

# Course Descriptions

## ACADEMIC ACHIEVEMENT

### AAA 090 ACADEMIC ACHIEVEMENT STRATEGIES 3 CREDITS

Students will develop personalized approaches to learn and succeed as they transition into college. Topics include goal-setting, time management, textbook reading strategies, note-taking, test-taking, listening techniques, concentration and memory devices, and critical thinking for student success. PREREQUISITE(S): CPT reading score 60-79

### AAA 103 COLLEGE ORIENTATION 1 CREDIT

This course is an orientation course designed for students new to higher education. Topics will include personal learning and study skill inventories, goal setting, educational planning and introductions to college services and procedures.

### AAA 109 ADVANCED ACADEMIC ACHIEVEMENT 3 CREDITS

Students will examine theories and practices associated with successful learning and adopt those that enhance their college success. Critical areas for study include education and career planning, effective communication, personal management, critical and creative thinking, development of community and awareness of diversity, leadership and techniques for successful academic performance. This course is recommended for new and returning students. PREREQUISITE(S): CPT reading score 80-120

## ACCOUNTING

### ACC 101 FUNDAMENTALS OF ACCOUNTING 3 CREDITS

This course presents the basic elements and concepts of accounting, with emphasis on the procedures used for maintaining journals, ledgers, and other related records, and for the completion of end-of period reports for small service and merchandising businesses. For non-accounting majors.

### ACC 115 PAYROLL ACCOUNTING 3 CREDITS

A study of federal and state laws and their effects on personnel and payroll records. The course is non technical and is intended to give students a practical working knowledge of the current tax laws and actual experience in applying regulations. Student will be exposed to computerized payroll procedures. PREREQUISITE(S): ACC 101 or 121, or enrolled concurrently, or instructor's permission

### ACC 118 ANALYZING AND INTERPRETING FINANCIAL STATEMENTS 3 CREDITS

An introduction to accounting and its significant role in making sound business decisions. This course is designed to teach students how to use financial statements to be wise users of accounting information. The course will give practical experience using ratio analysis to make credit and equity decisions. Instructional methods include lecture, case studies, group interaction and internet research projects.

### ACC 121 PRINCIPLES OF ACCOUNTING I 4 CREDITS

This course introduces the study of accounting principles to give the student an understanding of the theory and logic that underlie procedures and practices. Major topics include the accounting cycle for service and merchandising businesses, subsidiary ledgers, internal control principles and practices, notes and interest, inventory systems and costing, plant assets and intangible asset accounting, and depreciation methods and practices. This is the first course in the accounting sequence.

### ACC 122 PRINCIPLES OF ACCOUNTING II 4 CREDITS

This course continues the study of accounting principles as they apply to corporations. Major topics include: stocks, bonds, investments, the cash flow statement, financial analysis, budgeting, and cost and managerial accounting. PREREQUISITE(S): ACC 121 or equivalent; MAT 106, 111 or higher strongly recommended

### ACC 125 COMPUTERIZED ACCOUNTING 3 CREDITS

This course introduces computerized accounting in a microcomputer environment. Topics include a review of basic accounting theory and training in both manual and computerized accounting procedures. By using a pre-designed accounting software package, students learn the principles and techniques required for computerized processing of accounting data and for generating accounting reports and financial statements. Students will have extensive hands-on experience with computerized systems. PREREQUISITE(S): ACC 101 or ACC 131

### INCOME TAX I 3 CREDITS

This course is the study of basic concepts of federal income taxation, including gross income, deductions, accounting period and methods, and property transactions, with emphasis on individual taxation.

### ACC 135 SPREADSHEET APPLICATION FOR ACCOUNTING 3 CREDITS

This course introduces spreadsheets as an accounting tool. Using an accounting perspective the student will apply fundamental spreadsheet concepts. The spreadsheet will be used as a problem-solving and decision making tool. This course involves a ten-key pad component. PREREQUISITE(S): ACC 122, CIS 155 or spreadsheet experience (all required)

### ACC 211 INTERMEDIATE FINANCIAL ACCOUNTING I 3 CREDITS

Comprehensive analysis of generally accepted accounting principles (GAAP), accounting theory, concepts and financial reporting principles for public corporations. PREREQUISITE(S): Two semesters of accounting principles.

### ACC 215 ACCOUNTING, INFORMATION SYSTEMS 3 CREDITS

Explores the concepts, tools and techniques for the design and analysis of accounting information systems and automated data processing methods, standard transaction cycles, data base management, internal controls, computer controls, auditing computer systems and networks, expert systems, e-commerce, current and future research in information technology, and the role of the accountant in the management of accounting information systems.

### ACC 226 COST ACCOUNTING 3 CREDITS

This course is a study of the cost accumulation methods and management reports. The concepts and procedures of job order, process, standard and direct cost systems are covered; and budgeting, planning and control of costs are included. PREREQUISITE(S): ACC 122

### ACC 229 MANAGERIAL ACCOUNTING 3 CREDITS

The analysis of financial statements and other accounting data used by management in the planning and control functions. Includes a study of cost behavior, volume-cost-profit relationships, return on investment, and the budgetary process. PREREQUISITE(S): ACC 122

### ACC 235 COMPUTERIZED ACCOUNTING FOR SMALL BUSINESSES 3 CREDITS

This course introduces a microcomputer package, such as Quickbooks, One-write Plus or similar accounting application, for use in a small business. The student will learn how to install and start the application and how to convert a manual accounting system to an electronic accounting system. The course will focus upon an easy to use bookkeeping system that incorporates all daily transactions (checks, invoices, bills, and deposits) and summarizes bookkeeping records in reports to give a complete financial picture.

### ACC 245 COMPUTERIZED ACCOUNTING WITH A PROFESSIONAL PACKAGE 3 CREDITS

This course integrates accounting principles and practices with a professional computerized accounting package such as Peachtree, Dac Easy, or other professional packages. Emphasis will be on computerized functions of the general ledger and integrated accounts payable, accounts receivable, invoicing, and payroll systems. PREREQUISITE(S): ACC 121 or 101

### ACC 275 SPECIAL TOPICS VARIABLE CREDITS (1-6)

Description: Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**ACC 285 INDEPENDENT STUDY**  
**1-6 CREDIT**  
Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

**ACC 287 COOP EDUCATION**  
**3 CREDITS**  
Description: Provides an opportunity to gain practical experience in applying occupational skills and/or to develop specific skills in a practical work setting. The instructor works with the student to select an appropriate work site, establish learning objectives, and coordinate learning activities with the employer or work site supervisor. For Accounting majors only.  
PREREQUISITE: Instructor's Permission

## **ACTIVITY PROFESSIONAL'S TRAINING**

**APT 101 BASIC ACTIVITY PROFESSIONALS' TRAINING PART I**  
**4 CREDITS**  
This course, along with APT 102, and APT 103, satisfies the requirements for state qualification as an accredited program for Activity Professionals. The topics covered include an overview of the activity profession, human development in the late adult years and methods of service delivery.  
PREREQUISITE(S): High school diploma or GED.

**APT 102 BASIC ACTIVITY PROFESSIONALS' TRAINING PART II**  
**4 CREDITS**  
This course, together with APT 101 and APT 103, satisfies the requirements for state qualification as an accredited training program for activities professionals. The topics covered include: standards of practice, practitioner behavior, regulations, activity care planning of quality of life.  
PREREQUISITE(S): APT 101

**APT 188 BASIC EDUCATION PRACTICUM**  
**2 CREDITS**  
This course is the practical experience portion of the APT 100 courses, which together comprise the Basic Education Course curriculum established by the National Certification Council for Activity Professionals and the National Association of Activity Professionals. The student will demonstrate an understanding of the activity program in a long-term care setting, and the ability to assist with the quality of life components with geriatric elderly through supervised learning experiences.  
COREQUISITE(S): APT 101, 202

**APT 201 ADVANCED DOCUMENTATION AND REGULATORY COMPLIANCE**  
**2 CREDITS**  
This course is one of four courses which together comprise the Advanced Management Curriculum established by the National Certification Council for Activity Professionals (NCCAP) and the National Association of Activity Professionals (NAAP). This course will include an in-depth analysis of documentation and the corresponding regulations. In addition, State and Federal regulations and survey

process will be reviewed. This course builds on the skills learned in the APT 100 course; fine tuning care planning and documentation as well as teaches professional writing skills ie: writing proposals and legislative correspondence.  
PREREQUISITE(S): APT 100 or instructor's permission

**APT 202 ADMINISTRATIVE PRACTICES IN THE ACTIVITY PROFESSION**  
**2 CREDITS**  
This course is one of five courses which together comprise the advanced management curriculum established by the National Certification Council of Activity Professionals and the National Association of Activity Professionals. This course focuses on the practical issues in managing an activity department including: management and leadership techniques; personnel issues including recruiting, evaluation, and termination; management writing skills; and financial management are discussed.  
PREREQUISITE(S): APT 100 or instructor's permission

**APT 203 VOLUNTEER MANAGEMENT**  
**2 CREDITS**  
This course is one of five courses which together comprise the advanced management curriculum established by the National Certification Council of Activity Professionals and the National Association of Activity Professionals. This course covers the techniques needed by the Activity Coordinator to develop and manage an effective volunteer program. The student will learn how to recruit, interview, schedule, train, supervise, evaluate and motivate volunteers.  
PREREQUISITE(S): APT 100 or instructor's permission

**APT 204 COMMUNITY RELATIONS AND COMMUNICATION IN THE ACTIVITY DEPARTMENT**  
**2 CREDITS**  
This course is one of five courses which together comprise the advanced management curriculum established by the National Certification Council of Activity Professionals and the National Association of Activity Professionals. This course will focus on Public Relations and Community Relations. The student will learn how to sell their activity program to the community and raise the interest of the community. Students will learn effective communication techniques including public speaking, listening, and professional writing skills.  
PREREQUISITE(S): APT 100 or instructor's permission

**APT 275 SPECIAL TOPICS**  
**1-6 CREDIT**  
Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**APT 285 INDEPENDENT STUDY**  
**1-6 CREDIT**  
Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

**APT 288 ADVANCED MANAGEMENT PRACTICUM**  
**2 CREDITS**  
This course is the practical experience portion of the APT200 courses which comprise the advanced management curriculum established by the National Certification Council of Activity Professionals and the National Association of Activity Professionals. The student will demonstrate an understanding of the management skills needed to be an activity professional through supervised learning experience in a geriatric based care enter.  
PREREQUISITE(S): APT 100 and at least two of the following; APT 201, 202, 203, 204.  
COREQUISITE(S): APT 201, 202, 203, 204

## **AIR FORCE ROTC**

**AIR 101 DEVELOPMENT OF AIR POWER**  
**1 CREDIT**  
This course is a study of air power from balloons and dirigibles through the jet age; a historical review of air power employment in military and nonmilitary operations in support of national objectives; a look at the evolution of air power concepts and doctrine; and an introduction to the development of communicative skills.

**AIR 102 DEVELOPMENT OF AIR POWER II**  
**1 CREDIT**  
This course is a survey of the development of air power after World War II. Understand that the development of aviation is a multi-faceted tale of technological breakthroughs, politics, controversy and achievement. We will focus on the United States Air Force, its heritage and future.

