)
Previously LEN 204
Fundamentals of criminal investigation, crime scene search and recording, collection and preservation of physical evidence, scientific aids, MODUS operandi, sources of information, interviews and interrogation, follow-up, and case preparation. Prerequisites: None. 3 credit hours
Lecture.

CJ 208 Delinquency and the Juvenile Justice System (3)
Previously LEN 208
An introduction to the processes, procedures, and issues in the modern juvenile justice system. Prerequisites: None. 3 credit hours
Lecture

CJ 210 Physical Security Technology & Systems (3)
This class introduces facility security with the use of environmental design and integrated electronic technology (cameras, monitors, alarms). Prerequisites: None. 3 credit hours
Lecture

CJ 211 Liability & Legal Issues (3)
This course provides an overview of legal aspects of security. The class focuses on civil and criminal law, liability of asset protection, use of force, false imprisonment, negligent security, invasion of privacy and many other pertinent security legal issues. Prerequisites: None. 3 credit hours
Lecture

CJ 215 Police Patrol (3)
Previously LEN 104
This course gives a basic understanding of police operations and programs. Prerequisites: None. 3 credit hours
Lecture

CJ 216 Criminal Law (3)
This course is a basic overview to criminal laws. Prerequisites: None. 3 credit hours
Lecture

CJ 217 Criminal Procedures (3)
This course is an overview of criminal procedure laws. Prerequisites: None. 3 credit hours
Lecture

CJ 222 Prison & Jail Administration (3)
Correctional procedures and administration are introduced. Course includes a historical perspective and a study of future trends. Prerequisites: None. 3 credit hours
Lecture

CJ 290 Internship in Criminal Justice (3)
The Criminal Justice internship is designed to broaden students law enforcement education experience through appropriate criminal justice observation and work assignments. The experience will allow students to explore the various fields of interest in criminal justice field experience in an approved agency Prerequisites: Sophomore standing and completion of at least 12 semester hours of Criminal Justice work. 3 credit hours
Lecture

CJ 299 Selected Topics in Law Enforcement (3)
Previously LEN 299
Recent trends and investigations in selected areas of law enforcement will be presented in seminar format. This course may be repeated to a maximum of 12 units min. 1. Prerequisites: Consent of instructor. 1 - 3 credit hours
Lecture

Dental Hygiene

DHY 120 Dental Hygiene I (5)
The basic assessment and clinical skills, related theory, professional role and responsibilities of the dental hygienist as a member of the dental health team are included. Lecture: 2.5 hours, laboratory: 10 hours. Prerequisite: Completion of BSL 110 and BSL 111, both with a grade of C or better and acceptance into the Dental Hygiene Program.

DHY 121 Oral Biology I (3)
Oral histology and embryology, regional head and neck anatomy, and dental anatomy applicable to the practice of dental hygiene are included in this course. Lecture: 2 hours, laboratory: 4 hours. Prerequisite: Completion of BSL 110 and BSL 111, both with a grade of C or better and acceptance into the Dental Hygiene Program.

DHY 130 Dental Hygiene II (4)
This course is a continuation of DHY 120 which prepares the student to provide treatment that includes preventative and therapeutic procedures to promote and maintain oral health and assist the patient in achieving oral health goals. Lecture: 2 hours; laboratory: 8 hours. Prerequisite: Completion of DHY 120, DHY 121 and BSL 214 (or BIO 208), all with a grade of C or better.

DHY 131 Oral Biology II (5)
The disciplines of general pathology, oral pathology, pharmacology, and therapeutics as related to dental hygiene care are covered in this course. Lecture: 4.5 hours, laboratory: 2 hours. Prerequisite: Completion of DHY 120, DHY 121 and BSL 214 (or BIO 208), all with a grade of C or better.

DHY 135 Dental Radiology (3)

The theory and clinical practice of oral radiographic methods are presented in this course. Also included are: history and development of x-radiation; properties and uses of x-radiation; radiation hygiene; exposing, processing and mounting intraoral and extraoral radiographs; identification of radiographic anatomical landmarks; and advancements in computer imaging technology in dental radiology. Lecture: 2.5 hours, laboratory: 2 hours. Prerequisite: Completion of DHY 120, DHY 121 and BSL 214 (or BIO 208), all with a grade of C or better.

DHY 136 Periodontics for the Dental Hygienist I (2)

This course focuses on the clinical, histological and radiographic differences between healthy and unhealthy periodontal tissues. Topics to be discussed also include etiology, risk factor assessment, pathogenesis and classification of periodontal diseases. Prerequisite: Completion of DHY 120, DHY 121 and BSL 214 (or BIO 208), all with a grade of C or better.

DHY 220 Dental Hygiene III (4)

This course emphasizes the continued treatment of clinical patients. Treatment and management of dental patients with special needs are also addressed with attention to appropriate changes in dental treatment in response to a patient's medical condition. Lecture: 0 hours, laboratory: 16 hours. Prerequisite: Completion of DHY 130, DHY 131, DHY 135, DHY 136 and NFS 101, all with a grade of C or better.

DHY 222 Special Needs Patients (3)

This course focuses on the specific oral health care needs of persons with a variety of medical, disabling or mental conditions. Innovative approaches to serving populations with special oral health care needs are discussed. Special pharmacological considerations and treatment modifications are emphasized. Prerequisite: Completion of DHY 130, DHY 131, DHY 135, DHY 136 and NFS 101, all with a grade of C or better.

DHY 224 Dental Materials (2)

The physical and chemical properties of dental materials and their application are introduced. Lecture: 1.5 hours, Lab 2 hrs. Prerequisite: Completion of DHY 130, DHY 131, DHY 135 and DHY 136, all with a grade of C or better.

DHY 226 Periodontics for the Dental Hygienist II (2)

This course provides for the continuation and expansion of the content of Periodontics for the Dental Hygienist I. The role of the dental hygienist in the recognition of systematic implications as related to periodontal diseases is emphasized. Current advancements in the management of patients with periodontal disease are emphasized. Supportive periodontal therapy will be discussed and current surgical therapies will be introduced. Lecture: 1.5 hours, laboratory: 2 hours. Prerequisite: Completion of DHY 130, DHY 131, DHY 135, DHY 136 and NFS 101, all with a grade of C or better.

DHY 229 Local Anesthesia (2)

Common oral local anesthesia injection techniques and the related background information are addressed in this course. Subjects include: anatomic considerations, armamentarium, basic injection techniques, record keeping, neurophysiology, related pharmacology, patient evaluation, complications and contraindications. The pharmacology, administration and contraindications of Nitrous Oxide are also included. This

elective course satisfies the Kentucky State Dental Practice Act regarding "delegation of block and infiltration anesthesia and nitrous oxide analgesia to dental hygienists." Lecture: 1.25 hrs, laboratory: 3 hrs. Prerequisites: Completion of DHY 130, DHY 131, DHY 135 and DHY 136 all with a grade of C or better.

DHY 230 Dental Hygiene IV (4)

This course focuses on the mastery of all dental hygiene clinical skills utilized in treating patients. Lecture: 0 hours, Laboratory: 16 hours. Prerequisite: Completion of DHY 220, DHY 221, DHY 224, and DHY 226, all with a grade of C or better.

DHY 235 Principles of Practice (1)

This course covers the legal, ethical, and managerial aspects of dental hygiene practice. Prerequisite: Completion of DHY 220, DHY 222, DHY 224 and DHY 226, all with a grade of C or better.

DHY 238 Community Dental Health (4)

Basic concepts in assessing community dental health needs are introduced. Planning, implementing and evaluating dental health programs, as well as current trends and issues in preventive dental health education, are discussed. Concepts related to reading and interpreting scientific literature are also included. Students must develop and present a community dental health project and scientific tabletop presentation. Prerequisite: Completion of DHY 220, DHY 222, DHY 224 and DHY 226, all with a grade of C or better.

DHY 299 Independent Study in Dental Hygiene (1-4)

A special project or experience, approved by an instructor, provides an objective for independent study for dental hygiene technology students. This course may be repeated to a maximum of six credit hours. Lecture: variable; Laboratory: Variable. Prerequisite: Consent of instructor.

Dental Laboratory Technology**DN 101 Dental Morphology (2)**

The anatomical characteristics and dental terminology of the permanent human dentition are detailed. Other topics include dento-osseous structures, oral musculature, and the development of teeth. Waxing exercises of selected teeth are performed in the laboratory as a means of understanding tooth form and the development of manual dexterity. Lecture: 1 hr, laboratory: 3 hrs. Prerequisite: Admission into the DLT Program or consent of instructor.

DN 111 Dental Materials I (2)

The major content of this course includes an introduction to the study of dental materials including basic concepts in chemistry. Emphasis is placed on the chemical and physical properties of gypsum, resin, and wax used in dentistry. Basic manipulation of these materials is included in order to prepare the student for future use in the dental laboratory. Lecture: 2 hrs. Prerequisites: Admission into the DLT Program or consent of instructor.

DN 112 Dental Materials II (2)

This course emphasizes the metallurgy of dental alloys including the mechanism of crystallization, strain hardening and the chemical process of corrosion. Materials associated with fabricating metal prostheses are studied and include impression materials, cast alloys and wrought alloys. Hazard

and infection control procedures in the dental laboratory are presented as well as basic study of applicable physics and unit conversion. Lecture: 2hrs. Prerequisite: DN 111 or consent of instructor.

DN 121 Complete Dentures I (2)

The basic principles of complete denture prosthodontics is presented including the fundamentals of arranging and contouring artificial dentures. Identification of oral landmarks and changes that occur in the edentulous patient are discussed. Emphasis is placed on identifying the purpose and use of custom trays, baseplates and occlusion rims. Laboratory procedures include fabricating custom trays, baseplates, occlusion rims, and a complete set of dentures. Lecture: 1 hour; laboratory: 3 hours. Admission into the DLT Program.

DN 122 Complete Dentures II (2)

Advanced principles of complete denture prosthodontics are presented including balanced, monoplane and lingualized occlusion. Emphasis is also placed on the considerations in the oral cavity that effect the success of removable prosthodontic treatment. Laboratory procedures include denture repairs, selective grinding and fabricating complete dentures. Lecture: 1 hrs, laboratory: 3 hrs. Prerequisite: DN 121.

DN 131 Removable Partial Dentures I (2)

The basic principles of removable partial denture prosthodontics are presented. Emphasis is placed on the fabrication procedures and understanding of the basics of survey and design. Detailed information about the various major and minor connectors is discussed as well as learning the Kennedy Classification system. Laboratory procedures include fabricating two removable partial dentures including the attachment of artificial denture teeth. Lecture: 1 hour, laboratory: 3 hours. Admission into the DLT Program.

DN 132 Removable Partial Dentures II (2)

Advanced principles of removable partial denture prosthodontics is presented with emphasis on design principles. Detailed information about direct retainers, indirect retainers, rests and bases is discussed. Laboratory procedures involve fabricating three removable partial dentures including the attachment of artificial denture teeth. Lecture: 1 hour, laboratory: 3 hours. Prerequisite: DN 131.

DN 142 Occlusion (2)

Theories of occlusion; interarch and intraarch relationships; the temporomandibular joint and its movements; articulators, interocclusal records, and face-bow transfer; occlusal schemes; and restorative considerations in occlusal therapy are discussed and/or put to practical application in this course. Lecture: 1 hr, laboratory: 3 hrs. Prerequisite: Admission into the Dental Laboratory Program.

DN 151 Fixed Prosthodontics I (2)

The basic principles of crown and bridge fixed prosthodontics are presented including the fabrication of both single and multi-unit full metal restorations. Emphasis is placed on preparing and evaluating working casts, waxing anatomical tooth patterns, spruing, investing, burnout, casting, and polishing. Additional laboratory procedures include fabricating restorations on various types of articulators, developing functional occlusion, and soldering. Lecture: 1 hour; laboratory: 3 hours. Admission into the DLT Program.

DN 152 Fixed Prosthodontics II (2)

The basic principles of metal ceramic fixed prosthodontics are presented including the fabrication of both single and multi-unit restorations. Emphasis is placed on esthetic restorations, preparing and evaluating working casts, waxing substructure patterns, spruing, investing, burnout, casting, and polishing. Additional laboratory procedures include applying opaque, dentin, and enamel ceramic powders and contouring fired porcelain. Lecture: 1 hour; laboratory: 3 hours. Prerequisite: DN 151.

DN 261 Applied Laboratory Techniques (8)

Students fabricate a more complex variety of dental prostheses in four specialty areas: complete denture prosthodontics, removable partial denture prosthodontics, dental ceramics, and fixed prosthodontics (crown and bridge). Curriculum content includes reinforcement of techniques and procedures that are taught in the 100 level DN courses. Emphasis will be placed on management of laboratory time and project load to improve the quantity and quality of laboratory work. Lecture: 2 hours, laboratory: 18 hours. Prerequisite: DN 122, DN 132, DN 142, and DN 152.

DN 262 Advanced Specialty Laboratory Techniques (8)

Students fabricate dental prostheses at a more advanced level in at least one of the following specialty areas: complete denture prosthodontics, dental ceramics, fixed prosthodontics (crown and bridge), orthodontic appliances, or removable partial denture prosthodontics. Emphasis is placed on incorporating productivity, flow time, and quality requirements. Laboratory experience is provided in the classroom or selected externships in local dental laboratories. Lecture: 2 hours, laboratory: 18 hours. Prerequisite: DN 261.

DN 281 Orthodontic Laboratory Techniques (2)

Fixed, removable, active and passive orthodontic appliances are studied in this course. Principles of tooth movement, classifications of malocclusion, orthodontic materials and their manipulation, orthodontic study models, and functional appliances will be discussed. Lecture: 1 hour, laboratory: 3 hours. Prerequisite: DN 122.

DN 291 Dental Laboratory Management, History and Ethics (2)

Dental laboratory management, business plans, financial planning, history of dentistry and dental technology, and those ethics and laws which are specific to dentistry will be presented. Lecture: 2 hours. Prerequisite: Completion of all 100 level DN courses.

Early Childhood Education

(Interdisciplinary Early Childhood Education – IECE- For more information please see the KCTCS catalog, and www.bluegrass.kctcs.edu/LCC/IECE/ECtoIECE_faq.html)

EC 110 Children's Literature (3)

Diverse types of traditional and modern children's literature will be introduced. Methods for evaluating literature, setting up the environment, and using books with children will also be explored. Mandatory field experiences will require observations and implementation of literature-based activities.