**AIR 201 THE AIR FORCE TODAY, I**  
**1 CREDIT**  
This course is a survey course which focuses on the organizational structure of the Air Force, and the missions of Air Force commands; officership and professionalism; and oral and written communicative skills. A weekly Leadership Laboratory consisting of Air Force customs and courtesies, Air Force environment, drill and ceremonies, is mandatory for those students pursuing and Air Force commission.

**AIR 202 THE AIR FORCE TODAY, II**  
**1 CREDIT**  
This course focuses on the basic characteristics of air doctrine.; United States Air Force mission and organization; functions of United States strategic offensive and defensive forces; general purpose forces; aerospace support forces; professionalism and officership; and an assessment of communicative skills. A weekly 1 hour Leadership Lab consisting of Air Force customs and courtesies, Air Force environment, and drill and ceremonies is mandatory.

## ALLIED HEALTH

**HPR 106 LAW & ETHICS FOR HEALTH PROFESSIONS**  
**2 CREDITS**  
Advances student knowledge in the study and application of medico-legal concepts in medical careers, establishes a foundation for ethical behavior and decision making.  
PREREQUISITE(S): Determined by individual program guides.  
COREQUISITE(S): Determined by individual program guides.

**HPR 112 PHLEBOTOMY**  
**8 CREDITS**  
Teaches the duties associated with the practice of venipuncture, capillary puncture, and special collection procedures. Students will have experience with quality control, infection control and safety procedures as well as laboratory computer systems. Students successfully completing this course may apply for a National Phlebotomy Registry Examination.  
PREREQUISITE(S): None  
COREQUISITE(S): None

**HPR 178 MEDICAL TERMINOLOGY**  
**3 CREDITS**  
This course introduces the student to the structure of medical terms with emphasis on combining and using the most common prefixes, roots and suffixes. Includes terms related to clinical laboratory, diagnostic imaging, nuclear medicine and oncology as well as major body systems. Classroom structure provides accepted pronunciation of terms and relative use in the healthcare setting.

**HPR 205 MICROBIOLOGY OF INFECTIOUS DISEASES**  
**3 CREDIT**  
Acquaint the student with microbes and their roles in infectious disease. It includes descriptions of bacteria, viruses, fungi, and protozoa; as well as techniques for growing, controlling and treating diseases caused by these organisms. Within the scope of this course are units which discuss how the diseases are diagnosed, and finally, epidemiology and communicability of individual diseases grouped by portals of entry. Prevention and infection control issues as well as current issues surrounding infectious disease may also be discussed.  
PREREQUISITE(S): Bio 201 or BIO 105 (not concurrent) or instructor permission

**HPR 206 MICROBIOLOGY OF INFECTIONS DISEASES - LAB**  
**1 CREDIT**  
Provides a laboratory experience to acquaint the prenursing students with culture technique, staining methods, identification systems and methods on control of infectious disease microorganisms. It will include specimen, use of the light microscope, the technique of isolation streaking, antimicrobial sensitivity testing. This laboratory should be taken concurrently with HPR 205 lecture but HPR 205 lecture may be taken without this lab.  
PREREQUISITE(S): HPR 205  
COREQUISITE(S): HPR 205

**HPR 240 ROLE OF DEATH & BEREAVEMENT IN SOCIETY**  
**3 CREDIT**  
Examines death from the perspectives of the dying individual, the bereaved and the caregivers. The course will focus on sociological, cultural, spiritual, development and psychological aspects of dying and bereavement. It will also include study of various groups and their relationships to death and disposition, funerals and other rites.  
PREREQUISITE(S): PSY 101

**HPR 275 SPECIAL TOPICS**  
**1-6 CREDIT**  
Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**HPR 285 INDEPENDENT STUDY**  
**1-6 CREDIT**  
Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

**HWE 100 HUMAN NUTRITION**  
**3 CREDITS**  
Introduces basic principles of nutrition with emphasis on personal nutrition. Satisfies nutrition requirement of students entering health care professions  
PREREQUISITE(S): None  
COREQUISITE(S): None

**HWE 103 COMMUNITY FIRST AID AND CPR**  
**1 CREDIT**  
Uses demonstration videos, instructor led practice and workbook/textbook study to prepare for certification in Adult/Child/Infant CPR and Community First Aid.

**HWE 124 FITNESS AND WELLNESS**  
**2 CREDIT**  
Provides information on fitness and wellness and to serve as a guide to design, implement, and evaluate a complete personal fitness and wellness program. The course integrates the basic components of fitness and wellness in understanding human health in order to achieve well-being. This course offers current information in the health field and provides self-assessments for health risk and wellness behaviors. This includes lifestyle modification, nutrition, weight management, stress management, cardiovascular and cancer risk reduction, exercise and aging, exercise related injury, exercise and the environment, prevention of sexually transmitted diseases, substance abuse (including tobacco, alcohol and other psychoactive drugs), and analysis and interpretation of research publications and web sites in health and wellness.

## AMERICAN SIGN LANGUAGE

**ASL 121 INTRODUCTION TO AMERICAN SIGN LANGUAGE**  
**5 CREDITS**  
This course will expose the student to American Sign Language. Readiness activities will be conducted focusing on visual/receptive skills and basic communication. The direct experience method, using ASL, is used to enhance the learning process. This course is a prerequisite for ASL 122.

**ASL 122 AMERICAN SIGN LANGUAGE II**  
**5 CREDITS**  
In this course, the student will have an opportunity to develop syntactic knowledge of American Sign Language (ASL), basic vocabulary and basic conversational skills. Vital aspects of deaf culture and community will be incorporated. The direct experience method, using ASL, will be used to enhance the learning process. Students must successfully complete this course prior to being accepted into the Interpreting and Transliterating Preparations Program.  
PREREQUISITE(S): ASL 121

**ASL 275 SPECIAL TOPICS**  
**1-6 CREDITS**  
Description: Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**ASL 285 INDEPENDENT STUDY**  
**1-6 CREDIT**  
Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## ANTHROPOLOGY

**ANT 101 CULTURAL ANTHROPOLOGY**  
**3 CREDITS**  
Studies human cultural patterns and learned behavior. Includes linguistics, social and political organization, religion, culture and personality, culture change, and applied anthropology.

**ANT 107 INTRODUCTON TO ARCHAEOLOGY**  
**3 CREDITS**  
This course focuses upon the science of the recovering the human prehistoric and historic past through excavation, analysis and interpretation of material remains. It includes a survey of the archaeology of different areas of the old and new worlds. Also included are the works of selected archaeologists and discussions of major archaeological theories.

**ANT 111 PHYSICAL ANTHROPOLOGY**  
**3 CREDITS**  
Studies human biology and its effects on behavior. Includes principles of genetics and evolution, vertebrates and primates, human origins, human variation, and ecology.

**ANT 121 CULTURES OF THE  
SOUTHWEST 3 CREDITS**

The American Southwest provides a natural laboratory for the study of human cultural development and adaptation, from the earliest lithic cultures (Clovis and Folsom Hunters) to the various Desert Cultures, settled villages, and modern cities. The scope of this study will include the major prehistoric cultures (Early Man, Desert Cultures, Anasazi, Hohokam, Mogollon, and Sinagua) and the historic cultures (Pueblos, Navajo, Apache, Pima, Papago, Spanish-Mexican, and Anglo-American). Recommended preliminary coursework: ANT 101 and ANT 107. Recommended subsequent coursework: ANT 215, Anthropology Field Studies, and Special Topics in Anthropology.

**ANT 215 INDIANS OF NORTH  
AMERICA 3 CREDITS**

This course studies Indians of North America from the origins of native peoples in the New World, through the development of geographic culture areas, to European contact and subsequent contemporary Native American issues.

**ANT 275 SPECIAL TOPICS IN  
ANTHROPOLOGY 1-6 CREDIT**

Provides opportunity for off-campus field experience or study of a special topic in anthropology. Field study may occur at archaeological sites, museums, host educational institutions, within ethnographic situations, or other anthropologically appropriate places. Study of special topic may include that derived from physical anthropology cultural anthropology, archaeology, or other anthropological discipline.

**ANT 280 AB SOUTHWEST FIELD  
EXPLORATION 2 CREDITS**

Introduces the social, religious, economic and cultural development of the Anasazi. Major ruins, excavation sites and laboratory facilities in the Four Corners region are explored.  
PREREQUISITE(S): College level reading

**ANT 285 INDEPENDENT STUDY  
1-6 CREDIT**

This course allows the student to independently study certain aspects of anthropology. It provides opportunity to investigate an area of interest that developed in an introductory course.

## **ARCHITECTURAL DRAFTING, CONTRACTS & MATERIALS**

**ARC 101 INTRODUCTION TO  
ARCHITECTURAL DRAWING  
5 CREDITS**

Introduces representations in architectural drafting: projections, sectioning, pictorial drawings, and architectural representations.

**ARC 102 RESIDENTIAL  
ARCHITECTURE  
5 CREDITS**

Covers residential planning, wood frame construction, elements of working drawings, free hand sketching, building code requirements, detailing, and structural framing.  
PREREQUISITE(S): ARC 101 and CAD 102

**ARC 107 BLUEPRINT READING  
RESIDENTIAL/  
COMMERCIAL 3 CREDITS**

The interpretation and reading of blueprints and related documents as used in the building trades industry and architect's office.

**ARC 108 BLUEPRINT READING II  
(CIVIL) 3 CREDITS**

The interpretation and reading of civil blueprints. The branch of Engineering dealing with the design and construction of highways, bridges, tunnels, and waterworks.

**ARC 116 BUILDING MATERIALS  
3 CREDITS**

A general introduction to building materials and methods commonly in use today. Includes interior and exterior materials from foundations to roof systems.

**ARC 121 BUILDING STRUCTURE  
ANALYSIS 3 CREDITS**

Analysis of structural components for buildings. Study of vertical and horizontal loadings, shear and moment diagrams, wood, laminated wood, and steel beams, wood and steel columns. Student will be able to solve simple structural engineering problems.  
PREREQUISITE(S): MAT 116, 117

**ARC 125 HISTORY OF  
ARCHITECTURE 3 CREDITS**

A study of architectural styles, structures, architects, engineers, and artists from early times to present times. Emphasis is placed upon the influences which determined the architectural characteristics.

**ARC 127 ARCHITECTURAL  
PERSPECTIVE DRAWING  
2 CREDITS**

A study of freehand sketching, formal one and two point perspective systems. Black and white pencil rendering technique will be developed. Interior and exterior perspectives, including entourage, will be studied.  
PREREQUISITE(S): ARC 101 or instructor's permission

**ARC 205 COMMERCIAL DRAWING  
PRACTICE I 4 CREDITS**

A study of small commercial and multiple family dwellings. Construction techniques are discussed. Working drawings are prepared through extensive use of references and manufacturers catalog.  
PREREQUISITE(S): ARC 102

**ARC 215 ARCHITECTURAL  
GRAPHICS 3 CREDITS**

This course is designed to assist the architectural student in developing techniques of graphic rendering using pencil, ink, and color media. Both freehand and mechanical methods are stressed.  
PREREQUISITE(S): ARC 127, 227 or instructor's permission

**ARC 216 ESTIMATING I 3 CREDITS**

The student will develop skills in estimating the amount and cost of various types of construction. The student will demonstrate these skills by making estimates of material and labor quantities and costs for representative types of construction. Computer applications will be necessary.  
PREREQUISITE(S): ARC 107, or instructor's permission

**ARC 218 SURVEYING 3 CREDITS**

Course includes the fundamentals of plane surveying and the use of surveying instruments. It emphasizes construction related aspects of surveying and the development of skills in using surveying field information. Surveying problems are studied in coordinated class and laboratory assignments.  
PREREQUISITE(S): MAT 116

**ARC 225 ARCHITECTURAL  
FREEHAND SKETCHING  
2 CREDITS**

The development of skills in freehand drawing utilizing conventional pencil and pen techniques. Emphasis will be placed upon the basic pictorial principle involving isometric and perspective drawing.

**ARC 226 CONSTRUCTION  
SCHEDULING 3 CREDITS**

Students will discuss various methods of project scheduling. Emphasis will be placed on CPM techniques and strategies.  
PREREQUISITE(S): ARC 107, or instructor's permission

**ARC 228 CONTRACTS, BONDS &  
INSURANCE 3 CREDITS**

A study of contracts, graphs, diagrams used in management of construction projects. Management control through the use of CPM will be covered, along with a brief introduction to construction management concepts.

**ARC 231 BUILDING SERVICE  
SYSTEMS 3 CREDITS**

An elementary study of the mechanical and electrical systems used in buildings to provide comfort and utility within the structure. Introduces the interrelationship of architecture and engineering considerations and functions.  
PREREQUISITE(S): ARC 116

**ARC 236 CODES/ZONING/  
SPECIFICATIONS 3 CREDITS**

A study is made of the restrictions, standards, and requirements which in the interest of public safety and welfare have been established by law to govern the construction of buildings and their materials. Specifications are developed to describe building materials to be furnished and how they are to be installed.

**ARC 255 ARCHITECTURAL SEMINAR  
1 CREDIT**

Selected topics introduced for discussion of advanced architectural students. Topics will include employee expectations, interview techniques, resume preparation, interaction of office personnel, portfolio preparation, and job hunting strategies. Emphasis will be placed upon student interaction, participation and investigation.  
PREREQUISITE(S): ARC 205

**ARC 275 SPECIAL TOPICS IN ARCHITECTURAL TECHNOLOGY**

**1-6 CREDIT**

These courses provide students with opportunities to study topics of special interest that may lie outside of the standard ARC program. A syllabus will specify the content of each course at the time it is offered.

**ARC 285 INDEPENDENT STUDY**

**1-6 CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

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**ARMY ROTC**

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**ARM 103 ADVENTURES IN LEADERSHIP I 2 CREDITS**

Familiarizes the student with the organization and role of the Army, leadership doctrine, land navigation, first aid, communication skills and ethical problem solving. Provides the student with knowledge about what career opportunities are available as an Army Officer in either the active or reserve component. No Army obligation is incurred in taking this course.

**ARM 104 ADVENTURES IN LEADERSHIP II 2 CREDITS**

Builds on what was learned in ARM 103. Continues the focus on the Army's leadership doctrine, land navigation, first aid and communication skills. This course teaches the student how to function as a member of a team, and introduces small unit military operations. Provides the student with knowledge of what career opportunities are available as an Army Officer in either the active or reserve component. No Army obligation is incurred in taking this course.

**ARM 203 ADVENTURES IN LEADERSHIP III 2 CREDITS**

Provides a basic foundation in leadership fundamentals as well as the basic military training foundations necessary to enter the US Army Reserve Officer Training Corps (ROTC) Advanced Course. This course familiarizes the student with the organization and role of the Army. In addition it provides a concept of career and training opportunities that are available as an Army Officer in either the active or reserve component to assist the student in deciding to enter the Advanced Course program. No Army obligation is incurred in taking this course.

**ARM 204 ADVENTURES IN LEADERSHIP IV 2 CREDITS**

This course is a continuation of ARM 203. Provides a basic foundation in leadership fundamentals as well as the basic military training foundations necessary to enter the US Army Reserve Officer Training Corps (ROTC) Advanced Course. This course familiarizes the student with the organization and role of the Army. In addition it provides a concept of career and training opportunities that are available as an Army Officer in either the active or reserve component to assist the student in deciding to enter the Advanced Course program. No Army obligation is incurred in taking this course.

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**ART**

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**ART 110 ART APPRECIATION 3 CREDITS**

This course is an introduction to the visual arts including language, concepts, process and history.

**ART 111 ART HISTORY I 3 CREDITS**

Provides the knowledge base to understand the visual arts, especially as related to Western Culture. Surveys the visual arts from the Ancient through the Medieval periods.

**ART 112 ART HISTORY II 3 CREDITS**

Provides the knowledge base to understand the visual arts, especially as related to Western Culture. Surveys the visual arts from the Renaissance through the Modern periods.

**ART 121 DRAWING I 3 CREDITS**

This course is an investigation of various approaches and media designed to develop drawing skills and visual awareness.

**ART 122 DRAWING II 3 CREDITS**

This course is a study of expression drawing techniques and development of individual expressive style.

PREREQUISITE(S): ART 121

**ART 123 WATERCOLOR I 3 CREDITS**

Provides an introduction to the basic techniques and unique aspects of materials involved in the use of either transparent or opaque water media or both. Color theory is included.

PREREQUISITE(S): ART 121, 131, its equivalency, or permission of the instructor.  
COREQUISITES(S): None

**ART 124 WATERCOLOR II 3 CREDITS**

Continues the study of watercolor techniques, emphasizing original compositions and experimentation with materials. Color theory is included.

PREREQUISITE(S): ART 123 or its equivalency  
COREQUISITES(S): None

**ART 131 DESIGN I 3 CREDITS**

This course is a study of basic design elements, visual perception, form and composition.

**ART 132 DESIGN II 3 CREDITS**

This course covers the application of design elements and principles to both two and three dimensional problems.

PREREQUISITE(S): ART 131

**ART 141 JEWELRY AND METALWORK I 3 CREDITS**

This course is an introduction to the construction of jewelry designs in metals and small casting techniques.

**ART 142 JEWELRY AND METALWORK II 3 CREDITS**

This course emphasizes conceptual design development, using casting and specialized techniques.

PREREQUISITE(S): ART 141 or equivalent

**ART 154 SCULPTURE I 3 CREDITS**

This course is an introduction to the fundamentals of sculpture such as modeling, casting, carving and the assemblage of processes.

PREREQUISITE(S): Art 131, Art 132 or equivalent

COREQUISITES(S): None

**ART 155 SCULPTURE II 3 CREDITS**

This course provides development of the understanding and manipulation of three dimensional form, with greater concentration on individual creativity and style.

PREREQUISITE(S): ART 171 or equivalent

COREQUISITES(S): None

**ART 156 FIGURE DRAWING I 3 CREDITS**

This course is an introduction to the basic techniques of drawing the human figure.

**ART 158 HISTORY OF PHOTOGRAPHY 3 CREDITS**

This course will explore the development of the medium of photography from its invention in 1826 up to the present. The influences of photography and other mediums on each other will be discussed. Social and technological developments will be looked into in terms of their influence on the medium. Major 19th and 20th century photographers' work will be viewed and studied.

**ART 161 CERAMICS I 3 CREDITS**

This course is an introduction to traditional and contemporary ceramic forms and processes including handbuilding and throwing on the potter's wheel.

**ART 162 CERAMICS II 3 CREDITS**

This course is a continuation of Ceramics I with an emphasis on skills, techniques and form.

PREREQUISITE(S): ART 161 or equivalent

**ART 205 MUSEUM PRACTICUM 3 CREDITS**

Introductory course in basic museology involving lectures, field trips, and practical experience. This course examines various aspects of museum professions: art education, curatorial techniques, installation design, and conservation. This course will also train docents in teaching methods for both children and adults.

**ART 211 PAINTING I 3 CREDITS**

This course covers color, composition, materials and techniques of studio painting.

PREREQUISITE(S): ART 121 or 131

**ART 212 PAINTING II 3 CREDITS**

This course emphasizes experimentation with materials, composition and color.

PREREQUISITE(S): ART 211

**ART 213 PAINTING III 3 CREDITS**

Advanced students develop a body of work for exhibition and focused inquiry within the painting medium.

PREREQUISITE(S): ART 211, 212 or instructor's permission

**ART 215 MIXED MEDIA 3 CREDITS**

Creative painting with watercolor, gouache, acrylic, inks and dry media, combined with resists and collage.

**ART 230 SCULPTING THE FIGURE**  
**1 CREDIT**

This is a course for beginning through advanced students in sculpting the human figure using modeling techniques in clay.

**ART 241 JEWELRY & METAL WORK III**  
**3 CREDITS**

This course focuses upon advanced work and emphasizes experimentation with materials and techniques, individual designs, and superior craftsmanship.  
PREREQUISITE(S): ART 142

**ART 252 DOCUMENTARY PHOTOGRAPHY**  
**3 CREDITS**

In this course the class will work on a group project of comprehensively documenting a single place through photography.  
PREREQUISITE(S): ART 151, 152

**ART 256 ADVANCED FIGURE DRAWING II**  
**3 CREDITS**

This course provides continuing study of the various methods of drawing the human figure, with emphasis on the description of form and individual type.  
PREREQUISITE(S): ART 156

**ART 261 CERAMICS III**  
**3 CREDITS**

This course encourages students to develop an individual style of wheel thrown and hand built ceramic forms with continuing involvement in surface treatment.  
PREREQUISITE(S): ART 162

**ART 268 SCULPTURE III**  
**3 CREDITS**

This course focuses on advanced individual sculpture projects, emphasizing experimentation with materials, accomplished techniques and conceptual significance.  
PREREQUISITE(S): ART 225 or instructor's permission.

## **ASTRONOMY**

**AST 101 ASTRONOMY I** 4 CREDITS  
Studies the history of astronomy, the tools of the astronomer and the contents of the solar system: the planets, moons, asteroids, comets, and meteoroids. This course includes laboratory experience.

**AST 102 ASTRONOMY II** 4 CREDITS

Studies the structure and life cycles of the stars, the sun, galaxies, and the universe as a whole, including cosmology and relativity. This course includes laboratory experience.

**AST 275 TOPICS IN ASTRONOMY**  
**1-6 CREDITS**

These courses will provide a variety of topics and learning activities for the student. Specific topics are not listed but will be offered as appropriate. Investigation of contemporary research and current events will be encouraged.  
PREREQUISITE(S): AST 101 and instructor's permission

**AST 285 INDEPENDENT STUDY**  
**1-6 CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## **ATHLETICS**

**ATH 100 VARSITY SPORTS** 1 CREDIT

Offers the varsity athlete the opportunity for refinement of skills involved in their respective sport. Emphasizes an understanding and application of skills of the individual sport in intercollegiate competition, team cooperation, and school spirit.  
PREREQUISITE(S):

Permission required by the Athletic Director.  
ATH 100 and permission required by the Athletic Director.

**ATH 150 VARSITY SPORTS II** 1 CREDIT

Offers the varsity athlete the opportunity for refinement of skills involved in their respective sport. Emphasizes an understanding and application of skills of the individual sport in intercollegiate competition, team cooperation, and school spirit.  
Prerequisite(s):

**ATH 200 VARSITY SPORTS III**  
**1 CREDIT**

Offers the varsity athlete the opportunity for refinement of skills involved in their respective sport. Emphasizes an understanding and application of skills of the individual sport in intercollegiate competition, team cooperation, and school spirit.  
Prerequisite(s):

ATH 150 and permission required by the Athletic Director.