EC 120 Introduction to Early Childhood Education (3)
An introduction to the history of early childhood education will be presented, as well as an overview of current laws and best practices. Discussion will include issues impacting families and current research in early childhood education.

EC 130 Observing Young Children (3)
Techniques of observation, documentation, and assessment procedures for young children will be discussed, including issues of ethical and legal responsibilities for educators. An overview of observation forms, checklists, screenings, and standardized tests will be given. Sixteen hours of field experience will be required for observations and students will participate in the screening of a child who is between the ages of newborn and eight years old. Prerequisite: FAM 255 or concurrent; or consent of instructor.

EC 170 Learning Activities and Materials (3)
An overview of creativity, artistic development and the value of hands-on learning in young children will be presented. Students will investigate techniques for exploration through music and movement, literacy and language, mathematics, natural sciences and social sciences in an early childhood classroom for children ages birth through eight years. Anti-bias teaching strategies, methods for evaluating activities, and the environment will be discussed. Mandatory field experiences will require observations and assisting with the implementation of classroom learning activities. Lecture: 2 hours, laboratory: 3 hours. Prerequisite: FAM 255 and EC 120, or concurrent; or consent of instructor.

EC 200 Curriculum Development for Early Childhood Education (4)
Strategies for designing the environment and the curriculum will be discussed. Emphasis will be placed upon planning and implementation techniques for individual and group instruction. Students will evaluate learning environments and experiences for children from birth through eight years. Methods to promote family participation in a child's education also will be explored. Lecture: 3 hours, Laboratory: 4 hours. Prerequisite: FAM 255, EC 120 and EC 170, or consent of instructor.

EC 220 Children with Exceptionalities (3)
An overview of various types of exceptionalities will be given. Discussion will include issues of professional collaboration and techniques for working with parents. Principles of instruction, methods, and materials, and technology and equipment used in adapting programs to accommodate the learning needs of exceptional children will be emphasized. Prerequisite: EC 120 or consent of instructor.

EC 260 Practicum in Early Childhood Education (3)
Students will, under supervision, develop practical skills in teaching children from birth through eight years of age or complete a field experience in the following area(s): administration, home visitation or resource/referral. Emphasis will be placed on the preparation, implementation and evaluation of activities based on specific needs of the program. Student and instructor observations and analysis of performance occurring in the program day will be included. Prerequisites: completion of EC 120, EC 130, EC 170, EC 200, and EC 220 or concurrent; or consent of program coordinator. Lecture: 1 hour, laboratory: 10 hours

EC 299 Special Topics in Early Childhood Education (1-3)
This course will focus on an in-depth study of a selected topic in early childhood education. Topics may include, but are not limited to school age care, family child care and home visiting. The course may be repeated to a maximum of six credits under different subtitles. Prerequisite: (variable) given when topic is identified, or consent of instructor.

Economics

ECO 101 Contemporary Economic Issues (3)
A basic course in the analysis of contemporary economic issues with emphasis on current economic topics such as inflation, poverty and affluence, urban congestion, and environmental pollution. (Credit will not be given for this course to students who have received prior credit in ECO 201 and/or 202, and/or ECO 260 and/or 261.) V

ECO 201 Principles of Economics I (3)
The study of the allocation of scarce resources from the viewpoint of individual economic units. Topics include household and firm behavior, competitive pricing of goods and resources, and monopoly power. (Credit will not be given for this course to students who have received credit in ECO 261.) V

ECO 202 Principles of Economics II (3)
A study of how society's needs are satisfied with the limited resources available. Topics include contemporary issues such as inflation, unemployment, economic growth, international dependencies, and how public policy deals with them. (Credit will not be given for this course to students who have received credit in ECO 260.) Prerequisite: ECO 201 or equivalent. V

Educational and Counseling Psychology

EDP 202 Human Development and Learning (3)
Theories and concepts of human development, learning, and motivation are presented and applied to interpreting and explaining human behavior and interaction in relation to teaching across the developmental span from early childhood to adulthood. A field experience in a school or other educational agency is a required and basic part of the course. Prerequisite: PSY 100.

EDP 203 Teaching Exceptional Learners in Regular Classrooms (3)
An introduction to the characteristics and instructional needs of exceptional learners is presented with an overview of principles, procedures methods, and material for adapting education program to accommodate the integration of exceptional children in regular classrooms, when appropriate. A field experience in a school or other educational agency is a required and basic part of the course. Lecture: 3 hours, laboratory: 2 hours for a maximum of six weeks. Prerequisite: Successful completion of EDP 202 with an earned grade of C or higher.

Electrical Engineering Technology

ETE 108 Practical Electricity (2)
Basic concepts of electricity, electronic components, and the electrical profession will be covered in this course. Topics will include the basic electrical properties, using meters and oscilloscopes, building prototype circuits, soldering, and the basics of managing an electrical project. Lecture: 2hrs, laboratory: 2 hrs.

ETE 110 Electric Circuits I (4)
Basic DC and AC circuits, including circuit analysis techniques, are covered in this course. Design, construction and troubleshooting of simple DC and AC circuits emphasized in laboratory exercises. Lecture: 3 hours, laboratory: 2 hours. Prerequisites or concurrent: ETE/ET 108 and MA 109 or MA 110 or consent of instructor.

ETE 111 Electric Circuits II (4)
Alternating Current (AC) and Direct Current (DC) circuits are covered in greater depth. Emphasis is on impedance, reactance, power and electrical energy, electrical measurement instruments, and circuit analysis. Lecture, 3 hours; laboratory, 2 hours. Prerequisite: ETE/ET 110 or consent of instructor; prerequisite or concur: MA 110 or MA 112

ETE 112 Digital Logic Circuits (4)
Logic methods are introduced. Topics include: Boolean algebra, combinational logic theory, sequential circuits, number systems and codes, small and medium scale integrated circuits, logic families, design and troubleshooting of digital logic circuits, and interfacing techniques. Lecture: 3 hours, laboratory: 2 hours. Prerequisite: Consent of instructor.

ETE 134 Computer Hardware Maintenance (3)
The maintenance of computer workstation hardware, including set-up of workstation for network and Internet access is presented. Internal addressing, architecture, interrupts, complete PC construction and basic troubleshooting are focal points. Lecture: 2 hours, Laboratory: 2 hours. Prerequisite or concurrent: CIS 110 or consent of instructor.

ETE 241 Electronics I (4)
Semi-conductor devices are studied in this course. Emphasis is on design, construction and troubleshooting of diode, thyristor and transistor circuits, amplifiers, and power supplies. Lecture: 3 hours, laboratory: 2 hours. Prerequisite or concurrent: ETE/ET 110, or consent of instructor.

ETE 250 Programmable Logic Controllers (4)
Programmable Logic Controllers are studied with emphasis on the function and use of PLCs in an industrial environment. Lecture: 3 hours, laboratory: 2 hours. Prerequisite: ETE/ET 112 or consent of instructor.

ETE 253 Industrial Control Electronics (4)
This course covers solid state elements of industrial control including Triacs, SCRs, triggering devices, computer control issues, photo-electronics, industrial applications of electronics and other control devices. Lecture: 3 hours. Laboratory: 2 hours. Prerequisites: ETE/ET 241 or consent of instructor.

ETE 256 Microprocessor Fundamentals (4)
Emphasis is placed on the architecture of microprocessor systems, practical application of microprocessor technology,

and troubleshooting techniques. Analysis of the principles and techniques used in microprocessor controlled electronic systems is also covered. Lecture: 3 hours, laboratory: 2hours. Prerequisite: ETE/ET 112 or consent of instructor.

ETE 262 Measurement and Instrumentation (4)
Principles and techniques of measurement are taught in this course. Emphasis is on collection, interpretation and presentation of data; error analysis; capabilities and limitations of standard measurement instruments; and instrumentation in process control. Lecture: 3 hours, laboratory: 2hours. Prerequisite: ETE/ET 111 or consent of instructor.

ETE 290 Selected Topics in Engineering Technology: (Topic) (1-4)
Selected topics in engineering technology, due to rapidly changing technology or in response to local needs, will be offered in this course. Topics may vary from semester to semester at the discretion of the instructor. Course may be repeated with different topics to a maximum of eight credit hours. Lecture: 1-4 hours (variable); laboratory: 0-3 hours (variable). Prerequisite: Consent of instructor.

ETE 295 Independent Problems (1-4)
A problem or special project, approved by instructor, which provides an objective for independent study for electrical engineering technology students. This course may be repeated four times or to a maximum of 6 credit hours. Lecture: variable, laboratory: variable. Prerequisite: Consent of instructor.

English

ENC 090 Foundations of College Writing I (3)
An introduction to composition for students needing basic writing instruction and a comprehensive review of mechanics and grammar as these apply to their own writing. This course stresses clarity, organization, development, and correctness in writing with an emphasis on paragraph-length assignments. Students will be recommended to this course based on the placement examination.

ENC 091 Foundations of College Writing II (3)
Designed for students with some writing experience, this course includes instruction in the following: the writing process, organization, multiparagraph writings, editorial improvement, and critical reading. An introduction to research and documentation is also included. Students will be recommended to this course based on the placement examination.

ENC 092 Writing Laboratory (1)
The writing laboratory may supplement the concurrent composition course. It is designed to provide individual assistance in meeting students' specific writing needs. This course can be repeated with each writing course taken. Pass/Fail only.

ENG 101 Writing I (3)
A course in writing emphasizing argument. Instruction and practice in reading critically, thinking logically, responding to texts, developing research skills, writing substantial essays through systematic revision, addressing specific audiences, expressing ideas in standard and correct English. Includes

grammar and mechanics review. Notes: (a) Credit not available by special examination; (b) ENG 101 and ENG 102 may not be taken concurrently. I

ENG 102 Writing II (3)

Argumentative writing. Emphasis on development of a fluent, precise, and versatile prose style. Continued instruction and practice in reading critically, thinking logically, responding to texts, developing research skills, writing substantial essays through systematic revision, addressing specific audiences, expressing ideas in standard and correct English. Prerequisite: ENG 101 or equivalent. Notes: (a) Credit not available by special examination; (b) ENG 101 and ENG 102 may not be taken concurrently. I

ENG 203 Business Writing (3)

Instruction and experience in writing for business, industry, and government. Emphasis on clarity, conciseness, and effectiveness in preparing letters, memos, and reports for specific audiences. Prerequisite: Completion of University Writing requirement.

ENG 207 Beginning Workshop in Imaginative Writing (Subtitle required) (3)

A beginning course in the craft of writing, teaching students how to read critically and how to revise work in progress. The students provide an audience for each other's work. Exercises involve practice in aspects of craft and promote experimentation with different forms, subjects, and approaches; outside reading provides models and inspiration. May be repeated under different subtitle to a maximum of six credits. Prerequisite: Consent of instructor.

English 230 Introduction to Literature (3)

An introduction to close reading and argumentative writing about literature, in relation to a significant theme. The course involves studying selected texts revolving around a single theme, learning how to relate texts to contexts, to read closely and use basic literary terms and concepts. Attention will be paid to student writing, particularly to devising a thesis, crafting an argument, and learning how to use supporting evidence. VI

ENG 231 Literature and Genre (3)

A course exploring one or two different literary forms or genres, i.e. the formal categories into which literary works are placed. Students will explore the conventions of each genre and their related sub-genres. Attention will be paid to student writing. VI

ENG 232 Literature and Place (3)

A course exploring a number of selected literary texts, with special attention to the construction of personal, ethnic, racial, or national identity. The course may consider how race, class, sexuality, and/or nationality influence representations of experience. Attention will be paid to student writing. VI

ENG 233 Literature and Identities (3)

A course exploring a number of selected literary texts, with special attention to the construction of personal, ethnic, racial, or national identity. The course may consider how race, class, sexuality, and/or nationality influence representations of experience. Attention will be paid to student writing.

ENG 234 Introduction to Women's Literature (3)

This course will introduce students to a sampling of the rich body of women's writing, focusing on some important issues and representative examples. Students will read canonical and non-canonical works, discuss continuities and differences among women writers, and master some of the basic concepts of gender studies. Attention will be paid to student writing. VI

ENG 261 Survey of Western Literature from the Greeks through the Renaissance (3)

A study of works by major Western authors from the Bible and ancient Greek literature through the Renaissance. Note: ENG 261 fulfills no requirement of the English major. VI

ENG 262 Survey of Western Literature from 1660 to the Present (3)

A study of works by major Western authors from mid-17th century to the present. Note: ENG 262 fulfills no requirements of the English major. VI

ENG 264 Major Black Writers (3)

A cross-cultural and historical approach to written and oral works by major Black authors of Africa, the Caribbean and the United States. The course includes writers such as Chinua Achebe (Africa), Wilson Harris (Caribbean), and Toni Morrison (USA). (Same as AAS 264.) VI

ENG 281 Introduction to Film (3)

An introduction to the study of the movies as a narrative art and a cultural document. Viewing of films outside of class is required. May not be taken concurrently with ENG 380. VI

English as a Second Language

ESL 010 Introduction to Reading and Vocabulary (4)

High-beginning level students will improve fundamental reading skills and expand vocabulary as they interact with level-appropriate texts. Students will be recommended to this course based on the ESL placement examination.

ESL 011 Beginning Listening and Speaking (4)

High-beginning level students will improve the ability to speak and understand English in simple everyday and academic situations. The course will provide practice in pronunciation and basic oral communication functions. Beginning academic listening and speaking skills will also be covered. Students will be recommended to this course based on the ESL placement examination.

ESL 012 Intermediate Listening and Speaking (4)

Low-intermediate level ESL students will improve comprehension and communication in English on a variety of everyday topics and in the academic setting. Students will develop and practice techniques for greater composure and confidence in oral expression. Practice will also be provided in pronunciation and intonation. Students will be recommended to this course based on the ESL placement examination or through completion of ESL 011.

ESL 013 Advanced Listening and Speaking (4)

High-intermediate level ESL students will improve comprehension and communication in both social and academic settings. Instruction will include improving listening skills for academic note taking and small group discussion. Students will be expected to lead and share in class discussions

based on reading and authentic listening materials. Student will also present orally in front of the class. Students will be recommended to this course based on the ESL placement examination or through completion of ESL 012.

ESL 020 Reading Improvement and Vocabulary Development for Low-Intermediate Non-Native English Speakers (4)

Low-intermediate level students will review fundamental reading skills, learn and practice higher order reading skills, expand vocabulary and increase reading efficiency as they interact with level-appropriate texts. Prerequisites: placement test.