**ATH 250 VARSITY SPORTS IV**  
**1 CREDIT**

Offers the varsity athlete the opportunity for refinement of skills involved in their respective sport. Emphasizes an understanding and application of skills of the individual sport in intercollegiate competition, team cooperation, and school spirit.  
Prerequisite(s):  
ATH 200 and permission required by the Athletic Director.

## **AUTOMOTIVE TECHNOLOGY**

**ASE 102 INTRODUCTION TO THE AUTOMOTIVE SHOP**  
**2 CREDIT**

Prepares the incoming automotive student to work in the shop safely and gain familiarity with the shop and common equipment.

**ASE 110 BRAKES I** 3 CREDIT

Covers basic operation of automotive braking systems. Includes operation, diagnosis, and basic repair of disc brakes, drum brakes, and basic hydraulic systems.  
PREREQUISITE(S): ASE-101

**ASE 120 BASIC AUTOMOTIVE ELECTRICITY**  
**2-15 CREDIT**

Introduces automotive electricity and includes basic electrical theory, circuit designs, and wiring methods. Focuses on multi-meter usage and wiring diagrams.

**ASE 123 AUTOMOTIVE BATTERY, STARTING, AND CHARGING SYSTEMS**  
**2 CREDIT**

Covers the operation, testing, and servicing of automotive battery, starting, and charging systems. Includes voltage and amperage testing of starter and generator, load testing and maintenance of a battery, and starter and generator overhaul.  
PREREQUISITE(S): ASE 120

**ASE 130 GENERAL ENGINE DIAGNOSIS**  
**2 CREDIT**

Focuses on lecture and related laboratory experiences in the diagnosis and necessary corrective actions of automotive engine performance factors.

**ASE 132 IGNITION SYSTEM DIAGNOSIS AND REPAIR**  
**2 CREDIT**

Focuses on lecture and related laboratory experiences in the diagnosis, service, adjustments and repair of various automotive ignition systems.  
PREREQUISITE(S): ASE 130

**ASE 134 AUTOMOTIVE EMISSIONS**  
**2 CREDIT**

Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive emission control systems.  
PREREQUISITE(S): ASE 132

**ASE 140 SUSPENSION AND STEERING I**  
**3 CREDIT**

Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive emission control systems.  
PREREQUISITE(S): ASE 132

**ASE 150 AUTOMOTIVE U-JOINT & AXLE SHAFT SERVICE**  
**2 CREDIT**

Studies the operating principles and repair procedures relating to axle-shaft and universal joints.

**ASE 151 AUTOMOTIVE MANUAL TRANSMISSION/TRANSAXLES**  
**2 CREDIT**

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles and clutches and related components.

**ASE 152 DIFFERENTIALS & 4WD/AWD SERVICE**  
**2 CREDIT**

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive differentials, four wheel and all wheel drive units.

**ASE 160 AUTOMOTIVE ENGINE REMOVAL & INSTALLATION**  
**1 CREDIT**

Focuses on lecture and laboratory experiences in the removal and installation procedures of the automotive engine from and into front wheel and rear wheel drive vehicles.

**ASE 161 ENGINE, DISASSEMBLY  
DIAGNOSIS & ASSEMBLY  
5 CREDITS**

Focuses on lecture and laboratory experiences in the disassembly, diagnosis and reassembly of the automotive engine. Topics include the diagnostic and repair procedures for the engine block and head assemblies.

**ASE 163 AUTOMOTIVE  
COMPONENT REMOVAL  
AND REPLACEMENT  
3 CREDITS**

Practical methods of removal and installation of engines, transmissions, transfer cases, clutch assemblies, bolt, and thread repair.

**ASE 210 BRAKES II  
3 CREDITS**

Covers the operation and theory of the modern automotive braking systems. Includes operation, diagnosis, service, and repair of the anti-lock braking systems, power assist units and machine operations of today's automobile.

PREREQUISITE(S): ASE-110

**ASE 220 SPECIALIZED ELECTRONICS  
TRAINING  
2 CREDITS**

Provides a systematic approach to automotive electrical systems. Builds from the basic electrical principles and concepts through semiconductors and microprocessors. Features on-bench exercises. Students practice diagnostic procedures that have applications to present and future automotive electronics and electrical systems.

PREREQUISITE(S): ASE 120

**ASE 221 AUTOMOTIVE BODY  
ELECTRICAL  
4 CREDIT**

Provides a comprehensive study of the theory, operation, diagnosis, and repair of vehicle accessories.

PREREQUISITE(S): ASE 120

**ASE 231 AUTOMOTIVE COMPUTERS  
2 CREDIT**

Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems.

PREREQUISITE(S): ASE 120, ASE 134, ASE 220

**ASE 233 FUEL INJECTION AND  
EXHAUST SYSTEMS  
4 CREDITS**

Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems.

PREREQUISITE(S): ASE 120, ASE 134, ASE 231

**ASE 235 DRIVEABILITY DIAGNOSIS  
1 CREDIT**

Emphasizes lecture and related laboratory experience in diagnostic techniques and the use of diagnostic scan tools, oscilloscopes, lab scopes, multi-meters and gas analyzers. Students diagnose live vehicle driveability problems.

PREREQUISITE(S): ASE 233

**ASE 240 SUSPENSION AND  
STEERING II  
3 CREDIT**

Emphasizes lecture and related experiences in the diagnosis and service of electronic suspensions and steering systems and their components.

PREREQUISITE(S): Yes

**ASE 250 AUTOMATIC  
TRANSMISSION/  
TRANSAXLE SERVICE  
1 CREDIT**

Focuses on practical methods of maintaining, servicing, and performing minor adjustments on an automatic transmission and transaxle.

PREREQUISITE(S): Automotive Shop Safety

**ASE 251 AUTOMATIC  
TRANSMISSION/  
TRANSAXLE DIAGNOSIS  
AND ASSEMBLIES  
5 CREDIT**

Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation, removal of transmission/transaxle, tear down, replacement of components, measurement and subsequent adjustment of components and replacement of transmission/transaxle.

PREREQUISITE(S): ASE 250

COREQUISITE(S): ASE 250

**ASE 265 AUTOMOTIVE HEATING  
AND AIR CONDITIONING  
5 CREDIT**

Emphasizes lecture and related laboratory experiences in the diagnosis and service of automotive heating and air conditioning systems and their components.

**ASE 276 COOPERATIVE EDUCATION  
1-9 CREDIT**

Develops practical objectives assigned by an automotive employer providing an on-the-job learning experience at an approved automotive repair facility.

PREREQUISITE(S): 24 credit hours of automotive classes

**ASE 277 INDEPENDENT STUDY  
1-9 CREDIT**

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

PREREQUISITE(S): None

COREQUISITE(S): Students must be enrolled in automotive courses totaling at least 6 credit hours.

**ASE 280 CO-OP/INTERNSHIP:  
BASIC ELECTRICAL AND  
ENGINE PERFORMANCE  
1 CREDIT**

Focuses on practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or (iF.A.S.T.i) Fundamental Automotive Systems Training (Chrysler) or others as required by the program track.

PREREQUISITE(S): ASE-106 Electrical & Fuel System Shop Safety

**ASE 281 CO-OP/INTERNSHIP;  
BASIC HEAVY DUTY AND  
POWER TRAIN  
1 CREDIT**

Focuses on practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or (iF.A.S.T.i) Fundamental Automotive Systems Training (Chrysler) or others as required by the program track.

PREREQUISITE(S): AUT-160 Chassis & Power Train Shop

**ASE 282 CO-OP/INTERNSHIP:  
GENERAL (SUMMER)  
1 CREDIT**

Emphasizes practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or (iF.A.S.T.i) Fundamental Automotive Systems Training (Chrysler) or others as required by the program track.

**ASE 283 CO-OP/INTERNSHIP;  
ADVANCED ELECTRICAL  
& ENGINE PERFORMANCE  
1 CREDIT**

Emphasizes practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or (iF.A.S.T.i) Fundamental Automotive Systems Training (Chrysler) or others as required by the program track. The student registers for and takes the (ASE) Automotive Service Excellence based tests for engine performance and electrical systems.

**ASE 284 CO-OP/INTERNSHIP;  
ADVANCED HEAVY DUTY  
& POWER TRAIN  
1 CREDIT**

Focuses on practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or (iF.A.S.T.i) Fundamental Automotive Systems Training (Chrysler) or others as required by the program track they are enrolled in. The student registers for and takes the ASE-Automotive Service Excellence based test for brake systems and suspension and steering.

**ASE 285 INDEPENDENT STUDY  
1-6 CREDIT**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PREREQUISITE(S): Permission of the instructor

**ATEC COURSES:  
ATC 261 DRIVESHAFT AND  
UNIVERSAL JOINT SERVICE  
1 CREDIT**

The advanced study of the operating principles and repair procedures relating to driveshafts and universal joints.

**ATC 263 STEERING SUSPENSION ALIGNMENT SERVICE**

**2 CREDITS**

Familiarizes the student with the operating, repair and alignment characteristics of the modern automobile.

PREREQUISITE(S): AUT 162

**ATC 265 ADVANCED BRAKE SYSTEMS**

**2 CREDITS**

An advanced course focusing on the computerized anti-lock brake and traction control systems. On-bench and on-vehicle exercises are features of this course. THIS COURSE REQUIRES students to already have an in-depth understanding of basic brakes and automotive electronics.

PREREQUISITE(S): AUT 164

**ATC 269 ENGINE SERVICE**

**2 CREDITS**

The study of service procedures for major, minor and short block service. Includes removal and replacement of an engine from a late model vehicle.

**ATC 271 AUTOMATIC TRANSMISSION OVERHAUL**

**5 CREDITS**

An extensive study in automatic transmission overhaul and repair of both conventional and transaxle design.

PREREQUISITE(S): AUT 170 or instructor's permission

**ATC 275 BODY ELECTRICAL**

**3 CREDITS**

A comprehensive study of the theory, operation diagnosis and repair of vehicle's computerized and non-computerized body electrical systems and accessories. On-bench and on-vehicle exercises are features of this course.

PREREQUISITE(S): AUT 180

**ATC 297 AUTOMOTIVE DIAGNOSTIC EQUIPMENT**

**2 CREDITS**

This course is designed for advanced driveability technicians. It provides a working knowledge of diagnostic scan tools on vehicle practice using the diagnostic modes and computerized diagnostic equipment.

PREREQUISITE(S): ATC 190, 193, 194, AUT 180 or instructor's permission

**ATC 299 INDEPENDENT STUDY**

**VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

**AUT 235 MANUAL TRANSAXLE**

**1 CREDIT**

A study in manual transaxle design and service as it differs from manual transmissions of conventional design.

PREREQUISITE(S): AUT 161, 172, or instructor's permission

**AUT 253 FUNDAMENTALS OF HEATING, COOLING & AIR CONDITIONING**

**2 CREDITS**

A study of the basics in theory and service of air conditioning systems. Included are the study of engine cooling systems, heating systems and the freon recovery machines. The student will learn the operation, leak detection, and recharging of air conditioning systems.

**AUT 267 AIR CONDITIONING SERVICE**

**3 CREDITS**

Reviews the theory and operation of air conditioning systems and progresses to the controls and instrumentation of late model vehicles.