ESL 030 College Reading and Vocabulary Development for High-Intermediate Non-Native English Speakers (4)

High-intermediate level ESL students will master fundamental reading skills, improve critical reading, and further vocabulary development. Students will be introduced to a variety of genres, such as newspaper articles and essays, poems, short stories, charts, graphs and college-level content textbooks. Through the selected readings, this course will foster cultural awareness, comprehension, and interaction. The readings and activities introduced in the course will allow students to engage in meaningful dialogue, and in the process, refine their English skills. Prerequisites: ESL 020 or placement test.

ESL 090 Beginning Writing (4)

High-beginning level ESL students will learn composition skills by receiving instruction in the following: the writing process, organization, sentence development, paragraph writing, and editing. Basic instruction in grammar provided. Students will be recommended to this course based on the ESL placement examination.

ESL 091 Intermediate Writing for Non-Native English Speakers (4)

Low-intermediate level ESL students will enhance their composition skills by receiving instruction in the following: the writing process, organization, multi-paragraph writings, editing, and critical reading. Basic instruction in grammar provided. Prerequisite: placement test.

ESL 092 Advanced Writing for Non-Native English Speakers (4)

ESL 092 is designed to help students prepare for ENG 101. High-intermediate level ESL students continue to work on the writing process, editorial improvement, and critical reading. Students will be introduced to documenting sources. Grammar instruction includes advanced grammatical points. Prerequisites: ESL 091 or placement test.

Environmental Science Technology

EST 150 Introductory Ecology (4)

This course introduces the students to the basic concepts in ecology and application of those concepts to current environmental issues. Topics include: the relationships between organisms and the environment; factors that influence the relationships between organisms and the environment; factors that influence distribution and abundance of organisms; population structure and regulation; energy flow, nutrient cycling, and community development, structure, and response to disturbance. A weekly 2 hour laboratory will provide field

and laboratory experiences for the students. Lecture: 3 hours, laboratory: 2 hours. Prerequisites: BIO 103 and BIO 111 or equivalent. IV

EST 160 Hydrological Geology (3)

This course provides an introduction to geology and hydrology with an emphasis on understanding natural processes and the effects of human activities. Major topics covered include: plate tectonics; formation and classification of rocks and minerals; the processes affecting the hydrologic cycle; soil formation and classification; subsurface geology and groundwater movement; stream formation and flow; floods; and human impacts to stream hydrology and morphology. IV

EST 170 Environmental Sampling Laboratory (2)

A laboratory course which provides the fundamentals in evaluating and designing sampling approaches for different situations and different media. The course will provide students with field experience in sampling soil, surface water, groundwater, and benthic invertebrates. Laboratory: 4 hours. Prerequisite: EST 150 or consent of instructor.

EST 220 Pollution of Aquatic Ecosystems (3)

This course examines freshwater ecosystems and typical aquatic pollutants. Discussion topics focus on the sources, transport, fate, and effects of common pollutants such as domestic wastewater, metals, acidity, and pesticides. Methods to minimize or eliminate the sources and effects of pollutants are also explored. Prerequisite or concurrent: EST 150, EST 160, CHE 105, and CHM 105 or consent of instructor.

EST 225 Freshwater Invertebrates (3)

An overview of the morphology, life history and ecology of freshwater invertebrates and their habitats as well as their importance and role in stream protection and restoration. Students will learn how to collect, preserve and identify freshwater invertebrates. Students will learn how to calculate and analyze biometrics used to infer stream quality. Prerequisite: EST 150.

EST 230 Aquatic Chemistry Laboratory (2)

This course provides focused study on the chemistry of water. The course will provide students with laboratory experience in analyzing surface, ground, and drinking waters for a variety of chemical constituents. Laboratory: 4 hours. Prerequisite: CHE 105, CHM 105, and prerequisite or concurrent EST 220.

EST 240 Sources and Effects of Air Pollution (4)

This course provides an introduction to the study of ambient and indoor air pollution with an emphasis on sources, dispersion, and health and welfare effects of the major pollutants. Both regulatory and engineering controls of stationary and mobile sources are explored. A laboratory provides experience with sampling and analysis of air pollutants. Lecture: 3 hours, laboratory: 2 hours. Prerequisite: EST 150 and CIS 130, or equivalent, or consent of instructor.

EST 250 Solid and Hazardous Waste Management (3)

This course examines methods of managing solid and hazardous waste, with an emphasis on pollution prevention. Topics covered include relevant legislation, recycling, incineration, landfill operations, management of radioactive waste, remediation of waste sites and site worker health and

safety. Prerequisite: EST 150 and EST 160, or consent of instructor.

EST 260 Environmental Analysis Laboratory (2)

This course provides an introduction to the fundamentals of analyzing environmental media. The course will provide students with laboratory experience in analyzing soil, surface water, groundwater, air and microbial samples. Laboratory: 4 hours. Prerequisite: CHE 105, CHM 105 and prerequisite or concurrent EST 170.

EST 270 Environmental Law and Regulation (3)

This course is structured to provide the student with a basic understanding of major current federal and state environmental legislation and regulation with an emphasis on those portions that affect the regulated community. The course will also include an examination of the role of common law and the branches of government in environmental protection. Prerequisite or concurrent: EST 220, EST 240, and EST 250 or consent of instructor.

EST 280 Environmental Trends Seminar (1)

This course provides an examination of current approaches used to address a variety of environmental problems. Students will hear and critique presentations from professionals in the environmental field. Students will also research and give a presentation on a specific method to minimize or eliminate a current environmental problem. Prerequisites or concurrent: EST 160, EST 150, COM 181 or COM 252, EST 170, EST 220, EST 260, and EST 250 or consent of instructor.

EST 299 Selected Topics in Environmental Science Technology: (Topic) (1-3)

A special project or experience in Environmental Science will be selected to enhance core material in the Environmental Science Technology program. It provides the student an opportunity for independent study or specialized instruction as approved by an instructor. This course may be repeated to a maximum of 6 hours. Prerequisite: Consent of instructor.

Equine Business Management

EQM 100 Introduction to Equine Studies (3)

The intent of this course is to give students a general overview and basic understanding of the horse, its care and management. Course topics include identification, anatomy, health, nutrition, facility and equipment management. Lecture: 2 hours laboratory: 2 hours.

EQM 120 Introduction to Commercial Breeding Practices (4)

The intent of this course is to introduce prospective horse farm personnel to the breeding farm environment. Numerous topics will be discussed that relate to commercial breeding farm management and the necessary record keeping requirements. Lecture: 3 hours; laboratory: 2 hours. Prerequisite: EQM 100 or consent of instructor.

EQM 140 Equine Business Management I (2)

Course in equine management that serves to introduce the student to private and commercial horse farm operations, economic trends in the horse industry, international marketplace, capital, credit and risk associated with the equine industry. Prerequisite: EQM 100 and BE 160, or consent of instructor.

EQM 240 Equine Business Management II (2)

This course is a continuation of Equine Business Management I. Topics of discussion include types of farm ownership, structure of the horse farm as a business, and evaluation of farm financial performance through production levels, employee management, tax planning, bloodstock value, cash flow and budgeting. Prerequisite: EQM 140 and concurrent enrollment in or successful completion of ACC 201 and ECO 201, or consent of instructor.

EQM 242 Equine Law (3)

This course explores the value of legal documents as they relate to commercial and recreational horse/horse farm owners. Topics discussed include review of current legislation governing horse activities, types of legal contracts, liability issues, and security interests. Prerequisite: EQM 100 and BE 267, or consent of instructor.

EQM 246 Current Trends in the Equine Industry (1)

Seminar course in the horse industry designed to provide students with the opportunity to investigate, evaluate and debate key issues confronting horse owners and horse industry participants. Students are encouraged to analyze controversial circumstances in the equine industry and provide insight and logical conclusion. Seminar topics may include such issues as equine adoption, slaughter, transport, medications, account waging, and public image. Prerequisite: EQM 242 or consent of instructor.

EQM 250 Equine Practicum (3)

A supervised, field-based learning experience in the equine industry, including observation and proactive participation in affiliated environments. Students are required to analyze their experiences throughout the semester to develop career objectives and strong interpersonal, communication and leadership skills. Laboratory: 12 hours. Prerequisite: EQM 240, EQM 242, and concurrent enrollment in or successful completion of EQM 246.

Experiential Education

EX 196 Experiential Education (1-6)

Experiential Education is a planned and evaluated work experience for which the student receives academic credit and may or may not receive financial remuneration. The work experience may be related to the student's major or exploratory in nature. One credit will be awarded for each 40 hours of completed work experience. The course may be repeated for a maximum of 6 credits and is available on a pass/fail basis only. This course is open to students in programs other than the Associate in Applied Science majors plus those exploring alternate career paths or making special requests in addition to transfer, non-degree, and pre-baccalaureate students. Prerequisite: Consent of instructor and a completed learning agreement that has been signed by the student, the instructor, and the coordinator.

Family Studies

FAM 252 Introduction to Family Science (3)
Introduction to the scientific study of the family. Topics covered will include the important theoretical frameworks in family science, historical trends in marriage and family life, gender role theory, family life cycle theory, parenthood, communication, economics of family life, conflict, divorce, step-families and step-parenting, family strengths. Students will analyze contemporary family issues and take informed, written positions on those issues. V

FAM 253 Human Sexuality: Development, Behavior and Attitudes (3)
Study of human sexuality, including the process of gender differentiation, sexual response patterns, sexual behavior and attitudes. Prerequisite: 3 hours in social or behavioral sciences. V

FAM 255 Child Development (3)
An overview of the various aspects of development (physical, social, emotional, intellectual) in the social context for children prenatally through adolescence. Course will emphasize techniques of directed observation. Lecture: 3 hours, laboratory: 1 hour.

FAM 256 Guidance Strategies for Working with Young Children (3)
Examination of effective guidance strategies for use with young children in an early childhood setting; modifications of experiences for age level, ability, group and individual needs. Application and evaluation of guidance skills in laboratory experience. Lecture: 2 hours, laboratory: 2 hours. Prerequisite: PSY 223 (or FAM 254) or FAM 255.

French

FR 101 Elementary French (4)
The study of basic French through grammar, reading and oral practice. VI

FR 102 Elementary French (4)
A continuation of FR 101. The study of basic French through grammar, reading and oral practice. Prerequisite: FR 101. VI

Geographic Information Systems

GIS 110 Spatial Data Analysis and Map Interpretation (3)
This course is an introduction to the development and spatial interpretation of data so that it may be prepared for statistical analysis on a two or three-dimensional surface. The course will also introduce remote sensing techniques, Global Positioning Systems, the interpretation of aerial photography for environmental, commercial and/or demographic purposes, and the application of Geographic Information Systems in both the public and private sector. Students will receive a cursory introduction to a current software package and will have the opportunity to complete basic projects using that software. Lecture: 2 hours, lab: 1 hour.

GIS 120 Introduction to Geographic Information Systems (3)
This course, a continuation of GIS 110, will introduce the fundamentals of Geographic Information Systems. The course will cover the basic operating systems of a current GIS

software package including the use of graphic user interface, common theme operations, importation of a foreign database, introductory scripts and layouts, manipulation of tables, the creation and editing of shapefiles, and geocoding. This course is designed for those with little to no experience with GIS who are exploring career opportunities. Prerequisite: GIS 110.

GIS 210 Advanced Topics in GIS (3)
This course will explore advanced topics in Geographic Information Systems. The course will teach students how to import foreign databases into a GIS, advanced theme operations, extensive use with scripts, introductory programming with both Avenue and Visual Basic for GIS, and how to incorporate remotely sensed imagery into GIS. Prerequisite: GIS 120.

Geography

GEO 130 Earth's Physical Environment (3)
A course exploring the fundamental characteristics of earth's physical environment. Emphasis is placed on identifying interrelationships between atmospheric processes involving energy, pressure, and moisture, weather and climate, and terrestrial processes of vegetative biomes, soils, and landscape formation and change. Fulfills elementary certification requirements in education.

GEO 152 Regional Geography of the World (3)
A geographical study of the world by regions with a focus on the world's physical and human landscapes. Emphasis on how regions are connected to each other. Also how each region is affected by, and affects, global issues such as economic restructuring, food production, and environmental change, will be examined. Fulfills elementary certification requirement for Education and USP disciplinary social science requirement. V

GEO 160 Lands & Peoples of the Non-Western World (3)
The geographic study of the conceptual and historical definition of regions of the world as "Non-Western." Global patterns of social, cultural, economic, and political difference between the West and Non-West as well as the processes key to the making of the Non-Western world (such as colonialism and imperialism) are discussed. In addition, selected current issues of significance to peoples in the Non-Western world, such as sustainable development, environment, human rights, and gender relations, are considered. Fulfills USP Cross-Cultural requirement. V

GEO 172 Human Geography (3)
A study of the spatial distributions of significant elements of human occupation of the earth's surface, including basic concepts of diffusion, population, migration, settlement forms, land utilization, impact of technology on human occupation of the earth. (Fulfills elementary certification requirement for Education and University Studies requirement.) V

GEO 210 Pollution, Hazards, and Environmental Management (3)
An introduction to environmental systems such as weather and climate, vegetation, land forms and soils, and how the quality of these systems is modified by human use. Resource issues discussed include: atmospheric pollution and global warming; groundwater, flooding, and flood plain management; volcanic activity and earthquakes; and biospheric processes

associated with deforestation and lake eutrophication. Case studies based upon important environmental problems illustrate how human activity and environmental systems interrelate. Offered at LCC in the Spring Semester.

GEO 222 Cities of the World (3)

Focuses on the historical development, contemporary character, and alternative futures of cities in both developing and developed regions. The spatial, social, economic, and political processes of major world cities are studied and contemporary urban problems are discussed. Offered at LCC on even years in the Fall Semester. V

GEO 240 Geography and Gender (3)

Adopts a geographic approach to the study of gender relations. The role of space and place in shaping the diversity of gender relations throughout the world will be considered. Through case studies the importance of gender relations in understanding a variety of issues will be stressed. Such issues include: the design and use of urban and rural environments; "Third World" development; regional economic restructuring; changing political geographies; and migration. Offered at LCC on odd years in the Fall Semester. V

GEO 260 Third World Development (3)

This course focuses on characteristics of developing countries as well as solution strategies to development problems and conditions. Cultural distinctions, traditions, and institutions are recognized as keys to development condition and progress. Selected theories show how cultural variations in language and religion may be used to explain development. Numerous case studies are discussed, including Indonesia, China, India, Brazil, Kenya and Zimbabwe.

Geology

GLY 130 Dinosaurs and Disasters (3)

More than 65 million years ago, dinosaurs and their kin dominated the earth and relegated our mammalian ancestors to positions of unimportance for nearly 155 million years. This course traces the history of dinosaurs from early vertebrate ancestors to their final extinction and surveys the evolutionary, paleogeographic, environmental, and possible extraterrestrial causes for the rise to dominance and sudden fall. Along the way and afterwards, dinosaur interactions with other organisms and the environment, as well as their indirect influence on mammals, particularly on the much later evolution of humankind, will be examined. IV

GLY 220 Principles of Physical Geology (4)

How the Earth Works: an integrated course in physical geology, covering the physical, chemical, and biological processes that combine to produce geological processes. Attention is focused on plate tectonics, earth surface processes, and properties and formation of earth materials. Laboratory exercises emphasize identification and interpretation of geologic materials and maps. Lecture/Discussion, 3 hours per week; laboratory: 3 hours per week. IV

German

GER 101 Basic German (4)

Fundamentals of German with development of the four basic skills: reading, writing, listening, and speaking. VI

GER 102 Basic German (4)

Continuation of German 101. Prerequisite: GER 101, or one year of high school German, or equivalent. VI

Health Science Education

HSE 101 Introduction to the Health Sciences (1)

Limited to students contemplating a career in one of the health sciences.

History

HIS 104 A History of Europe Through the Mid-Seventeenth Century (3)

This course is a survey of the development of European politics, society, and culture through the Age of Religious Conflict. VI

HIS 105 A History of Europe From the Mid-Seventeenth Century to the Present (3)

This course is a survey of the development of European politics, society, and culture from the Age of Absolutism to the present. It is a continuation of HIS 104. VI

HIS 106 Western Culture: Science and Technology I (3)

Presents the interactions of science and technology with the social and cultural development of Western civilization; the values in scientific inquiry as compared with other kinds of inquiry; the importance of science and technology in modifying social organization and human expectations. Emphasizes the period to the Industrial Revolution. VII

HIS 107 Western Culture: Science and Technology II (3)

Presents the interactions of science and technology with the social and cultural development of Western civilization; the values in scientific inquiry as compared with other kinds of inquiry; the importance of science and technology in modifying social organization and human expectations. Emphasizes the period since the Industrial Revolution. VI

HIS 108 History of the United States Through 1865 (3)

This course traces the nation's development through the Civil War. It is designed to meet the demands for a general understanding of American history. This course fulfills the requirements for the elementary teachers' certificate. VI

HIS 109 History of the United States Since 1865 (3)

A continuation of HIS 108, from 1865 to the present. VI

HIS 120 The World at War, 1939-45 (3)

A global overview of the events of the Second World War, including consideration of the conflict's military, diplomatic, political, social and economic dimensions. VI

HIS 202 History of British People to the Restoration (3)

From the Roman period to the Stuart period. A general survey of the various epochs and phases of the English people at home and abroad. VI

HIS 203 History of the British People Since the Restoration (3)
From the Stuart period to the present. A continuation of HIS 202. VI

HIS 206 History of Colonial Latin America, 1492 to 1810 (3)
A board survey of the social, economic, political and cultural development of Latin America from the fifteenth century to 1810. Includes analysis of such topics as pre-Columbian societies on the eve of conquest, the Iberian kingdoms in the Age of Expansion, the conquest and colonization of the indigenous cultures of the New World, the establishment of Spanish and Portuguese institutions, the relations between the Church and the State, the encomienda and the hacienda slavery and the impact of the Bourbon Reforms on America. VII

HIS 207 History of Modern Latin America, 1810 to Present (3)
A broad survey of the Latin American nations focusing on their social, economic, political and cultural development. Traces the history of the Independence movements, nation building, the struggle for modernization dependency and the phenomenon of revolution in the twentieth century. VI

HIS 240 History of Kentucky (3)
A general survey of the chief periods of Kentucky's growth and development from 1750 to the present. VI

HIS 247 History of Islam & Middle East Peoples, 500 - 1250, A.D. (3)
A survey of the origins and development of the Islamic civilization from the time of the Prophet Mohammed to 1250, with special consideration on the role of the Arab, Iranian, and Turkic peoples. VI

HIS 248 History of Islam and Middle East Peoples, 1250 to the Present (3)
A continuation of HIS 247. A survey of the religion and institutions of the Islamic world in the Middle East with special emphasis on the Mongol, Ottoman, Safavid and Qajar empires. The demise of these empires, the response of the Middle East peoples to European imperialism, and their national development up to the present will be considered. VI

HIS 260 Afro-American History to 1865 (3)
A study of the Black experience in America through the Civil War. An examination of the African heritage, slavery, and the growth of Black institutions. (Same as AAS 260.) VI

HIS 261 Afro-American History 1865-Present (3)
This course traces the Black experience from Reconstruction to the Civil Rights Movement of the 1960s. The rise of segregation and the ghetto and aspects of race relations are examined. (Same as AAS 261.) VI

HIS 265 History of Women in America (3)
History of American women, with particular emphasis on the mid 19th through the mid 20th centuries. Major themes include the family, work, social ideas about women, and feminism. Prerequisite: HIS 109 or consent of instructor.

Humanities

HUM 121 Peace Studies (3)
This interdisciplinary course is intended as a general introduction to the nature, scope, and methodology of Peace Studies, with a view toward the future. It will explore the history of non-violent movements to effect social change, the role of women in the attainment of peace and protection of life, the tie between social justice and the environment, and the resolution of conflict between individuals, groups, societies, and nations. The course includes the study of activist such as Dr. Martin Luther King, Jr., Gandhi, and Dorothy Day.

HUM 135 Introduction to Native American Literature (3)
This course introduces the study of the oral and written literature of Native American peoples, with an emphasis on the cultural and historical contexts. VI

HUM 240 Literature of Appalachian Kentucky (3)
This is an online or computer-assisted introductory survey course in the Appalachian literature of Kentucky concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period or aesthetic movement, a genre, a theme, or an aspect of literary theory.

HUM 241 Literature of Central Kentucky (3)
This is an online or computer-assisted introductory course in the literature of Central Kentucky concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period or aesthetic movement, a genre, a theme, or an aspect of literary theory.

HUM 242 Literature of Western Kentucky (3)
This is an online or computer-assisted introductory survey course in the literature of Western Kentucky which concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period, or aesthetic movement, a genre, a theme or an aspect of literary theory.

HUM 245 Seminar in Kentucky Literature (Subtitle Required) (3)
This is an online or computer-assisted seminar course in Kentucky literature recognizing, examining, and studying distinct regional differences and similarities with concentration on major contemporary and traditional Kentucky writers and their texts. Topics will vary, from a group of authors, and historical period or aesthetic movement, to a genre, a theme, or an aspect of literary theory.

Information Management and Design

IMD 100 Introduction to Information Systems (3)
Essential computer concepts and terminology are introduced in this course. An overview of operating systems software, a graphical user interface environment and multitasking concepts, disk and file management, Internet capabilities, and telecommunications are included. Introduction to word processing, spreadsheets, databases, and the integration of these three applications are included.

IMD 114 Information Literacy (3)
This course is an introduction to the use of information resources, both traditional print materials and online materials, for academic and professional research. Topics include development of search strategy, evaluation of resources, use of database search techniques, ethical and legal aspects of information management and documentation of sources.

IMD 115 Introduction to Computer Graphic Design (3)
In this course, students will be introduced to the theory and techniques behind computer graphic design. Students will be introduced to layout; color theory and use; design, photo and illustration techniques; and exploration of media in respect to digital design. Also, students will be introduced to the production process including pre-press, printing, other production techniques and distribution. Prerequisite: IMD 100 or CIS 105 or equivalent skills.

IMD 116 Keyboarding (2)
Students use a microcomputer and software to develop proper techniques of touch keyboarding. Speed, accuracy and control are emphasized.

IMD 117 Keyboarding and Basic Word Processing (3)
Students use a microcomputer and software to develop proper techniques of touch keyboarding. Basic word processing skills are integrated with a thorough study of form, style, and arrangement of business documents. Speed, accuracy and control are emphasized.

IMD 118 Document Processing (3)
Document formatting and word processing techniques are integrated to produce a wide variety of business documents. Emphasis is placed upon planning, organizing, and formatting business documents and upon meeting production standards essential to the operation of modern offices. Prerequisite: IMD 117 or consent of instructor.

IMD 120 Introduction to the Internet (1)
In this course, students will develop skills in understanding and using Internet technologies. Topics include the World Wide Web, e-mail, chat, mailing lists, newsgroups, video conferencing and webcasting. In addition, current issues surrounding the Internet such as free speech, viruses, privacy concerns, Internet culture and the exponential rise of misinformation will be explored.

IMD 126 Introduction to Desktop Publishing (3)
The use of microcomputers for designing and producing various publications is introduced. Hands-on experience is provided in using desktop publishing software and a laser printer to produce high-resolution publications, such as flyers, brochures, business forms, and newsletters. Students are also introduced to basic design techniques, type and graphics layout, and the related terminology. Prerequisite: IMD 100 or equivalent skills.

IMD 127 Vector Design with Adobe Illustrator(3)
In this course, students will be introduced to and develop vector (line-based) graphics using industry-standard application(s). Topics covered will include examining the theory behind vector graphics, investigating the advertising and print industries' use of this type of graphic, creation of graphics from simple to increasingly complex, as well as development

of a portfolio of vector art. Prerequisite: IMD 115 or concurrent or consent of instructor.

IMD 128 Raster Design with Adobe PhotoShop (3)
In this course, students will be introduced to and develop raster (photo or pixel-based) graphics using industry-standard application(s). Topics covered will include examining the theory behind raster graphics, investigating the advertising and print industries' use of this type of graphic, creation and manipulation of raster-based graphics from simple to increasingly complex, as well as development of a portfolio of raster art and photo editing and manipulation samples. Prerequisite: IMD 115 or concurrent or consent of instructor.

IMD 130 Introduction to Web Pages (2)
An introduction to the creation and publication of a web site. The course will cover Hypertext Markup Language (HTML), using HTML codes for web design, incorporating graphics and images into web pages, and publishing pages on the web. Prerequisite: IMD 120 or equivalent.

IMD 132 Web Page Editors (1)
In this course, students will be introduced to basic web base authoring and publishing software. Students will use a web page editor to create effective web pages and upload them to the World Wide Web. Prerequisite: IMD 130 or consent of instructor.

IMD 133 Beginning Web Design (3)
This course is an introduction to the creation and publication of a web site. The course covers hypertext markup language (HTML), using HTML code and web authoring application software for web design, incorporating graphics into web pages, and publishing a web site.

IMD 150 Presentations (3)
In this course, students will learn to produce and present digital presentations, making effective use of correct grammar, presentation writing style, topography, graphics, sound and video. Students will install and use current digital hardware and software.

IMD 160 Introduction to E-commerce (3)
Students are introduced to the concepts, issues and application of business on the Internet. Students will examine the business as well as technical aspects of e-commerce. Topics include the relationship of business and the Internet, types and specific examples of e-business, the planning and development of an e-business as well as security issues, monetary transaction options, international concerns, legal and regulatory issues, ethical concerns, and the future of e-commerce. Specific technical issues will include examination of Internet infrastructure including the options, functions of the web server as well as e-commerce software options. Students will create an e-commerce business website plan and develop it into a simple, effective e-business website. Prerequisite: IMD 100 or CIS 105 or consent of instructor.

IMD 175 Web Usability Design (3)
Students focus on effective communication through web design. Topics include web planning, navigation and usability based on market research (audience capabilities and preferences) as well as site content and goals, financial considerations and technical capabilities. Other issues such as browser compatibility, marketing and site "gimmicks",

customer tracking, and site redesign will be addressed.
Prerequisite: IMD 133 or consent of instructor.

IMD 180 Intermediate Web Design (3)
Students develop advanced hypertext markup language (HTML) skills as well as examine new standards and technologies. Topics include extensible hypertext markup language (XHTML), well-formed documents, tables, frames, forms, image maps, multimedia, image optimization, cascading style sheets (CSS), site planning, working with clients and the web design business. Students will complete a well formed website on a specific topic utilizing the theories and technologies learned. Prerequisite: IMD 133 or consent of instructor.

IMD 185 Web Graphics Design (3)
In this course, students will be introduced to the theory and techniques behind the design of high-quality and efficient graphics for the World Wide Web. Topics covered include theory behind design for the Web, creation of gifs, animated gifs and jpegs, text as graphics, and sliced images for the web. Prerequisite: IMD 133

IMD 205 Computerized Accounting Systems (3)
In this course, students will be introduced to financial accounting software. Topics and issues addressed in this applications-based course include analyzing business transaction; recording and posting business transactions; recording period end adjustments and completing the end-of-period closing process; implement internal cash controls: processing payroll activities; and recording transactions for merchandising businesses.

IMD 210 Microsoft Office Applications (3)
Students expand their Microsoft Office skills utilizing word processing, spreadsheet, database management, presentation and desktop information management applications for the creation and integration of information. Prerequisite: IMD 100 or equivalent.

IMD 212 Advanced Microsoft Office Application (3)
Students learn advanced Microsoft Office skills utilizing spreadsheet and database management applications through creation, management and integration of documents. Prerequisite: IMD 210 or consent of instructor.

IMD 215 Administrative Office Procedures (3)
The roles and responsibilities of the office professional and the inter-relationships of people, procedures, and technology are introduced, with emphasis on appropriate decision-making techniques and productivity in the office. Prerequisite: IMD 118 or consent of instructor.

IMD 220 Administrative Office Simulations (3)
Students use administrative procedures to complete office simulations with an emphasis on accuracy, productivity, efficiency, and problem solving. Students will be utilizing skills in word processing, spreadsheet, database management, presentation, and e-mail applications. Standard business transactions will be completed through electronic commerce. Prerequisite: IMD 150; IMD 235; IMD 212 or concurrent; or consent of instructor

IMD 225 Applied Web Graphics (3)
Students focus on developing advanced web graphic design skills. Topics include creation of sophisticated gifs, jpegs, pngs and sliced images for integration into complex layouts involving tables, frames, cascading style sheets (CSS) and layers. Practical applicability also will be cultivated through the design of a professional website. Prerequisite: IMD 180 and IMD 185, or consent of instructor.