**AUT 270 AUTOMATIC TRANSMISSION PRINCIPLES AND SERVICE**

**1 CREDIT**

The study of the theory, operation and service procedures of automatic transmissions. Safety procedures and precision measurement will also be included.

**AUT 272 STANDARD TRANSMISSIONS AND CLUTCHES**

**2 CREDITS**

A study of the theory and operation of standard transmissions and clutches.

**AUT 274 VIBRATION DIAGNOSIS**

**1 CREDIT**

Systematic diagnosis, checks and adjustments of the vehicles components that can contribute to vibration conditions.

**AUT 285 INDEPENDENT STUDY**

**VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

**AUT 290-293 COOP EDUCATION CAREER TRAINING**

**3 CREDITS**

**294-295 COOP EDUCATION CAREER TRAINING**

**6 CREDITS**

**296 COOP EDUCATION CAREER TRAINING**

**9 CREDITS**

**297 COOP EDUCATION CAREER TRAINING**

**12 CREDITS**

**298 COOP EDUCATION CAREER TRAINING**

**1 CREDIT**

See Cooperative Education Section or detailed description.

**ASEP COURSES:**

**ASP 190 GM SPECIALIZED ELECTRONICS**

**4 CREDITS**

Course builds from the electrical principles and concepts through automotive semi-conductors to micro-processors. The use of electrical measurement devices and wire repairing, including copper/aluminum and weather pack service techniques is emphasized. On-bench and on-car practical exercises are features of the classroom activities. Students will practice diagnostic procedures having application to present and future automotive electronic systems.

PREREQUISITE(S): AUT 180

**ASP 196 GM ELECTRONIC NEW PRODUCT**

**2 CREDITS**

This course is an advanced study in body electrical components. Included are the studies of supplemental inflatable restraint systems and applied automotive electronics. This course is designed to upgrade hands on diagnostic skills by the use of a DVOM and a lab oscilloscope.

**ASP 265 GM BRAKING SYSTEMS**

**1 CREDIT**

An extensive training program continuing from the basic concepts to various GM braking systems and the latest GM braking changes.

PREREQUISITE(S): AUT 164

**ASP 269 GM ENGINE SERVICE**

**2 CREDITS**

The study of service procedures for major and minor repairs includes actual removal and replacement of a GM engine from a late model GM vehicle.

**ASP 271 GM AUTOMATIC TRANSMISSION OVERHAUL**

**6 CREDITS**

An extensive study of the operation and repair of high production late model General Motors Automatic Transmissions.

**ASP 273 GM STANDARD TRANSMISSION AND CLUTCHES**

**2 CREDITS**

The in-depth study and repair of General Motors specific product designs.

PREREQUISITE(S): AUT 172

**ASP 285 INDEPENDENT STUDY**

**1-6 CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission.

**BIOLOGY**

**BIO 100 INTRO TO ANATOMY AND PHYSIOLOGY**

**1 CREDIT**

This five or seven week module is designed for students who are required or wish to take Biology 201, Human Anatomy and Physiology I, and have never taken nor recently been exposed to courses dealing with Anatomy and Physiology, Elementary Chemistry (Inorganic and Organic), The Metric System, and Cells.

**BIO 105 SCIENCE OF BIOLOGY**

**4 CREDITS**

Designed for non-science students. Examines the basis of biology in the modern world and surveys the current knowledge and conceptual framework of the discipline. Biology as a science - process of gaining new knowledge is explored as is the impact of biological science on society. This course includes laboratory experiences.

**BIO 111 GENERAL COLLEGE  
BIOLOGY WITH  
LAB 5 CREDITS**

Examines the fundamental molecular, cellular and genetic principles characterizing plants and animals. Includes cell structure and function, and the metabolic processes of respiration, and photosynthesis, as well as cell reproduction and basic concepts of heredity. This course includes laboratory experience.

**BIO 112 GENERAL COLLEGE  
BIOLOGY II WITH  
LAB 5 CREDITS**

A continuation of Biology I. Includes ecology, evolution, classification, structure and function in plants and animals. This course includes laboratory experience.  
PREREQUISITE(S): BIO 111

**BIO 115 HUMAN GENETICS  
3 CREDITS**

This course is a study of the inheritance of human traits. It is a non-mathematical study for the non-science major. Topics include Mendelian, non-Mendelian, sex-linked, blood type traits, inherited diseases and ethics.

**BIO 116 HUMAN BIOLOGY  
3 CREDITS**

This course is an introduction to human anatomy and physiology for students who have little or no background in science. It does not substitute for a one year anatomy and physiology course with a lab. Topics covered are atoms, molecules, cells, energetics, genetics, and a brief survey of systems.

**BIO 143 ECOLOGY OF COLORADO  
3 CREDITS**

Studies the natural environments in Colorado. Explores the vast natural environments of Colorado and the plants and animals that inhabit the life zones of our majestic plains, mountains, and valleys. Discovers the interrelationships of man and his Colorado environment - past, present, and future. Through an inquiry approach, the student examines the changing needs and roles of our environments. Field trips include Roxborough State Park, Garden of the Gods, Mt. Evans, Pikes Peak, Deer Creek Canyon, Daniels Park, Barr Lake or others.

**BIO 201 HUMAN ANATOMY AND  
PHYSIOLOGY I 4 CREDITS**

Focuses on an integrated study of the human body including the histology, anatomy, and physiology of each system. Examines molecular, cellular, and tissue levels of organization plus integuments, skeletal, articulations, muscular, nervous, and endocrine systems. Includes a mandatory hands-on laboratory experience covering experimentation, microscopy, observations, and dissection. This is the first semester of a two-semester sequence.  
PREREQUISITE(S): BIO 111 or equivalent, or permission of Dept. chair.

**BIO 202 HUMAN ANATOMY AND  
PHYSIOLOGY II 4 CREDITS**

Focuses on the integrated study of the human body and the histology, anatomy, and physiology of the following systems and topics: cardiovascular, hematology, lymphatic and immune, urinary, fluid and electrolyte control, digestive, nutrition, respiratory, reproductive, and development. Includes a mandatory hands-on laboratory experience involving experimentation, microscopy, observations, and dissection. This is the second semester of a two-semester sequence.  
PREREQUISITE(S): BIO 201 or equivalent, or permission of Dept. chair.

**BIO 220 GENERAL ZOOLOGY  
5 CREDITS**

Focuses on the study of invertebrate and vertebrate animals and examines structure, evolutionary development, ecology, classification, physiology, reproduction, and zoogeography. A survey of zoological diversity emphasizes the characteristics, zoological contributions, and classification of animal phyla and major classes. Requires hands-on laboratory and field experience. Designed for biology majors.  
PREREQUISITE(S): BIO 111 or equivalent, or permission of department chair.

**BIO 221 BOTANY 5 CREDITS**

This course is designed for biology majors. It is a study of nonvascular and vascular plants. It emphasizes photosynthetic pathways, form and function, reproduction, physiology, genetics, diversity, evolution, and ecology. This course requires mandatory hands-on laboratory and field experience.  
PREREQUISITE(S): BIO 111 or equivalent, or permission of department chair.

**BIO 275 TOPICS IN BIOLOGY  
1-6 CREDITS**

These short courses will provide a variety of topics and learning activities for the student. Although specific topics are not listed in the catalogue, some examples include human sexuality, edible plants, spring wild flowers, identification of birds, identification of trees, human body, biomedicine, sports physiology, etc. Investigation of contemporary research and current events will be encouraged.

**BIO 290-293 COOP EDUCATION  
CAREER TRAINING  
3 CREDITS**

**294-295 COOP EDUCATION  
CAREER TRAINING  
6 CREDITS**

See Cooperative Education section for detailed description.  
PREREQUISITE(S): instructor's permission.

**BIO 285 INDEPENDENT STUDY  
1-6 CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## BUSINESS

**BUS 115 INTRO TO BUSINESS  
3 CREDITS**

Survey of the operation of the American Business System: fundamentals of the economy, careers and opportunities, marketing, management, production, governmental regulations, tools of business, and social responsibilities.

**BUS 116 PERSONAL FINANCE  
3 CREDITS**

Course is designed to cover the major topics of earning and allocating money, saving and borrowing money, getting more for what you spend, safeguarding personal income and property.

**BUS 117 RISK MANAGEMENT AND  
INSURANCE 3 CREDITS**

Fundamental principles of insurance and their application in life, property, liability, and health insurance with some emphasis on the operation and contributions of the insurance industry. Provides the basic knowledge for intelligent solution of personal and business insurance problems as well as for further study of insurance.

**BUS 203 INTRO TO INTERNATIONAL  
BUSINESS 3 CREDITS**

Course will provide student with an understanding of the interdisciplinary nature of international business. Course will cover the development of international business; theories and methods of international trade; financing mechanism and terms used in export documentation and export finance; the effects of economics, political and cultural environment on international business and trade; impact of geography in business transactions; legal aspects of international business; and developing an effective international marketing strategy.

**BUS 205 BUSINESS ETHICS  
3 CREDITS**

A 3-credit course in the analysis of ethical behavior for business. The premise is that ethics deals with "right" and "wrong" standards of behavior that are determined by the ethical and social expectations of society in general, and further, that we expect responsible people to observe the ethical standards of our society. A case approach is used throughout the course. The ethical issues involve trade-offs among ethical decisions and economics, legal, social, and cultural concepts.

**BUS 216 LEGAL ENVIRONMENT OF  
BUSINESS  
3 CREDITS**

This course emphasizes public law, regulation of business, ethical considerations, and various relationships which exist within society, government, and business. Specific attention will be devoted to economic regulation, social regulation, regulation and laws impacting labor-management issues, environmental concerns and an introduction to contracts. Students will develop an understanding of the roll of law in social, political, and economic change.

**BUS 217 BUSINESS COMMUNICATION AND REPORT WRITING**

**3 CREDITS**

The course emphasizes effective business writing: letters, memoranda, reports, application letters, and resumes. Also, the course will include the fundamentals of business communication and an introduction to international communication.

**BUS 226 BUSINESS STATISTICS**

**3 CREDITS**

Course is intended for business major and covers statistical study, descriptive statistics, probability and binomial distribution, index numbers, time series, decision theory, confidence intervals, hypothesis testing, testing of two-sample means, chi-square and ANOVA, linear regression, and correlation.  
PREREQUISITE(S): MAT 132 or instructor's permission

**BUS 241 CULTURAL DIVERSITY IN BUSINESS**

**3 CREDITS**

The business person's guide to cultural, travel and information resources needs in the international arena. Specifics in negotiation, communications verbal and non-verbal, networking, and understanding what individual countries needs are in a business culture.

**BUS 251 PERSONAL LEADERSHIP DEVELOPMENT**

**3 CREDITS**

This is a development course in personal leadership that combines a study of techniques employed by successful civic, industry, and political leaders, in conjunction with the actual development and preparation of the student's personal plan for leadership development. Instructional methods include analysis of taped and filmed presentations, group discussions, and personal analysis materials. Cross listed with MAN 224.

**BUS 275 SPECIAL TOPICS IN BUSINESS**

**1-6 VARIABLE CREDITS**

This course is designed to provide students with a vehicle to pursue special topics of interest in business. The content of this course is designed on an individual needs basis "by arrangement between the instructor's and the student." The course may be designed to allow the student to acquire credit for projects in current events. instructor's approval of material is required.