IMD 226 Advanced Desktop Publishing (3)
In this course, students will learn to design and produce text-and image-intensive publications. Industry-standard desktop publishing software will be utilized to create brochures, newsletters, proposals and other documents. Students also will use drawing and image-editing software for the purpose of creating and editing graphics for publications. Emphasis will be placed on importing text and graphics from word processing and graphics programs into desktop publishing software. Students will study the desktop publishing process from concept and creation through pre-press and printing. Prerequisite: IMD 126; IMD 127, 128 and 150 or concurrent; or consent of instructor.

IMD 227 Vector and Raster Design (3)
In this course, students will be introduced to vector (line-based) and raster (photo or pixel-based) graphics. Topics covered will include theory behind vector and raster graphics as well as creation of graphics in vector and raster art software packages. Prerequisite: IMD 115 or concurrent or consent of instructor.

IMD 230 Advanced Web Design (3)
In their role as web designers, students will be exposed to existing and emerging web technologies. Topics and issues include modification of prewritten scripts and applets as well as discussion of current client and server-side technologies including JavaScript, DHTML, Java, CGI/Perl, PHP, Cold Fusion, SQL, ASP and XML. Prerequisite: IMD 180 or consent of instructor.

IMD 232 Professional Web Editors (3)
Students learn how to use and customize advanced web authoring software. A professional WYSIWYG (what-you-see-is-what-you-get) editor will be used to develop and create web pages, automate production, and manage and maintain entire websites. Students will build on their Hypertext Markup Language (HTML) and web development knowledge to customize features and integrate applications. This class will also focus on efficiency and working in a team-based environment. Prerequisite: IMD 180 or consent of instructor.

IMD 235 Advanced Word Processing (3)
Students will learn current word processing software from intermediate skills through advanced utilities. Topics include producing customized documents, enhancing the visual display of documents, creating customized desktop publishing documents, organizing text in documents using advanced features, and integrating data utilizing various applications. Emphasis will be on mastering the software for optimal use. Prerequisite: IMD 210 or CIS 130, or equivalent skills.

IMD 240 Animation for the Web (3)
Students learn to design and deliver low-bandwidth web animations with professional, industry-standard applications. Students will also use industry-standard vector-based applications to create graphics for integration with animation.

Prerequisite: IMD 180, IMD 185, IMD 232, or consent of instructor.

IMD 245 Multimedia for the Web (3)

Students develop multimedia products for information delivery, training and advertising on the web using industry-standard applications. Students will storyboard, plan, produce and execute a multimedia product; integrate the final product into a web environment; and test for product performance and correct production flaws. Students will also explore topics such as platform and server considerations and limitations and the basics of continuity in multimedia design. Prerequisite: IMD 180 and IMD 185; or consent of instructor.

IMD 250 Digital Video Editing with Final Cut Pro (3)

Students will capture and edit digital video using industry-standard desktop video software and export to DVD, VHS, and the Internet for use in entertainment, documentary films, commercials, and newscasts. Students will learn to storyboard, plan, and produce a digital video project from conception to final packaging and explore topics such as compositing, alpha channels, and special effects. IMD 100 or IMD 133 or consent of instructor

IMD 270 Professional Practices (3)

This course is designed to assist students develop strategies for entering the Information Management & Design profession by editing and refining portfolios and creating correspondence to meet professional standards, designing resumes and other self-promotional materials, developing a job search strategy, practicing interview techniques and professional presentations. IMD 210 or IMD 235 or consent of instructor

IMD 271 Internship (1-3)

On-the-job experience will be required of the Information Management & Design student. A minimum of 40 clock hours of appropriate experience per credit hour will be required. The learning plan will be discussed and agreed upon by the student, instructor and site supervisor. Prerequisite: Consent of instructor, 2.0 G.P.A., and the completion of 12 credit hours of IMD course work (including IMD 270).

IMD 275 Workplace Management (3)

Management principles and techniques and their applications to the contemporary business workplace are included. Emphasis is on information management, team concepts and the role of personnel management.

IMD 276 Legal Office Procedures (3)

Legal office procedures and the transcription of legal forms and documents are included in this course. Prerequisite: IMD 118 or BE 267.

IMD 278 Medical Office Procedures (3)

Medical office procedures using a medical practice management software program, medical coding, and the transcription of medical forms, histories, and reports are included in this course. Prerequisite: IMD 118, CLA 131, or consent of instructor.

IMD 280 Applied Computer Graphic Design (3)

In this course, students will study graphic and commercial design techniques in conjunction with exploration of advanced computer graphic software. Students will also apply and integrate theory and techniques explored in earlier graphics

classes. This course will be the capstone for students choosing the graphics option. Presentation, vector, raster, desktop publishing, web development and multimedia software will be utilized to create design-intensive, portfolio pieces. Prerequisite: IMD 224, IMD 226, IMD 227 or IMD 127 and IMD 128,, or consent of instructor.

IMD 292 Portfolio Practicum: Web Design (3)

In this capstone course, students will assemble a comprehensive web site design portfolio using skills learned in the IMD Web Design core courses. The purpose of the portfolio will be to assess students' overall skills learned in the web design option. It will also be used to provide IMD students with a professional design portfolio to aid in the search for employment. Students will use Macromedia Fireworks, Dreamweaver, Flash, Adobe Photoshop/ImageReady, and dynamic scripting languages to assemble the comprehensive design portfolio. Prerequisite: IMD 225, 232, 240 or consent of instructor.

IMD 299 Selected Topics in Information Management and Design (1-3)

This course is designed to expand course offerings as new technology is developed, as well as consider contemporary and/or emerging trends in information management and design. Topics may vary from semester to semester at the discretion of the instructor; course may be repeated with different topics to a maximum of six credit hours. Prerequisite: Consent of instructor.

Introduction to College

See Student Development and Counseling courses.

Japanese

JPN 101 Beginning Japanese I (4)

A course in first semester Japanese language.

JPN 102 Beginning Japanese II (4)

A course in second semester Japanese language. Prerequisite: JPN 101 or equivalent.

Journalism

JOU 101 Introduction to Journalism (3)

This course surveys the history and social theories of journalism and introduces students to contemporary journalistic practice. Student will learn about the function and operation of print, electronic and on-line news media. Issues and concepts to be covered include the relationship of government to media; press freedom and controls; media ethics, and the impact of global communications. The course also covers the relationship of journalism to advertising, public relations and telecommunications, particularly with regard to new technologies. Prerequisite: JOU pre-majors only or consent of instructor.

JOU 204 Writing for the Mass Media (3)

An introduction to the concepts and techniques of media writing. This course offers hands-on instruction in information gathering, organization, and writing for print, broadcast and on-line media. Lecture: one hour; laboratory: four hours per week. Prerequisite: JOU pre-major status; JOU 101 or consent of instructor.

Kinesiology and Health Promotion

KHP 100-KHP 135 Service Courses (1)
Instruction in a variety of motor skills activities. Courses are designed for students at a beginner level. Up to six hours credit may be earned in service courses; however, the same activity may not be repeated for credit.

Law Enforcement

See "Criminal Justice"

Library Information Technology

LIT 115 Introduction to Reference Services (3)
This course presents an introduction to library reference sources and services. Reference interview techniques, use of standard print and online reference tools, bibliographic databases, web search engines and subject guides, and online full-text books, periodicals, documents, and interlibrary loan services are among the topics included. This is a web-based distance course that involves service learning activities.

LIT 124 Library Administration (3)
This course provides an introduction to basic principles of library organization and management. Emphasis is on the practical application of management concepts to the effective administration of library systems. This is a web-based distance course. Prerequisite: LIT 115 or consent of instructor.

LIT 132 Library Technical Services (3)
This course is an introduction to library technical services. Acquisitions, processing, cataloging and classification are introduced. This is a web-based distance course. LIT 115 or consent of instructor.

LIT 200 Seminar in Kentucky Literature (3)
(Subtitle Required)
This is an online or computer-assisted seminar course in Kentucky literature recognizing, examining, and studying distinct regional differences and similarities with concentration on major contemporary and traditional Kentucky writers and their texts. Topics will vary, from a group of authors, and historical period or aesthetic movement, to a genre, a theme, or an aspect of literary theory.

LIT 230 Web Publishing for Libraries (3)
This is a course in web publishing for library web sites, including HTML code, web page authoring software, web page and web site design, and trends in library web sites. This is a distance education course with a service learning component. Prerequisite: LIT 115 or consent of instructor.

LIT 240 Literature of Appalachian Kentucky (3)
This is an online or computer-assisted introductory survey course in the Appalachian literature of Kentucky concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period or aesthetic movement, a genre, a theme, or an aspect of literary theory.

LIT 241 Literature of Central Kentucky (3)
This is an online or computer-assisted introductory course in the literature of Central Kentucky concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period or aesthetic movement, a genre, a theme, or an aspect of literary theory.

LIT 242 Literature of Western Kentucky (3)
This is an online or computer-assisted introductory survey course in the literature of Western Kentucky which concentrating on the major contemporary and traditional writers who are distinctly identified with that region. Approaches may include a group of authors, an historical period, or aesthetic movement, a genre, a theme or an aspect of literary theory.

LIT 243 Library Services for Children (3)
This course is a study of library services for children. Topics include library programming development and production, children's literature, collection development, Internet resources, and legal issues. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor.

LIT 245 Library Services for Young Adults (3)
This course is a study of library services for young adults from 6th to 12th grades. Topics include programming, collection development, the use of the Internet, and ethical and legal issues. Emphasis is on the development and promotion of young adult library services. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor.

LIT 247 Library Services for Adults (3)
This is a study of library services for adults. Topics include adult literature, collection development, reader's advisory service, programming, circulation services, reference services, and customer relations. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor.

LIT 248 Library Services for Preschool Children (3)
This course is a study of library services for preschool children, age infant to 5 years. Topics include library programming development and production, preschool children's literature, services for parents and for child care services, collection development, and legal issues. This is a web-based distance course that requires service learning activities. Prerequisite: LIT 115.

LIT 280 Genealogy Services in Libraries (3)
This course prepares librarians to provide quality services to genealogical patrons. Topics include: definitions of genealogy and motivations of patrons; genealogical data, sources, and research methods; reference interviews; orientation of patrons to genealogical resources; collection development; interlibrary loan; patron referral; and legal and ethical issues relating to genealogical research. This is a web-based distance course that requires a service learning project. Prerequisite : LIT 115 or consent of instructor.

LIT 285 History of Libraries (3)
This course is a survey of the development of libraries from ancient times to the present, with emphasis on academic and

public libraries in the United States. Attention is given to the interaction of libraries with economic, social and political trends in the larger society. LIT 115 or consent of instructor

LIT 299 Selected Topics in Library Information Technology: Topic (1-3)

This course is designed to expand library course offerings as new technologies develop, new issues evolve, and/or to address local library issues. Topics may vary from semester to semester at the discretion of the instructor. Course may be repeated with different topics to a maximum of nine credit hours. This is a web-based distance course that involves service learning activities. Prerequisite: LIT 115 or consent of instructor.

Mathematics

(See the KCTCS catalog for updated course descriptions)

MA 108R Intermediate Algebra (3)

This course is remedial in nature and covers material commonly found in second year high school algebra. Specific topics to be discussed include numbers, fractions, algebraic expression, simplifying, factoring, laws of exponents, linear equations, simple graphs and polynomial algebra. This course is not available for degree credit toward a bachelor's degree. Credit not available on the basis of special examination. Prerequisite: One year of high school algebra. Recommended for students with a Math ACTE score of 18 or less, or consent of department.

MA 109 College Algebra (3)

Selected topics in algebra and analytic geometry. Develops manipulative algebraic skills required for successful calculus study. Includes brief review of basic algebra, quadratic formula, systems of linear equations, introduction to analytic geometry including conic sections and graphing. This course is not available for credit to persons who have received credit in any mathematics course of a higher number with the exceptions of MA 112, 123, 162, 199, 201 and 202. Credit not available on the basis of special examination. Prerequisite: Two years of high school algebra and a Math ACTE score of 19 or above, or MA 108R, or math placement test. III

MA 110 Analytic Geometry and Trigonometry (4)

This is a course specifically designed for students intending to enroll in a calculus sequence. Topics will include trigonometric functions, exponentials and logarithms, graphs, polar coordinates, conic sections and systems of conics. Students may not receive credit for MA 110 and either of MA 109 or MA 112. This course is not available for credit to students who have received credit in any higher numbered mathematics course except for MA 123, 162, 199, 201 or 202. Credit is not available by special examination. Lecture: 3 hours, recitation, 2 hours per week. Prerequisite: Two years of high school algebra and a Math ACTE score of 23 or above, or consent of department. III

MA 111 Contemporary Mathematics (3)

An introduction to concepts and applications of mathematics, with examples drawn from such areas as voting methods, apportionment, consumer finance, graph theory, tilings, polyhedra, number theory and game theory. This course is not available for credit to persons who have received credit in any

mathematics course of a higher number with the exceptions of MA 112, 123, 162, 201 and 202. This course does not serve as a prerequisite for any calculus course. Credit not available on that basis of special examination. Prerequisite: Two years of high school algebra and a Math ACTE score of 19 or above, or MA 108R, or math placement test.

MA 112 Trigonometry (2)

A standard course. Includes trigonometric functions, identities, multiple analytic formulas, laws of sines and cosines and graphs of trigonometric functions. This course is not available to persons who have received credit for any mathematics course of a higher number with the exception of MA 113, 123, 131, 132 and 162. Credit not available by special examination. Prerequisite: Two years of high school algebra or MA 108R. III

MA 113 Calculus I (4)

A course in one-variable calculus, including topics from analytic geometry. Derivatives and integrals of elementary functions (including the trigonometric functions) with applications. Lecture: 3 hours, recitation, 2 hours per week. Prerequisite: Math ACTE score of 26 or above, or MA 109 and MA 112, or MA 110, or consent of department. III

MA 114 Calculus II (4)

A continuation of MA 113, primarily stressing techniques of integration. Lecture: 3 hours, recitation, 2 hours per week. Prerequisite: High school trigonometry or MA 112; and a grade of C or better in MA 113 or MA 132. III

MA 123 Elementary Calculus and Its Applications (3)

An introduction to differential and integral calculus, with applications to business and the biological and physical sciences. Not open to students who have credit in MA 113. Prerequisite: Math ACTE score of 21 or above, or MA 109 or math placement test. III

MA 162 Finite Mathematics and Its Applications (3)

Finite mathematics with applications to business, biology, and the social sciences. Linear functions and inequalities, matrix algebra, linear programming, probability. Emphasis on setting up mathematical models from stated problems. Prerequisite: MA 109 or equivalent. III

MA 193 Supplementary Mathematics Workshop I: (Subtitle required) (1-2)

Laboratory offered (only) as an adjunct to certain mathematics lecture courses. Offered only on a pass/fail basis. Coreq: Set by instructor.

MA 194 Supplementary Mathematics Workshop II: (Subtitle required) (1-2)

Laboratory offered (only) as an adjunct to certain mathematics lecture courses. Offered only on a pass/fail basis. Coreq: Set by instructor.

MA 201 Mathematics for Elementary Teachers (3)

Basic concepts of measurement, geometry, probability, and statistics. Recommended only for majors in early elementary and middle school education. Prerequisite: MA 109. III

MA 202 Mathematical Problem Solving for Elementary Teachers (3)
Development of mathematical problem solving skills. Students will solve problems from such areas as algebra, geometry, probability, number theory, and logic. Credit not available on the basis of special examination. Prerequisite: A grade of "C" or better in MA 201. Also recommended: a course in logic (e.g. PHI 120) or a course in calculus (e.g. MA 123). III

MA 213 Calculus III (4)
MA 213 is a course in multivariate calculus. Topics include three-dimensional vectors calculus, partial derivatives, double and triple integrals, sequences, and infinite series. Lecture: 3 hours, recitation, 2 hours per week. Prerequisite: MA 114 or equivalent. III

MA 214 Calculus IV (3)
MA 214 is a course in ordinary differential equations. Emphasis is on first and second order equations and applications. The course includes series solutions of second order equations and Laplace transform methods. Prerequisite: MA 213 or equivalent. III

MA 241 Geometry for Middle School Teachers (3)
A course in plane and solid geometry designed to give middle school mathematics teachers the knowledge needed to teach a beginning geometry course. Cannot be counted toward the mathematics minor or major. Prerequisite: One semester of calculus.

MAH 061 (MAH 61) Pre-Algebra (3)
Students will enhance their understanding of rational numbers and linear equations. Emphasis will be placed on the vocabulary and manipulative skills needed for operations involving whole numbers, fractions, decimal numbers, percents, signed numbers, and simple algebraic expressions, and for solving simple linear equations.

MAH 065 Mathematics Laboratory (1)
Designed to supplement the lecture class, this laboratory may be taken concurrently with any mathematics course. This course can be repeated for each mathematics course taken. Laboratory: 2 hours per week. Pass/Fail only.

MAH 070 (MAT 070) Elementary Algebra (3)
Material commonly found in first-year high school algebra is studied. Topics include rational numbers, variable expressions, linear equations, inequalities, exponents, polynomials, factoring and rational expressions.

MAH 121 (MT 105) Mathematics for Business (3)
Basic mathematical concepts as applied to finance are covered. Topics include percentages, markup, simple and compound interest, discounts, annuities, debt installments, depreciation, and financial statements. Prerequisite: MAH 070 or equivalent as determined by placement examination. III for AAS degrees only.

MAH 125 (MT 115) Technical Mathematics (3)
Some mathematical concepts from algebra, geometry and trigonometry, with an emphasis on geometrical ideas and applications, are studied. Topics to be covered include scientific notation, unit conversions, linear equations in two variables, variation, measurement of geometric figures, solving triangles using trigonometry, and problems involving

applications of these topics. Prerequisite: MAH 070 or equivalent as determined by placement examination. III for AAS degrees only.

MAH 155 Applied Mathematics (3)
After a review of rational numbers, the concepts of ratios and proportions, scientific notation, units and conversions, linear equations in two variables, percents, interest, and descriptive statistics are covered. Emphasis is on application in the various technology programs. Prerequisites: MAH 070, or equivalent as determined by placement examination.

Mental Health

See PY 298

Music

MUS 100 Introduction to Music (3)
A study of the elements of music as they apply to the listening experience; designed for the non-music major with no prior knowledge of music. Emphasis will be placed upon developing an awareness and understanding of musical styles from the Renaissance to the present. Music majors may not use this course to fulfill either General Studies, Universities Studies or music history requirements. VI

MUS 206 American Music (3)
A history of music in America from c. 1620 to the present. Will require listening to recordings, reading the primary text and suggested readings in books, periodicals and documents. Students should become aware of important names, places, events and styles in music as well as important historical trends and movements. VI

Nuclear Medicine Technology

NUC 140 Nuclear Medicine Principles & Clinic I (6)
An introduction and orientation to nuclear medicine technology, aspects of radiation protection, the applied science and mathematics of radionuclides, and radionuclide skeletal imaging procedures are studied. Lecture: 4 hrs, clinic: 12 hrs. Prerequisites: Admission to NMT program, CPR certification, BSL 110, BSL 111, MA 109; concurrent: CHE 104 and PH 172.

NUC 150 Nuclear Medicine Principles & Clinic II (6)
Nuclear Medicine instrumentation and quality control procedures, clinical applications of computers, and radionuclide cardiovascular and pulmonary system imaging procedures are studied. Lecture: 4 hrs, clinic: 12 hrs. Prerequisites: NUC/NMT 140; concurrent: CHE 106.

NUC 230 Nuclear Medicine Principles & Clinic III (6)
Central nervous system, gastrointestinal system, and urinary system radionuclide imaging procedures are studied. Lecture: 7.5 hrs, clinic: 30 hrs. Prerequisites: NUC/NMT 150

NUC 240 Nuclear Medicine Principles & Clinic IV (8)
Radiopharmaceutical preparation and quality control, the therapeutic applications of radionuclides, as well as endocrine system radionuclide imaging procedures are studied. Lecture: 4 hrs, clinic: 24 hrs. Prerequisites: Current CPR certification and NUC/NMT 230

NUC 280 Nuclear Medicine Principles & Clinic V (8)
The biological effects of radiation, regulatory aspects of radiation protection, oncologic/inflammatory-infectious process radionuclide imaging studies and hematologic and in-vitro radionuclide non-imaging studies are studied. Lecture: 4 hrs, clinic: 24 hrs. Prerequisites: NUC/NMT 240

NMT 299 Selected Topic in NMT (1)
Content is designed for medical imaging technologists currently working, but not certified, in nuclear medicine technology who are attempting to meet alternate eligibility requirements for certification by the Nuclear Medicine Technology Certification Board (NMTCB). Topic will be chosen by the instructor and the student in instrumentation, radiopharmacy, or radiation safety in order to document requirements to apply for the examination. May be repeated with different topic subtitles for a maximum of three (3) credits. The radiopharmacy topic may include applied work with the radiopharmacist through the clinical affiliation of the NMT program. There is no clinical or laboratory component for instrumentation or radiation safety. This course is not open to students enrolled in the NMT program. NMT graduates may enroll as a registry review.

Nursing

NSG 115 Nursing I (9)
Introduction to nursing and the nursing process are studied as related to the basic human needs of clients throughout the life span. Areas of study include foundation knowledge, concepts and skills, with emphasis on health promotion and physical assessment. Lecture: 5 hours, Laboratory: 12 hours. Prerequisites: Admission to the Associate Degree Nursing Program; BSL 110 and mathematics course with a grade of "C" or better; PY 110 or PSY 100. Prior to or concurrent: PSY 223, BSL 111, Computer Literacy course.

NSG 125 Nursing II (2)
Common drugs are studied based upon their classification and their effects upon the basic human needs. Areas of emphasis include nursing responsibility, accountability, and application of the nursing process regarding drug therapy. Credit not available by special examination. Prerequisites: Completion of NSG 115 and BSL 111 with a grade of "C" or better, PSY 223, and Computer Literacy; at least a 2.0 cumulative grade point average.

NSG 235 Nursing III (4)
Areas of study include the application of the nursing process with the childbearing family focusing on health promotion and the care of families experiencing interferences with basic human needs. Emphasis is on the nurse as a provider of care. Credit not available by special examination. Lecture: 2 hours, laboratory: 6 hours. Prerequisite: Completion of NSG 115 and BSL 111 with a grade of "C" or better, PSY 223 and Computer Literacy; at least a 2.0 cumulative grade point average. Corequisite: NSG 245.

NSG 245 Nursing IV (4)
Areas of study include the application of the nursing process to health promotion and interferences with the ability to meet selected basic human needs for child/adult clients. Emphasis is on the nurse as a provider of care. Credit not available by special examination. Lecture: 2 hours, Laboratory: 6 hours. Prerequisites: Completion of NSG 115 and BSL 111 with a

grade of "C" or better, PSY 223 and Computer Literacy; a 2.0 cumulative grade point average. Corequisite: NSG 235.

NSG 255 Nursing V (9)
Areas of study include the application of the nursing process as it relates to health promotion and care of child/adult clients experiencing interferences with the ability to meet selected basic human needs. Emphasis is on the nurse as a provider of care. Credit not available by special examination. Lecture: 5 hours, Laboratory: 12 hours Prerequisites: Satisfactory completion of courses required by the first year nursing curriculum as specified; satisfactory completion being "C" or better in each nursing course; BSL 214 prior to or concurrent, at least a 2.0 cumulative grade point average.

NSG 265 Nursing VI (9)
Course content will focus on the application of the nursing process as it relates to health promotion and care of child/adult clients experiencing interferences with the ability to meet selected basic human needs. Areas of emphasis include the nurse as a provider and manager of care as well as a member of the discipline. Lecture: 5 hours, Laboratory: 12 hours. Credit not available by examination. Prerequisite: Satisfactory completion of NSG 255 and BSL 214 with a grade of "C" or better; at least a 2.0 cumulative grade point average.

Nutrition and Food Science

NFS 101 Human Nutrition and Wellness (3)
Food composition, digestion, absorption and metabolism as related to selection of nutrients essential for human life, growth, reproduction, lactation, wellness and physical activity. Not open to NFS majors except hospitality management students.

Philosophy

PHI 100 Introduction to Philosophy: Knowledge and Reality (3)
An introduction to philosophical studies with emphasis on issues of knowing, reality, and meaning related to human existence. VI

PHI 120 Introductory Logic (3)
A course which treats argumentation, syllogistic and sentential logic. The focus will be on the use of formal methods in the construction and criticism of actual arguments, the aim being to inculcate standards of good reasoning, e.g., clarity, consistency and validity. Credit is not given to students who already have credit for PHI 320.

PHI 130 Introduction to Philosophy: Morality and Society (3)
An introduction to philosophical studies with emphasis on a critical study of principles of moral action and social and political values. VI

PHI 260 History of Philosophy I: From Greek Beginnings to the Middle Ages (3)
An introductory study of the development of Western philosophy from ancient through late medieval times including systematic work in logic, metaphysics, epistemology and ethics by such philosophers as Plato, Aristotle, Augustine and Aquinas.

PHI 270: History of Philosophy II: From the Renaissance to the Present Era (3)
An introductory study of the development of Western philosophy from early modern to recent times including systematic work in logic, metaphysics, epistemology and ethics by such philosophers as Occam, Descartes, Hume and Kant.

Physics

Note: It is assumed that all prerequisites include, in addition to any specific course listed, the phrase “or equivalent,” or “consent of instructor.”

PH 172 Physics for Health Sciences (2)
This course will cover basic concepts of motion, forces, momentum, work, energy, power, and waves, as applied in electricity and magnetism, optics, atomic and nuclear physics. Prerequisite: MA 108R or 2 years of high school algebra; or consent of instructor. IV

PHY 151 Introduction to Physics (3)
A lecture-demonstration course covering the mechanics of solids, liquids, gases, heat, and sound. Credit is not given to students who already have credit for PHY 201, 211 or 231. Prerequisite: Two years of high school algebra or MA 108R. IV

PHY 152 Introduction to Physics (3)
A lecture-demonstration course covering electricity, magnetism, optics, atomic and nuclear physics. Credit is not given to students who already have credit for PHY 203, 213 or 232. Prerequisite: Two years of high school algebra or MA 108R. IV

PHY 160 Physics and Astronomy for Elementary Teachers (3)
Course sequence (GLY 160-PHY 160 six credit hours) in physical science for prospective elementary teachers. The sequence addresses basic concepts of earth science, astronomy and physics appropriate for elementary teachers and is taught with an emphasis on inquiry-based, laboratory activities. PHY 160 includes the basics of the motion of objects, astronomy by sight, electrical circuits, magnetism and the behavior of light. Lecture: 1 hour; laboratory: 5 hours.

PHY 211 General Physics (5)
First part of a two-semester survey of classical and modern physics, focusing on the motion of solids and fluids as governed by Newton's Laws and by the conservation laws of energy, momentum, and angular momentum. Lecture: 2 hours, recitation: 2 hours, laboratory: 2 hours. Credit is not given to students who already have credit for PHY 231 and 241. Prerequisite: A working knowledge of algebra and trigonometry as obtainable in MA 109 and MA 112, or as demonstrated by an ACT math score of 25 or higher. IV

PHY 213 General Physics (5)
Continuation of PHY 211, covering electrostatics, de circuits, magnetism, Maxwell's Equations, ture, two electromagnetic radiation, light and some modern physics. Lecture: 2 hours; recitation: 2 hours; laboratory: 2 hours. Credit is not given to students who already have credit for PHY 232 and 242. Prerequisite: PHY 211 or equivalent.

PHY 231 General University Physics (4)
First part of a two-semester survey of classical physics. Consequences of the principles of mechanics are developed conceptually, analytically and quantitatively. Lecture: 3 hours. recitation: 1 hour. Familiarity with elementary concepts and techniques of calculus (derivatives and integrals) is required. Prerequisite or concurrent: MA 114. IV

PHY 232 General University Physics (4)
A general course covering electricity, magnetism and optics. Lecture: 3 hours; recitation: 1 hour. This course is a prerequisite to a significant number of courses in this and related areas of study. Familiarity with elementary vector calculus is encouraged. Prerequisite: PHY 231. Concurrent: MA 213.