**BUS 285 INDEPENDENT STUDY**

**1-6 VARIABLE CREDIT**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

**BUS 287 COOP EDUCATION**

**1-6 VARIABLE CREDITS**

See Cooperative Education section for detailed description.

**BUSINESS TECHNOLOGIES**

**BTE 100 COMPUTER KEYBOARDING**

**1 CREDIT**

Designed for students who have minimal or no keyboarding skills. Introduces the touch method of keyboarding, as well as the basic operation and functions of the equipment. Emphasizes learning the alphanumeric keyboard, proper technique, and speed control.

**BTE 102 KEYBOARDING APPLICATIONS I**

**2 CREDITS**

Designed for students with minimal keyboarding skills. Introduces letters, tables, memos, and manuscripts. Emphasizes speed and accuracy.  
PREREQUISITE(S): Ability to Keyboard 20 wpm or permission of instructor

**BTE 103 KEYBOARDING APPLICATIONS II**

**3 CREDITS**

Reinforces basic keyboarding formats and procedures. Productivity and decision-making skills are exercised. Emphasizes speed and accuracy.  
PREREQUISITE(S): BTE 102

**BTE 108 TEN KEY BY TOUCH**

**1 CREDIT**

An introduction to touch control of a ten-key pad. The class emphasizes the development of speed and accuracy using proper technique.

**BTE 111 KEYBOARDING SPEEDBUILDING I**

**1 CREDIT**

Designed to increase speed and improve accuracy in keyboarding on the PC through the use of correct techniques and concentrated effort.  
PREREQUISITE(S): Ability to keyboard by touch or permission of instructor

**BTE 112 KEYBOARDING SPEEDBUILDING II**

**2 CREDITS**

Designed to increase speed and improve accuracy in keyboarding on the PC through the use of correct techniques and concentrated effort.  
PREREQUISITE(S): Speedbuilding I or instructor's permission

**BTE 120 ELECTRONIC OFFICE PROCEDURES**

**2 CREDITS**

Provides instruction in the latest electronic office procedures using business technologies which include: e-mail, FAX, Windows, DOS, presentation graphics, telephone techniques, internet, electronic calendaring and appointment scheduling

**BTE 125 RECORDS MANAGEMENT**

**3 CREDITS**

Instructs on how records are created, stored, and retrieved. Covers the basic filing rules - classifying, indexing, coding, storing, and retrieving as applied to basic methods - alphabetic, chronological, subject, numeric, and geographic. Emphasizes 'hands-on' records management through the use of simulations, which includes manual and/or computer software.  
PREREQUISITE(S): acceptable keyboarding proficiency

**BTE 156 BUSINESS MATHEMATICS WITH CALCULATORS**

**4 CREDITS**

Covers basic business mathematics using the touch system on electronic calculators to solve business problems.

**BTE 166 BUSINESS EDITING SKILLS**

**3 CREDITS**

Provides proofreading techniques and reviews spelling, punctuation, grammar, and word processing formats on various types of business documents and worksheets.

**BTE 202 OFFICE SIMULATION II**

**3 CREDITS**

Provides the student the opportunity to demonstrate and perfect the computer skills, organizational skills, and communication skills required to secure employment and/or advancement in the workplace.  
PREREQUISITE(S): experience with adv word processing, spreadsheets, or permission of instructor

**BTE 209 BASICS OF MACHINE TRANSCRIPTION**

**1 CREDIT**

Provides a working knowledge for transcribing from machine dictation using word processing and proficient levels of punctuation, spelling, and grammar.  
PREREQUISITE(S): Keyboarding and word processing skills or instructor's permission

**BTE 225 ADMINISTRATIVE OFFICE MANAGEMENT**

**3 CREDITS**

Presents new developments, technology, procedures, organization, and contemporary terminology used in effective office management. Emphasizes decisionmaking and application of administrative skills.

**BTE 238 LEGAL OFFICE PROCEDURES**

**3 CREDITS**

Designed for students who will be working in a legal office either in the private or the public sector. The course covers fundamental office procedures found in both general and specialized law offices.

**BTE 275 SPECIAL TOPICS**

**1-6 CREDIT**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**BTE 285 INDEPENDENT STUDY**

**1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): Instructor's permission

**BTE 287 COOP EDUCATION/ INTERNSHIP**

**1-6 VARIABLE CREDITS**

Provides students with the opportunity to supplement course work with practical work experience related to their educational program and occupational objectives. Students are placed at approved work sites that are related to their program of study. They work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.  
Prerequisite(s): Instructor's permission

## CAREER DEVELOPMENT

### PSY 109 CAREER DEVELOPMENT 3 CREDITS

This course assists students in recognizing their career potential, and provides tools for making realistic decisions concerning educational and occupational objectives. This course also helps students develop skills needed for job search, employer search, employer search and resume development.

### ECG 102 EMPLOYMENT SEMINAR 1 CREDIT

This seminar is designed to assist students in developing skills that are needed in searching for and acquiring a job. Topics include job search, employer research, job application, cover letter, resume development and interviewing.

### ECG 115 PERSONAL GROWTH AND CULTURAL AWARENESS 2 CREDITS

Topics include social class structure in terms of its social, economic, and cultural roles. Areas to be discussed include monetary system and handling of finances, dating and marriage, laws and violations, personal hygiene, medical services, course load, Immigration and Naturalization Services, insurance and apartment leases. Course also provides English and math testing.

### ECG 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## CARPENTRY

### CAR 101 BASIC SAFETY 1 CREDITS

An overview of safety concerns and procedures in the construction field.  
COREQUISITE(S): CAR 101

### CAR 102 HAND AND POWER TOOLS 1 CREDITS

Focuses on basic hand and power tools including stationary tools. Emphasizes a hands-on approach to proper and safe use of these tools as it applies to the construction environment and is taught in conjunction with a lab or framing class.  
COREQUISITE(S): CAR 101

### CAR 105 JOB SITE LAYOUT AND BLUEPRINT READING 1 CREDITS

Introduces blue-print reading and how they apply to the construction site. Includes in-depth introduction to site layout (materials and methods).

### CAR 115 FORM & FOUNDATION SYSTEMS 1 CREDITS

Covers materials and methods for concrete forms and foundations. Includes various reinforcement methods such as re-bar and welded-wire fabric.  
COREQUISITE(S): Core framing labs

### CAR 121 FLOOR FRAMING 1 CREDITS

Covers framing basics as well as the procedures for laying out and constructing a wood floor using common lumber as well as engineered building materials.

### CAR 122 WALL FRAMING 1 CREDITS

Focuses on the procedures for laying out and framing walls and ceilings, including roughing-in door and window openings, construction corners and partition Ts, bracing walls and ceilings, and applying sheathing.

### CAR 123 ROOF FRAMING 1 CREDITS

Describes the various kinds of roofs and focuses on instructions for laying out rafters for gable roofs, hip roofs and valley intersections. Covers both stick-built and truss-built roofs.

### CAR 125 ROOFING MATERIALS METHODS 1 CREDITS

Covers application techniques and estimation of asphalt and wood roofing products and accessories including gutters and flashing.

### CAR 130 WINDOWS AND EXTERIOR DOORS 1 CREDITS

Describes the various types of windows, skylights, and exterior doors and provides instructions for installing them. Includes instructions for installing weather-stripping and locksets.

### CAR 131 EXTERIOR TRIM 1 CREDITS

Teaches cornice and rake construction, corner, window and door trim, installation of soffit, frieze, fascia and similar trim items and includes estimation and proper selection.

### CAR 145 INTERIOR FINISHES - GENERAL 1 CREDITS

Presents an overview of interior finishes. Covers installation and finishing of drywall, suspended ceilings, and general painting and other wallcovering.

### CAR 146 INTERIOR FINISHES - DRYWALL CONSTRUCTION 1 CREDITS

Covers the use of gypsum wall board and the techniques of concealing joints and fasteners, construction methods, estimation and a variety of texture finishes.

### CAR 151 INTERIOR TRIM - DOORS & TRIM 1 CREDITS

Covers interior doors and trim with focus on material choices, methods of work, and estimation. Teaches in conjunction with a construction lab experience to provide application of techniques covered in classroom environment.  
COREQUISITE(S): CAR172 Construction Lab II

### CAR 153 INTERIOR TRIM - CABINET/COUNTERTOPS 1 CREDITS

Covers the selection/ installation/terminology of factory built cabinets and countertops. Includes various types and design and examines estimation of cost.

### CAR 160 FLOOR FINISHES 1 CREDITS

Covers installation and finishing of hardwood floors, laminate/engineered floors, and tile. Includes discussion on advantages and disadvantages of various choices available.  
PREREQUISITE(S): Permission of instructor

### CAR 215 FORM AND FOUNDATION SYSTEMS II 1 CREDITS

Builds on course CAR 115 and expands on theories and concepts from the first year class. Offers opportunities to explore more complex systems and form requirements.

### CAR 221 ADVANCED FLOOR SYSTEMS 2 CREDITS

Expands upon skills and knowledge learned in CAR 121 and focuses on an in-depth look at floor framing. Allows students to hone skills previously learned.  
PREREQUISITE(S): CAR 121 or permission of instructor  
COREQUISITE(S): CAR 170

### CAR 222 ADVANCED WALL SYSTEMS 2 CREDITS

Expands upon those skills and knowledge learned in CAR 122. Covers complex wall framing issues and leadership/foreman responsibilities.  
PREREQUISITE(S): CAR 122 or permission of instructor  
COREQUISITE(S): CAR 270

### CAR 223 ADVANCED ROOFING SYSTEM 2 CREDITS

Builds on those skills learned in CAR 123. Offers an opportunity for students to hone skills and apply knowledge to more complex systems of roof framing.  
PREREQUISITE(S): CAR 123 or permission of instructor  
COREQUISITE(S): Framing Lab Car 270

### CAR 250 ADVANCED INTERIOR TRIM - GENERAL 2 CREDITS

Expands upon the material covered in CAR150 and includes more advanced techniques and in-depth discussion of various material choices. Covers estimating and efficiency studies.  
PREREQUISITE(S): CAR 150

### CAR 251 ADVANCED INTERIOR TRIM - DOORS 2 CREDITS

Expands upon material covered in CAR151. Includes in-depth study of premium interior doors and trim, including full mortise lock sets, furniture grade trim, and techniques for matching existing high-end and antique woodworking.  
PREREQUISITE(S): CAR 151 or permission of instructor  
COREQUISITE(S): CAR 272 Construction Lab II

### CAR 254 ADVANCED INTERIOR TRIM - SPECIAL 2 CREDITS

Explores the craftsmanship and fine woodworking involved in many fine homes. Includes mantel and various fireplace designs, custom shelves and closets, and custom moulding.  
PREREQUISITE(S): CAR 154, or permission of instructor  
COREQUISITE(S): CAR 272 construction lab

**CAR 275 SPECIAL TOPIC****1-6 CREDITS**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**CHEMISTRY****CHE 101 INTRO TO CHEMISTRY I****5 CREDITS**

For non-science majors, students in occupational and health programs, or students with no chemistry background. Includes the study of measurements, atomic theory, chemical bondings, nomenclature, stoichiometry, solutions, acid and base, gas laws, and condensed states. Laboratory experiments demonstrate the above concepts qualitatively and quantitatively.