PHY 241 General University Physics Laboratory (1)
A laboratory course offering experiments in mechanics and heat, framed in a small work environment that requires coordination and team work in the development of a well-written lab report. Prerequisite or concurrent: PHY 231. IV

PHY 242 General University Physics Laboratory (1)
A laboratory course offering experiments in electricity, magnetism, and light, framed in a small group environment that requires coordination and team work in the development of a well-written lab report. Prerequisite: PHY 241; concurrent: PHY 232. IV

Physiology

PGY 206 Elementary Physiology (3)
An introductory survey course in basic human physiology. Prerequisite: One semester of college biology.

Political Science

Note: It is assumed that all prerequisites include, in addition to any specific course listed, the phrase “or equivalent,” or “consent of instructor.”

PS 101 American Government (3)
A survey of national government and the political process in the United States, with emphasis on the Constitution, the President, Congress and the judicial system. V

PS 212 Culture and Politics of the Third World (3)
This course analyzes the politics of selected states in Africa, Asia, and Latin America. Various bases of political cleavage and cooperation will be examined: ethnicity, language, social class and ideology. Cultural differences between Africa, Asia, and Latin America will be identified and their political implications explored, as well as differences within geo-cultural areas. V

PS 235 World Politics (3)
A study of the most significant problems of world politics, including the fundamental factors governing international relations, the techniques and instruments of power politics, and the conflicting interests in organizing world peace. V

PS 255 State Government (3)
An introduction to the institutions, political processes and policies of state governments, and the relationships of state

governments with other levels of government in the United States. V

PS 271 Introduction to Political Behavior (3)
The study of behavior in a political context; the analysis of basic behavioral concepts used in political science such as political roles, group behavior, belief systems, personality, power and decision-making. V

PS 280 Issues in Public Policy (3)
An examination of selected major public problems, focusing on their nature, political ramifications and alternate methods of dealing with them. Policies covered will vary from semester to semester, but will include such areas as poverty, health care, energy, education, race relations environment, etc. Prerequisite: PS 101.

Psychology

PSY 100 Introduction to Psychology (4)
An introduction to the study of behavior covering theories, methods and findings of research in major areas of psychology. Topics covered will include the biological foundations of behavior; learning, perception, motivation, personality; developmental, abnormal, and social behavior; and methods of assessment. This course is a prerequisite to a significant number of courses in this and related areas of study. Lecture: 3 hours, laboratory/discussion, 1 hours. V

PSY 195 Orientation to Psychology (1)
An orientation to educational issues and career planning for students who have declared psychology as a major. Topics include career paths and opportunities, professional resources and issues, and educational planning. Pass/Fail only. Prerequisite: Declared major in Psychology, or consent of instructor.

PSY 215 Experimental Psychology (4)
A study of the application of scientific methods to psychological research. Special emphasis is placed on the critical evaluation of contemporary research in experimental psychology. Particular attention is focused on the design, execution, and written report of laboratory research. Lecture: 3 hours, laboratory: 2 hours. Prerequisite: PSY 100 and sophomore standing, or consent of instructor.

PSY 216 Applications of Statistics in Psychology (4)
An introduction to statistical procedures used in making decisions based on psychological data. May not be used to satisfy the laboratory requirement in the College of Arts and Sciences. Lecture: 3 hours; laboratory, 2 hours. Prerequisite: PSY 100.

PSY 223 Developmental Psychology (3)
An introduction to the principles of developmental psychology as seen in human growth over the entire lifespan, with the primary focus on infancy through adolescence. Emphasis is placed on theory and data relating to the developmental aspects of cognition, language and personality. Prerequisite: PSY 100 or equivalent. (Same as FAM 254.) V

PY 110 General Psychology (3)
A survey course in general psychology designed to give the student an introduction to the history, methods and content of modern psychology. Topics include the history and systems of

psychology, psychological research, physiological psychology, psychological processes, developmental psychology, personality, abnormal behavior and social psychology. V

PY 230 Psychosocial Aspects of Death and Dying (3)
A one-semester course designed for students who have completed at least one semester of an introductory psychology or sociology course, or its equivalent. Focus will be on the understanding of the biopsychological, sociological and psychological aspects of death and dying. The primary goal of the course is to help the individual recognize the behavior and attitudes associated with death in preparation for dealing with dying and bereavement. Prerequisite: Introductory psychology or sociology, or consent of instructor. V

PY 297 Psychology of Aging (3)
An overview of the demographics of aging, theories of aging and research methods used to study adult development. The course will examine the biological, psychological and social impact of aging, longevity, work, retirement, death and bereavement. Prerequisite: PY 110 or PSY 100 or consent of instructor.

PY 298 Essentials of Abnormal Psychology (3)
An historical overview of the services provided to individuals with mental illness and theories of personality development. Assessment, diagnosis and treatment of the major mental disorders, and the biological, psychological, and sociological contributing causation factors are discussed. Prerequisite: PY 110 or PSY 100 or consent of instructor.

Quality Technology

QT 101 Quality Management Principles (3)
Students are introduced to fundamental concepts, principles, and practices used to improve quality in organizations. The need for organizational change is reviewed and paradigms of quality are introduced. An overview of areas of change, methods of quality planning and methods for implementing quality policies are provided.

Radiography

RDL 100 Radiography I (10)
An introduction to radiography which emphasizes historic perspective, professional ethics, introductory radiation protection, patient management, density and contrast manipulation and the role of the radiographer as a member of the health care team is included. The principles of human anatomy are applied to the study of fundamental radiographic procedures (exposure factors and patient positioning) used for different age groups. Procedures include: thorax, abdomen, upper and lower extremities. Lecture: 6 hours, laboratory: 2 hours, clinic: 15 hours. Prerequisite: Admission to Radiography Program, CPR certificate, BSL 110 and BSL 111.

RDL 110 Radiography II (10)
Radiography II is a continuation of Radiography I with emphasis on radiographic imaging, related technical factors and accessory equipment. The principles of human anatomy are applied to the study of fundamental radiographic procedures (exposure factors and patient positioning) used for different age groups. Procedures include cranium, spine, alimentary canal, gillary system, and urinary system. Included also is the selection, tupe, complication, patient education, and

administration of contrast media. Lecture: 6 hours, laboratory: 2 hours, clinic: 15 hours. Prerequisite: RDL/RAD 100.

RDL 200 Radiography III (4)

Special radiographic examinations and equipment are discussed. A practical approach to critical thinking and critical analysis of the finished radiograph with emphasis on a systematic approach is also included. Lecture: 2 hours, clinic: 10 hours. Prerequisite: RDL/RAD 110.

RDL 205 Radiography IV (3)

This course is a continuation of the clinical education experience. Critical evaluation of the finished radiograph with emphasis on recognizing acceptable density, contrast, detail, distortion, and anatomical position is also included. Lecture: 1 hour; clinic: 10 hours. Prerequisite: RAD 200.

RDL 210 Radiography V (9)

Theories and principles involved in the production, control, and application of ionizing radiation in radiography are covered. Additional topics include: developing a quality assurance program, quality control testing or radiographic equipment, processing the latent image, and image intensification. Advanced patient care skills are also included. Lecture: 4 hrs, laboratory: 2 hrs, clinic: 20 hrs.

RDL 220 Radiography VI (9)

Equipment and advanced modalities used to complement diagnostic radiology are introduced. Principles of radiation biology, radiation protection, pathology and the systematic classifications of disease are included. Professional and legal standards are discussed. Lecture: 4 hours, laboratory: 2 hours, clinic 20 hours. Prerequisite: RDL/RAD 210.

RDL 230 Sectional Anatomy for Advanced Imaging (3)

Digital images will be used to aid technologists in recognizing, locating, and identifying normal and abnormal anatomy. Areas of concentration will include the head, spine, soft tissue neck, thorax, abdomen, male and female pelvis, and upper and lower extremities. Prerequisite: Technologists registered by the American Registry of Radiologic Technologists or Nuclear Medicine Technology Certification Board, or students who have completed one year and are currently enrolled in an accredited Radiography or Nuclear Medicine Program, or consent of instructor.

RDL 240 Advanced Patient Care (3)

The technologist will be provided with advanced knowledge about patient assessment and care. Included will be: vital signs, arterial blood gases (ABG's); cardiac arrhythmias; neurological, cardiac, respiratory, and trauma symptoms and evaluation; treatment for medical emergencies, contrast media administration and allergic reactions; pharmacology and drug administration. Sections on legalities, informed consent, ethics, quality assurance, communication, patient education, education of community and other health care professionals, documentation, equipment safety and professional growth will be discussed. Prerequisite: Technologists registered by the American Registry of Radiologic Technologists or Nuclear Medicine Technology Certification Board, or students who have completed one year and are currently enrolled in an accredited Radiography or Nuclear Medicine Program, or consent of instructor. The student must also have current Basic Cardiac Life Support for health care providers (CPR), and venipuncture certification.

RDL 250 Computed Tomography Physics and Instrumentation (3)

The student will be provided with knowledge about the physics of computed tomography (CT) image production and the equipment necessary to produce these images. History of CT development, basic principles of image production, use of computers to create the CT image, methods of acquisition, image display, radiation dose, patient safety, definition of terminology specific to CT, equipment characteristics and utilization, enhancement techniques and basic site planning requirements will be included. Prerequisite: RDL/RAD 230, RDL/RAD 240, and a basic computer course, or consent of instructor.

RDL 255 Magnetic Resonance Physics and Instrumentation (3)

Basic principles of magnetic resonance imaging will be introduced. Areas of concentration will include historical development, magnetic theory, instrumentation necessary for the production of magnetic resonance images, and basic pulse sequences. Prerequisite: Technologists registered by the American Registry of Radiologic Technologists or Nuclear Medicine Technology Certification Board, or students who have completed one year and are currently enrolled in an accredited Radiography or Nuclear Medicine program, and RDL/RAD 230 and RDL/RAD 240, or consent of instructor.

RDL 260 Computed Tomography Imaging Technology (3)

Imaging techniques related to the central nervous system, neck, thorax, musculoskeletal system and abdominopelvic regions will be presented. Patient assessment, clinical history, protocol selection, room and patient preparation, patient positioning, equipment utilization, manipulation and filming, image reformatting, evaluation of image quality, identification of pathology, and computer measurement evaluation techniques will be discussed. Interventional procedures will be covered, including common laboratory procedures ordered on specimens. Prerequisite: RDL/RAD 230, RDL/RAD 240, and/or concurrent with RDL/RAD 250, or consent of instructor.

RDL 265 Magnetic Resonance Imaging Technology (3)

Magnetic resonance (MRI) image quality, artifacts, advanced imaging techniques including cardiac gating and magnetic resonance angiography, fast and ultrafast scanning techniques and spectroscopy will be discussed. Students will be provided with safety considerations for patients and others. Prerequisite: RDL/RAD 255 or consent of instructor.

RDL 270 Computed Tomography Special Imaging (3)

Clinical experience will enable the student to develop the skills necessary to obtain high quality CT images. Clinical education will be conducted at a clinical facility after or in conjunction with RDL/RAD 260. CT case studies will be presented in a laboratory setting. Activities will include demonstration, observation, and performance of CT procedures under the direct supervision of a CT technologist at the facility. Patient assessment, protocol selection, imaging techniques, image quality, problem solving and critical thinking will be emphasized. The student must have current CPR certification in Basic Cardiac Life Support for health care providers and must have liability insurance for clinical practice. Laboratory: 15 hours. Prerequisite: RDL/RAD 230, RDL/RAD 240, RDL/RAD 250 and/or concurrent with RDL/RAD 260, or consent of instructor.

RDL 275 Magnetic Resonance Imaging Clinical Seminars

(3)

Clinical experience will include patient screening and assessment, image production, image post processing and filming, and image archival and storage. Case studies will be presented during weekly seminars. The student must have current CPR certification in Basic Cardiac Life Support for health care providers and must have liability insurance for clinical practice. Laboratory: 15 hours. Prerequisite: RDL/RAD 265 or consent of instructor.

Reading and Study Skills

CMS 185 College Reading

(3)

CMS 185 is designed to improve textbook reading at the college level by developing vocabulary techniques, comprehension strategies and understanding of textbook graphics. Theories and strategies taught in the course are applied to college level reading materials.

DRE 010 Reading Laboratory

(3)

Designed to improve reading comprehension and vocabulary skills, to develop a variety of reading rates, and to prepare students for college reading through individualized and/or group instruction and practice. Students will be recommended to this course based on the placement examination.

DRE 015 College Study Strategies

(3)

Deals with the development or improvement of study strategies such as time management, study management in the content areas, organization of ideas, listening, note-taking, memory, test-taking, concentration, cognitive styles, etc. Pass/fail.

DRE 030 Improving College Reading

(3)

Designed to improve proficiency in reading comprehension, vocabulary, and critical reading skills. Strategies taught in the course are applied to college level reading materials. Students will be recommended to this course based on the placement examination.

GE 101 Strategies for Academic Success

(3)

This course is designed to teach students how to have a successful college experience both academically and personally. The focus will be on the development of practical knowledge and skills to assist students toward that goal. Topics include time planning, test taking, study techniques, critical thinking, community and campus resources, and managing the personal and relationship issues that face many students.

Real Estate

RE 100 Real Estate Principles I

(3)

A general introduction to real estate as a business and as a profession, designed to acquaint the student with the wide range of subjects necessary to the practice of real estate. Topics include license law, ethics, purchase and listing agreements, brokerage, deeds, financing, appraisals, mortgages, and real estate property managements.

RE 120 Real Estate Marketing

(3)

Marketing and selling of real estate properties are included. Topics emphasized are: qualifying prospects, preparing for property showing, negotiating the sale, developing a five-year

goal plan, and managing time. Computer applications are utilized in the course.

RE 121 Appraising

(3)

Appraising residential real estate for loans, estates, condemnations, and listings, and the factors that contribute to the value of real estate are addressed. The 3 methods of estimating value are included, with emphasis given to the market data approach.

RE 122 Construction and Blueprints

(3)

The basic concepts of construction, design, and blueprint reading are included.

RE 200 Real Estate Principles II

(3)

A continuation of Real Estate Principles I, with emphasis on license law, finance, property management, marketing, land planning and development, brokerage management, fair housing, and appraising. Prerequisite: RE 100.

RE 201 Property Management

(3)

The basics of managing income-producing real property are examined and applied. Topics include management plans, tenant selection, marketing and advertising, accounting methods, net operating income statements, maintenance, and the Landlord Tenant Act. Prerequisite: RE 100.

RE 202 Real Estate Investments I

(3)

A general introduction to the various types of real estate investments. A comparison of investments in real estate with other types of investments. Basic fundamentals of investment analysis and terminology. Prerequisite: RE 100.