PREREQUISITE(S): MAT 060

**CHE 102 INTRO TO CHEMISTRY II****5 CREDITS**

Includes the study of hybridization of atomic orbitals for carbon; nomenclature of organic compounds; properties of different functional groups, nomenclature of various important biological compounds, their properties and their biological pathways. Laboratory experiments demonstrate the above topics quantitatively and qualitatively.

**CHE 111 GENERAL COLLEGE****CHEMISTRY I 5 CREDITS**

For science and engineering majors. Includes the study of measurements, atomic theory, chemical bonding, stoichiometry, gases, condensed states, solutions, and thermochemistry. Also includes the problem solving skills and descriptive contents for these topics. Laboratory techniques used in the experiments will demonstrate the above concepts as well as the qualitative and quantitative analytical techniques involved in chemistry.

PREREQUISITE(S): 1 year high school chemistry or equivalent

COREQUISITE(S): MAT 121 or instructor's permission

**CHE 112 GENERAL COLLEGE****CHEMISTRY II 5 CREDITS**

Includes the study of thermodynamics, chemical kinetics, chemical equilibrium, acid-base equilibrium, ionic equilibrium, electrochemistry, nuclear chemistry, and organic chemistry. Also includes the problem solving skills and descriptive contents for these topics. Organic chemistry may be included if time permits. The laboratory experiments will demonstrate both the qualitative and quantitative analytical techniques.

PREREQUISITE(S): CHE 111

**CHE 211 ORGANIC CHEMISTRY I****5 CREDITS**

The topics of this course include structure and reactions of aliphatic hydrocarbons and selected functional group families. Nomenclature of organic compounds, stereochemistry, reaction mechanisms will be covered. Laboratory will demonstrate the above concepts and laboratory techniques.

PREREQUISITE(S): CHE 112

**CHE 212 ORGANIC CHEMISTRY II****5 CREDITS**

The topics in this course include structure, reactions, and reaction mechanisms of aromatic compounds and continuation of functional group families from CHE 211. Introduction to the chemistry of heterocycles, and biologically related compounds will be covered if time permits. Laboratory will demonstrate the above concepts and laboratory techniques.

PREREQUISITE(S): CHE 211

**CHE 275 SPECIAL TOPICS IN CHEMISTRY****1-6 VARIABLE CREDIT**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**CHE 285 INDEPENDENT STUDY****1-6 VARIABLE CREDIT**

Provides the opportunity for the highly motivated student to engage in intensive study and research on a specified topic under the direction of a faculty member.

PREREQUISITE(S): Instructor's permission

**COMPUTER AIDED DESIGN/DRAFTING****CAD 101 COMPUTER AIDED****DRAFTING I 3 CREDITS**

Provides an introduction to the use of the microcomputer as a drafting tool. Computer literacy, CAD/D technology and the use of one CAD/D system will be emphasized. AutoCAD software is introduced.

PREREQUISITE(S): CIS 103

**CAD 102 COMPUTER AIDED****DRAFTING II 3 CREDITS**

Provides an opportunity for in-depth training using a microcomputer CAD/D system as an automated drafting tool. AutoCAD software will be emphasized.

PREREQUISITE(S): CAD 101

**CAD 105 AUTOCAD FOR INTERIORS****4 CREDITS**

This course will provide an opportunity for the Interior Design student to obtain the basic skills necessary to operate Computer Aided Design (CAD) software. AutoCAD software will be emphasized.

PREREQUISITE(S): CIS 118; IND 111; OR instructor's permission

**CAD 201 COMPUTER AIDED****DRAFTING/CUSTOM****3 CREDITS**

This course allows the student an opportunity to develop an understanding and skill in the use of the AutoCAD program as used on a micro-based CAD/D system. Students will demonstrate their competency by plotting completed projects

PREREQUISITE(S): CAD 102 or instructor's permission

**CAD 202 COMPUTER AIDED****DRAFTING/3D 3 CREDITS**

This course examines 3-D drawing techniques. Students will develop 3-D drawings and construct 3-D models. Student drawings will be plotted. Mechanical and architectural applications will be emphasized.

PREREQUISITE(S): CAD 102 or instructor's permission

**CAD 217 3D STUDIO VIZ 3 CREDITS**

Focuses on introductory level basic features of the software using the latest version of 3D Studio VIZ. Includes creation and modification of primitive and complex shapes, Boolean constructions, creation and modification of lights, applying materials to objects, creation and modification of backgrounds, creation and adjustment of cameras, rendering, and animation by keyframing.

PREREQUISITE(S): CAD 202 or 225

**CAD 225 ARCHITECTURAL****DESKTOP/AUTODESK****3 CREDITS**

This course provides students with the software application training in Architectural desktop necessary to produce 3D Architectural drawings utilizing students 2D drafting skills.

PREREQUISITE(S): CAD 102 or instructor's permission

NOTE: The student MUST have a solid working knowledge of AutoCAD 2000 or AutoCAD 2000i, especially the use of polylines, XREFs and plotting. The instructor will NOT provide remedial instruction on these subjects. A working knowledge of AutoCAD 3D principles and techniques is recommended, but is not required. Additionally, the student MUST have a solid working knowledge of one of the following Microsoft Windows operating systems: Windows 98, Windows NT4.0 or Windows 2000 Among the required skills, the student must know how to create, move, rename and delete files using the Windows Explorer. This is also an area where the instructor will NOT provide remedial instruction.

**CAD 231 LAND DESKTOP/AUTODESK****3 CREDITS**

Focuses on the basic command structure and applications of civil mapping concepts utilizing a civil software, to include data collection files, symbols libraries, setting attributes, COGO, layer control, surface modules, road calc, and site design. All course work is completed on a CAD system.

PREREQUISITE(S): CAD 102, or Permission of instructor

**CAD 249 AUTOLISP PROGRAMMING****3 CREDITS**

This course will introduce the students to the development of the AutoLisp programming language. The course covers techniques and concepts needed to utilize the AutoCad software programming capabilities.

PREREQUISITE(S): CAD 102

**CAD 254 MECHANICAL DESKTOP/****AUTODESK 3 CREDITS**

This course examines 3D Parametric Solid modeling techniques. Students will construct solid models and generate 2D mechanical drawings utilizing these models.

PREREQUISITE(S): CAD 102 or instructor's permission

**CAD 275 SPECIAL TOPICS**  
**1-6 VARIABLE CREDIT**  
 Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**CAD 285 INDEPENDENT STUDY**  
**1-6 VARIABLE CREDIT**  
 Course designed to meet the individual needs of students.  
 PREREQUISITE(S): instructor's permission

## COMPUTER INFORMATION SYSTEMS

Please note: due to a statewide initiative, a number of CIS course have been re-numbered and /or re-named. If you have questions about specific course numbers or titles, please check with the Department Chair, or an advisor.

**CIS 103 WINDOWS SHORT COURSE**  
**1 CREDIT**  
 This course will meet prerequisite requirements for CIS 118, CIS 168, CIS 145, and CIS 155. It is intended for the student with no previous computer experience in the Windows operating system. Windows fundamentals, accessories, file management, and customizing will be covered. Familiarity with the keyboard recommended. This course does not apply to degrees or certificates.

**CIS 115 INTRO TO COMPUTER INFORMATION SYSTEMS**  
**3 CREDITS**  
 This is an overview of the needs for and roles of computer information systems. Emphasis is on computer requirements in organizations, history, hardware functions, programming, systems development, and computer operations. Hands-on experience with applications and programming will be included.

**CIS 118 INTRO TO PC APPLICATIONS**  
**3 CREDITS**  
 This course introduces computer concepts and components as well as coverage of application suite software and the Internet. Included are descriptions of and hands-on experience with word processors, spreadsheets, databases, presentation graphics, operating environments and other common PC application packages.  
 PREREQUISITE(S): CIS 095 or familiarly with MS Windows

**CIS 124 INTRO TO OPERATING SYSTEMS**  
**3 CREDITS**  
 Introduces concepts, terminology and hands-on skills in the use of DOS and Windows. Emphasizes navigation, file manipulation, file creation and troubleshooting.

**CIS 128 WINDOWS COMPLETE**  
**2 CREDITS**  
 Introduces the functions and capabilities of Microsoft Windows. Includes configuring and modifying the operating system environment.

**CIS 130 INTRO TO INTERNET**  
**1 CREDIT**  
 Enhances the student's knowledge of the Internet and its resources. Individuals learn terminology in dealing with the Internet. Includes privacy and copyright issues with information retrieved from the Internet. Students experience the use of e-commerce, multimedia and e-mail. Explores searching the Internet and credibility of information obtained with searches.

**CIS 131 WORD PROCESSING I**  
**1 CREDIT**  
 This course is designed to give the student an introductory working knowledge of Microsoft WORD for Windows. Using the Windows environment and mouse, the student will create, edit, format, save and print documents. The student will use spell check and thesaurus features. The student will format text, paragraphs, and pages, as well as create envelopes including Postnet bar codes.  
 PREREQUISITE(S): BTE 100 or minimal keyboarding skills recommended

**CIS 132 WORD PROCESSING II**  
**1 CREDIT**  
 This course is designed to increase the student's working knowledge of Microsoft WORD for Windows. In this module the student will learn to use the find and replace function and the merge function. The student will create multiple page reports using headers, footers, footnotes, endnotes, and page numbers and will create documents using columns and tables.  
 PREREQUISITE(S): BTE 100 or minimal keyboarding skills recommended; CIS 131 or instructor's permission

**CIS 133 WORD PROCESSING III**  
**1 CREDIT**  
 This course is the third in a series of modules designed to increase the student's working knowledge of Microsoft WORD for Windows. In this module the student will learn to use borders, drawing, word art and graphics. The student will create macros, charts, outlines, styles, fill-in forms. The student will also select and sort records.  
 PREREQUISITE(S): CIS 131, 132 or instructor's permission

**CIS 135 WEB SITE DESIGN AND MANAGEMENT**  
**3 CREDITS**  
 This class is designed for the student who has experience with HTML and basic site building. This class focuses on user interface, navigation design, and information architecture. With a strong emphasis on community service and group learning, teams of students design and build fully functioning Web sites. This course is intended to prepare future Web designers, producers and interactive media artists entering the Digital Media Industry.  
 PREREQUISITE(S): CIS 131, 133; GDI 102

**CIS 136 MICROSOFT OFFICE SPECIALIST CERTIFICATION: WORD**  
**1 CREDIT**  
 Prepares students for the Microsoft Office Specialist Certification examination for Word. Students will use software to determine strengths and weaknesses and elect to review and prepare for either the Core of expert level certification exam. The actual Microsoft Office Specialist certification exam is not included in this course.  
 PREREQUISITE(S): CIS 131 or instructor permission based on prior experience

**CIS 140 MICROSOFT OUTLOOK**  
**1 CREDIT**  
 This course introduces the functions used in Microsoft Outlook including e-mail messages, calendaring, contacts, tasks, journals and notes.

**CIS 145 COMPLETE PC DATABASE**  
**3 CREDITS**  
 Explores a complete array of database skills. Includes table, query, form, and report creation and modification. Other topics include application integration and automation of database tasks within the database.