RE 220 Real Estate Brokerage Management

(3)

A study of the basic real estate principles and theories as they apply to real estate brokerage management are included. Topics included are: legal and work environment; brokerage management concepts; employment agreements; personnel selection, compensation, and management; policy manuals; listing and marketing management; and financial control. Prerequisite: RE 100.

RE 225 Real Estate Finance

(3)

All aspects of real estate finance are examined, including financial instruments, financial institutions, buyer qualifications, and mortgage markets. Governmental influence, risk analysis, and financing of income-producing properties are included. Prerequisite: RE 100.

RE 230 Real Estate Law

(3)

The laws and regulations pertaining to real estate and related environmental issues are studied. Topics include: ownership rights, title examination, planning and zoning, contracts of sale, Fair Housing regulations, agency issues, court systems and recent court decisions.

RE 299 Selected Topics in Real Estate (Topic)

(1-3)

Topics are presented to expand course offerings as new technology and information are developed, as well as to address local real estate needs. Topics may vary from semester to semester at the discretion of the instructor. May be repeated to a maximum of six credit hours. Prerequisite: Consent of instructor.

Respiratory Care

Previously

RRT/RCP 110 Cardiopulmonary Anatomy & Physiology(3)

The normal structure and function of the respiratory and cardiovascular systems including acid-base physiology are addressed. Prerequisite: MAH 151 or MA 109, BSL 110 and BSL 111 with a grade of C or better, or consent of instructor.

RRT/RCP 120 Fundamentals of Respiratory Care (4)

An introduction to respiratory care including chest physical assessment, medical gas therapy, humidity and aerosol therapy, bronchial hygiene, airway management, medical asepsis and development of the respiratory care plan. Lecture: 3 hours. laboratory: 4 hours. Prerequisite: MAH 151 or MA 109, BSL 110 and BSL 111 with a grade of C or better, or consent of instructor.

RRT/RCP 121 Respiratory Care Practice I (1)

Students will observe and practice medical gas administration, humidity and aerosol therapy, infection control, airway management and bronchial hygiene. Students will also assess patients and participate in developing and implementing respiratory care plans. Laboratory: 4 hours. Prerequisite: MAH 151 or MA 109, BSL 110 and BSL 111 with a grade of C or better, valid Healthcare Provider CPR card and concurrent with or successful completion of RRT 120.

RRT/RCP 130 Cardiopulmonary Pharmacology (2)

Pharmacologic principles, general classifications, actions and interactions of drugs affecting the cardiopulmonary system are addressed. Prerequisite: MAH 151 or MA 109, BSL 110 and BSL 111 with a grade of C or better; or consent of instructor.

RRT/RCP 131 Respiratory Care Practice II (2)

Students will participate in the health care team while practicing techniques of basic respiratory care including airway management and bronchial hygiene. Laboratory: 8 hours. Prerequisite: RRT 110, RRT 120, RRT 121, and RRT 130 with a grade of C or better. Concurrent with or completion of RRT 140.

RRT/RCP 140 Cardiopulmonary Evaluation (2)

Cardiopulmonary assessment is addressed. Topics include blood gas analysis, pulmonary function studies, electrocardiography and chest radiography. Lecture: 1.5 hours, Laboratory: 2 hours. Prerequisite: RRT 110, RRT 120, RRT 121, and RRT 130 with a grade of C or better; or consent of instructor.

RRT/RCP 141 Respiratory Care Practice III (2)

Students will begin practicing adult mechanical ventilation procedures and airway management in the critical care setting in addition to continued performance of the basic respiratory care skills. Laboratory: 8 hours. Prerequisite: RRT 131 and RRT 140 with a grade of C or better.

RRT/RCP 150 Introduction to Mechanical Ventilation (2)

An introduction to the technological aspects of mechanical ventilation including the theory of operation, classification and patient-ventilator system checks. Lecture: 1.5 hours. Laboratory: 2 hours. Prerequisite: RRT 131 and RRT 140 with a grade of C or better; or consent of instructor

RRT/RCP 200 Patient-Ventilator System Management (4)

Concepts in ventilatory support, including physiologic effects, indications, monitoring and management of the patient-ventilator system are addressed. Lecture: 3 hours, laboratory: 4 hours. Prerequisite: RRT 141 and RRT 150 with a grade of C or better; or consent of instructor.

RRT/RCP 210 Cardiopulmonary Pathophysiology (3)

The etiology, diagnosis, clinical manifestations and management of cardiopulmonary disorders as related to respiratory care are addressed. Prerequisite: RRT 141 and RRT 150 with a grade of C or better; or consent of instructor.

RRT/RCP 220 Neonatal/Pediatric Respiratory Care (3)

Evaluation, respiratory care and life support of the neonatal/pediatric are addressed with an emphasis on cardiopulmonary disorders. Lecture: 2.5 hours. Laboratory: 2 hours. Prerequisite: RRT 141 and RRT 150 with a grade of C or better; or consent of instructor.

RRT/RCP 221 Respiratory Care Practice IV (4)

Students will observe and practice advanced cardiopulmonary evaluation techniques while improving efficiency in the ventilatory management of adult patients. Students will also begin to practice pediatric/neonatal mechanical ventilation techniques. Laboratory: 16 hours. Prerequisite: RRT 141 and RRT 150 with a grade of C or better.

RRT/RCP 230 Preventive and Long-Term Respiratory Care (2)

Prevention of cardiopulmonary disorders and care of individuals with long term cardiopulmonary disability are covered. Psychosocial and physical needs of the client are addressed. Emphasis is on improving the quality of life and cardiopulmonary reserve. Special respiratory care needs of diverse client populations in a variety of settings are covered. Prerequisite: RRT 200, RRT 210, RRT 220 and RRT 221 with a grade of C or better; or consent of instructor.

RRT/RCP 231 Respiratory Care Practice V (4)

Emphasis is on preparing the student to participate in effectively and efficiently planning, managing and delivering respiratory care to diverse client populations in various settings. Students will also practice pediatric/neonatal mechanical ventilation techniques as well as observe/practice techniques of advanced cardiac life support. Laboratory: 16 hours. Prerequisite: RRT 200, RRT 210, RRT 220 and RRT 221 with a grade of C or better.

RRT/RCP 240 Advanced Cardiopulmonary Evaluation (3)

Cardiopulmonary assessment is addressed. Topics include hemodynamic monitoring, pulmonary and cardiac exercise/stress testing, advanced cardiac procedures, blood chemistry/fluid and electrolyte balance. Lecture: 2.75 hours. Laboratory: 1 hour. Prerequisite: RRT 200, RRT 210, RRT 220 and RRT 221 with a grade of C or better; or consent of instructor.

RRT/RCP 250 Advanced Cardiac Life Support (2)
This course focuses on managing acute cardiovascular emergencies including: cardiac arrest, acute myocardial infarction and stroke. The course adheres to the American Heart Association Advanced Cardiac Life Support (ACLS) standards. It is designed for healthcare providers whose occupation requires knowledge of ACLS skills. The course is case study driven with group interaction and hands on skills. Students demonstrating essential knowledge and skills during evaluation situations and meeting American Heart Association standards on the written exam will receive an American Heart Association ACLS Provider CPR card. Lecture: 1.5 hours, laboratory: 2 hours. Prerequisite: Current Healthcare Provider CPR card and current enrollment in or graduation from a health program whose occupation requires knowledge of ACLS skills.

RRT/RCP 260 Respiratory Care Seminar (1)
This course will allow students to further analyze material previously studied in the program. In addition, students will systematically prepare for the National Board for Respiratory Care (NBRC) examinations. Job seeking skills will also be addressed. Prerequisite: RRT 200, RRT 210, RRT 220 and RRT 221 with a grade of C or better; or consent of instructor.

Russian and Eastern Studies

CHI/RAE 150 Beginning Chinese I (4)
A course in first semester Chinese language

CHI/RAE 151 Beginning Chinese II (4)
A course in second semester Chinese language. Prerequisite: RAE 150 or equivalent.

Social Work

SW 124 Introduction to Social Services (3)
Introduction to social welfare concepts and philosophies. Examination of the profession of social work and its philosophy and value commitments within social welfare. Public and private service delivery systems will be studied. Required of social work majors and recommended it be taken the first year.

SW 222 Development of Social Welfare (3)
Study of the cultural traditions, value orientations, and political and economic forces which have contributed to the emergence of present social welfare policies and systems in the United States. Required of social work majors and open to all others.

Sociology

SOC 101 Introductory Sociology (3)
Introduction to the concepts and methods of sociology. Investigation of socialization, group processes, social institutions and social change. Student may not receive credit for both this course and GEN 102. V

SOC 152 Modern Social Problems (3)
An introductory course involving an examination of selected social problems of the day. Topics may include family, poverty, education, crime, race, housing, population, health care, industrial development, and power. Prerequisite: SOC 101 or SOC 151 or equivalent social science background. V

SOC 235 Inequality in Society (3)
Analysis of the nature, development, and persistence of inequality in various societies. Diverse dimensions of inequality are viewed as the basis for a number of specific social problems in Western and non-Western societies. Social origins of inequality are emphasized. Policy implications are addressed. Prerequisite: Three hours of sociology or equivalent social science background. V

SOC 260 Population, Resource, and Change (3)
The interrelationship among population variables (size, composition, change), social systems, and environmental conditions will be explored from an issue of problems approach. The tools of populations studies will be introduced and used to examine how population influences society and mankind's use of the environment. Prerequisite: Three hours of sociology or equivalent social science background.

SOC 299 Special Introductory Topics in Sociology (Subtitle required) (3)
An introductory study of a selected topic in sociology. Topics may include, but are not limited to, industrial sociology, sociology of aging, sex roles, criminology, stratification and urban sociology. May be repeated to a maximum of six credits under different subtitle. Prerequisite: Three hours of introductory level sociology or consent of instructor.

Spanish

SPA 101 Elementary Spanish I (spoken approach) (4)
This course is designed to introduce basic modes of communication in Spanish. The emphasis is on everyday language which the students will learn by applying essential grammatical structures to vocabulary. Both listening and reading comprehension are stressed. The textbook provides instructional assignments and self-correctional exercises. Not open to students who have credit for SPI 141. VI

SPA 102 Elementary Spanish II (spoken approach) (4)
A continuation of SPI 101. Not open to students who have credit for SPI 142. Prerequisite: SPI 101 or consent of the department and placement test. VI

SPA 201 Intermediate Spanish III (spoken approach) (3)
Review and reinforcement of grammatical and phonological patterns. Emphasis will be given to developing reading, listening and speaking skills based on contemporary texts. Not open to students who have credit for SPI 241. Prerequisite: SPI 102 or consent of department and placement test. VI

SPA 202 Intermediate Spanish IV (spoken approach) (3)
Continuation of SPI 201. Not open to students who have credit for SPI 242. Prerequisite: SPI 201 or consent of department and placement test. VI

Special Education

SED 101 American Sign Language I (3)
A functional-notational approach to learning beginning competency in American Sign Language (ASL). The syntax, grammar, and non-manual markers (behaviors) of ASL and cultural information will be incorporated. After an initial orientation period, no verbal communication will be used in the classroom.

SED 102 American Sign Language II (3)
A functional-notational approach designed to follow SED 101 that will enhance students' knowledge of American Sign Language and expand their understanding and appreciation of the people who use it. Prerequisite: SED 101.

SED 203 American Sign Language III (3)
Emphasis is placed on practical application of ASL signing skills, development of cross-cultural communication abilities, and vocabulary expansion. Linguistic information is reviewed and additional linguistic materials are introduced. Prerequisite: SED 102.

SED 204 American Sign Language IV (3)
Continued expansion of sign vocabulary, sharpening of conversational skills including fingerspelling and numbers, semantics, morphology, syntax and other ASL features applied to conversational settings. Prerequisite: SED 203.

Statistics

STA 200 Statistics: A Force in Human Judgment (3)
This course is concerned with the interaction of the science and art of statistics with our everyday lives emphasizing examples from the social and behavioral sciences. The student will not be required to learn mathematical formulas. Topics include the nature of statistics, uses and misuses of statistics, the scope and limitations of statistics, criteria by which published statistics may be judged, interpretation of probability and the art of decision making. Prerequisite: Completion of the math requirement. III

STA 291 Statistical Method (3)
Introduction to principles of statistics. Statistical description of sample data including frequency distributions, measures of central tendency, and measures of dispersion. Theoretical distributions, statistical estimation, and hypothesis testing. Introduction to simple linear regression and correlation. Prerequisite: MA 113, 123 or equivalent. III

Student Development and Counseling

SDC 100 College Survival Seminar (1)
This course is designed to introduce new students to college in order to facilitate a successful college experience. Students will discover campus resources and support services available to them. Students will be introduced to career and life planning, study strategies, coping skills (i.e., stress management, interpersonal relationships), team projects, activities aimed at self discovery, and issues that impact college campuses and our global society that are important to the development of the modern college student.

SDC 102 Stress Management (1)
Students will review various physiological and psychological approaches to stress with an emphasis on creating an awareness of how to change and manage their responses to stressful situations. Options and appropriate exercises for coping with anxiety will be presented. Topics will include time management, cognitive restructuring, health, wellness and relaxation training.

SDC 105 Career Planning Seminar (1)
Students will become more knowledgeable about themselves and career options. Self-assessments and vocational inventories measuring interests, work values, skills and abilities will be administered to students. Students will learn how to research careers, career alternatives and employment trends. Topics will include goal setting, decision-making and employability skills. Students will complete a personal career plan at the conclusion of the course.

SDC 109 Employability Skills (1)
This course is designed to prepare students for the world of work. Students will be introduced to self and career assessment, employability skills (i.e., the application process, resume writing, interviewing, and follow-ups), and the job market and job search strategies.

Women's Studies

WS 200 Introduction to Women's Studies in the Social Sciences (3)
An introduction to women's studies from a social science perspective, using a cross-cultural and interdisciplinary approach. Introduces students to social science explanations for sex-typed behavior, to social perceptions of women and men, and to the roles of women in social and cultural life. V

WS 201 Introduction to Women's Studies in the Arts and Humanities (3)
An introduction to women's history in work, family and creative production. This course presents a set of organizing ideas for examining issues and problems of women in contemporary society, and gives students opportunities for writing, interviewing and discussing issues of gender, class and race from an interdisciplinary point of view. It introduces students to the basic methods of humanistic inquiry in general and humanistic women's studies in particular. VI