**CIS 149 MICROSOFT OFFICE SPECIALIST CERTIFICATION PREP: ACCESS**  
**1 CREDIT**  
 Prepares students for the Microsoft Office Specialist certification examination for Access. Students use software to determine strengths and weaknesses and elect to review and prepare for the Core level Certification exam.  
 PREREQUISITE(S): CIS 145 or instructor permission based on prior experience

**CIS 155 PC SPREADSHEET CONCEPTS: EXCEL**  
**3 CREDITS**  
 Exposes the student to a wide range of uses of the electronic spreadsheet with special emphasis on using it as a business tool. Includes fundamentals and terms, creating and saving workbooks, entering and using formulas, formatting, printing, multiple-page workbooks, creating charts, entering and using functions, managing lists, and simple macros.

**CIS 159 MICROSOFT OFFICE SPECIALIST CERTIFICATION**  
**1 CREDIT**  
 Prepares students for the Microsoft Office Specialist certification examination for Excel. Students use software to determine strengths and weaknesses and elect to review and prepare for either the Core or Expert level Certification exam. The MOUS test is not included in this course.  
 PREREQUISITE(S): CIS 155 or Instructor permission

**CIS 167 DESKTOP PUBLISHING**  
**3 CREDITS**  
 Introduces the concepts and applications for desktop publishing using word processing software. Emphasizes page layout and design with techniques for incorporating text and graphics and final production of printed documents.  
 PREREQUISITE(S): Knowledge of Word Processing

**CIS 168 PRESENTATION GRAPHICS  
1 CREDIT**

Introduces the development of presentation graphics materials including graphs, charts, illustrations, and diagrams. Emphasizes effective communication.  
PREREQUISITE(S): CIS 103 or familiarity with MS Windows

**CIS 169 MICROSOFT OFFICE  
SPECIALIST CERTIFICATION  
1 CREDIT**

Prepares students for the Microsoft Office Specialist certification examination for PowerPoint. Students use software to determine strengths and weaknesses and elect to review and prepare for the Core level Certification exam.  
PREREQUISITE(S): CIS 165 or instructor permission based on prior experience

**CIS 179 1 CREDIT**

Prepares students for the Microsoft Office Specialist certification examination for PowerPoint. Students use software to determine strengths and weaknesses and elect to review and prepare for the Core level Certification exam.  
PREREQUISITE(S): CIS 165 or instructor permission based on prior experience

**CIS 214 ADVANCED UNIX  
2 CREDITS**

This course is designed to cover advanced topics in UNIX. Topics covered are basic system organization and philosophy, complex commands, file system, multi-tasking, text/data manipulation, efficient use of the standard utilities, shell programming, awk, programming tools, and Make.  
PREREQUISITE(S): CIS 213 and 2 semesters of a programming language or equivalent experience

**CIS 218 ADVANCED PC  
APPLICATIONS 3 CREDITS**

This course covers the advanced capabilities of a microcomputer software applications suite. Emphasis is placed on solving business problems by integrating data from all of the software applications, and creating macros and Visual Basic procedures that facilitate the production of useful information. Printed documents, reports screen forms, slides, and web pages are produced to communicate information.  
PREREQUISITE(S): CIS 118 or CIS 136, 145, 155, and CIS 131 or equivalent experience

**CIS 220 FUNDAMENTALS OF UNIX  
3 CREDITS**

Covers the structure and fundamentals of the UNIX operating system. Includes the files system and file processing, various utility programs, and shell, multi-user operation, text processing and communications.

**CIS 221 ADVANCED UNIX  
2 CREDITS**

This course continues building upon skills and commands covered in CIS 220. the course emphasizes scripting topics including utilizing pipelines, filters, grep, awk, sed and text processing.  
PREREQUISITE(S): CIS 220

**CIS 222 UNIX SYSTEM  
ADMINISTRATION  
3 CREDITS**

Introduces the UNIX/Linux operating system and covers the skills required to install, configure and operate a UNIX/Linux system.  
PREREQUISITE(S): CIS 220, 221

**CIS 232 UNIX SHELL  
PROGRAMMING 3 CREDITS**

This course builds upon the skills from CIS 220. covers simple scripts to automate frequently executed commands followed by an explanation of adding conditional logic, user interaction, loops, menus, traps and functions to enhance the productivity and effectiveness of the user. in addition, students explore in detail Bourne and Korn shell scripting languages.  
PREREQUISITE(S): CIS 220

**CIS 240 DATABASE DESIGN AND  
DEVELOPMENT  
3 CREDITS**

Introduces the basic concepts of relational databases, data storage, and retrieval. Covers database design, data modeling, transaction processing, and introduces the Structured Query Language for databases.

**CIS 241 PC DATABASE  
PROGRAMMING 3 CREDITS**

This course covers advanced topics in using a PC database software application including normalization of tables, maintaining data integrity, and programming with macros and Visual Basic. Students learn the fundamentals of event-driven programming, and both the syntax and usage of beginning Visual Basic commands. We will design and create an Access database application with multiple tables, forms, macros, and Visual Basic modules.  
PREREQUISITE(S): CIS 140, 141

**CIS 243 ORACLE DEVELOPMENT  
APPLICATION I 3 CREDITS**

Create database structures and stores, retrieve, and manipulate data in a relational database. a student will learn SQL, which is a set of statements that all users and programmers must use to access data in an Oracle database; use SQL + to manipulate SQL statements and perform additional tasks. Students will have knowledge of SQL that will allow them to create tables, enter and manipulate tables, query data in tables, and format the results of those queries.  
PREREQUISITE(S): CIS 240 or instructor permission

**CIS 244 ORACLE APPLICATION  
DEVELOPMENT II 4 CREDITS**

This is a continuation of CIS 243. Students will have a strong understanding of Oracle variables, control structures, cursors, and exceptions among other programming concepts.  
PREREQUISITE(S): CIS 243 or instructor's permission

**CIS 253 PROGRAMMING A  
MICROSOFT SQL SERVER  
2000 DATABASE 3 CREDITS**

Provides students with the technical skills required to program a database solution by using Microsoft SQL Server 2000.  
PREREQUISITE(S): equivalent knowledge and experience

**CIS 254 INTERMEDIATE  
PHP/MYSQL SOFTWARE 6 CREDITS**

This is an intermediate level programming/database management course designed for Open Source Applications. the course provides a structured learning environment with hands-on experience installing, configuring, and implementing PHP and MySQL software.  
PREREQUISITE(S): Basic understanding of programming concepts, database knowledge, and operating systems, or with instructor's approval

**CIS 266 TOPICS IN COMPUTING  
3 CREDITS**

Explores social, ethical and legal issues related to computer use in business and within an international context. Incorporates some of the philosophical challenges posed by emerging technologies.

**CIS 267 MANAGEMENT OF  
INFORMATION SYSTEMS  
3 CREDITS**

Introduces the concepts and techniques of managing computer-based information resources. Includes hardware, software, personnel, control techniques, and the placement and integration of information systems resources within the organization.

**CIS 268 SYSTEMS ANALYSIS AND  
DESIGN I 3 CREDITS**

Introduces the student to the materials, techniques, procedures and human interrelations involved in developing computer information systems. Topics covered include the systems approach, fact gathering techniques, forms design, input/output, file design, file organization, various charting techniques, system audits on controls, project management, implementation and evaluation.

**CIS 287 COOP EDUCATION  
CAREER TRAINING  
3 CREDITS**

This course is designed to provide students an opportunity to gain practical experience in applying their occupational skills and/or to develop specific skills in a practical work setting. the instructor's will work with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the employer or work site supervisor. attendance at seminars and/or interaction with the instructor is required.

# COMPUTER NETWORKING

## CNG 101 INTRO TO NETWORKING 3 CREDITS

Focuses on underlying concepts of data communications, telecommunications and networking. Emphasizes the terminology and technologies in current networking environments and provides a general overview of the field of networking as a basis for continued study in the field. COREQUISITE(S): CIS 118, or instructor's permission

## CNG 102 LOCAL AREA NETWORKS 3 CREDITS

Introduces Local Area Networking. Focuses on discussions and demonstrations of planning, installing, and supporting networks.

## CNG 103 WIDE AREA NETWORKS 3 CREDITS

Provides the student with conceptual and working knowledge of how Local Area Networks communicate over a wide area. Introduces telephony - the technology of switched voice communications. Provides students with an understanding of how communication channels of the public switched telephone networks are used for data communications and how voice data communications have become integrated. PREREQUISITE(S): CNG 102, or instructor's permission

## CNG 104 INTRO TO TCP/IP 3 CREDITS

Outlines four important networking architectures in corporate environments today - TCP/IP, SNA, AppleTalk, and DNA. Focuses on the major components and functions of each of these architectures as well as methods used to connect different architectures. Provides students with concepts that are important to the field of systems integration, as well as a conceptual basis for understanding network architectures. COREQUISITE(S): CNG 102

## CNG 108 NETWORK ANALYSIS AND DESIGN 3 CREDITS

Provides advanced instruction for networking professionals and students who grasp the basic concepts of networking but would like to understand methods used to analyze, design and manage LANs point-to-point networks. Exercises are geared toward learning techniques used to design and analyze networks. PREREQUISITE(S): CNG 101 or equivalent experience

## CNG 121 COMPUTER TECHNICIAN I: A+ 4 CREDITS

Introduces personal computer hardware to gain the skills and knowledge for a successful entry-level computer service technician. Provides extensive hands-on work with computer systems. Includes PC setup and configuration, floppy and hard drive installation and basic maintenance and troubleshooting. Successful completion prepares the student for the core hardware service technician portion of the CompTIA A+ Certification Exam.

## CNG 122 COMPUTER TECHNICIAN II A+ 3 CREDITS

Focuses on operating systems as well as installation of modems, tape backups, CD-ROM drives, and SCSI subsystems. Covers operating systems, Windows 9x, Windows NT and Windows 2000 installation, configuration and upgrading. Includes laser printers and backup power systems. This course prepares the student for the CompTIA A+ OS Technologies Exam. PREREQUISITE(S): CNG 121 or Approval of Instructor

## CNG 125 NETWORKING II: NETWORK + 3 CREDITS

Continues to provide students with the knowledge necessary to implement and support a network. Focuses on the vendor-independent networking skills and concepts that affect all aspects of networking. The Networking I and II: Network + courses prepare students for the Network + certification. PREREQUISITE(S): Networking I: Network +

## CNG 129 NETWORK CABLING 2 CREDITS

Prepares the student to install and troubleshoot cable, connectors, connecting blocks, patch panels and related hardware as needed to support a local area network.

## CNG 160 TELECOMMUNICATIONS I 3 CREDITS

Introduces the background needed to understand telephony products and services in the telecommunications industry. Includes hardware and devices, transmission characteristics and codes, network configurations, software and protocols. PREREQUISITE(S): CNG 203 or permission of instructor

## CNG 208 INSTALLING, CONFIGURING, AND ADMINISTERING MICROSOFT WINDOWS 2000 SERVER 3 CREDITS

This course covers Windows 2000 Server operating system, installation, administration, support, and troubleshooting. Prepares student to take the Windows 2000 exam #70-215. PREREQUISITE(S): CNG 209 or instructor's permission

## CNT 209 WINDOWS 2000 PROFESSIONAL 3 CREDITS

Covers Windows 2000 Client installation, implementation, administration, support, network management and troubleshooting. Prepares students for Windows 2000 exam #70-210. PREREQUISITE(S): CNG 104 or instructor's permission

## CNG 210 WINDOWS 2000 NETWORK AND OPERATING ESSENTIALS 3 CREDITS

Provides individuals new to Microsoft Windows 2000 with the knowledge necessary to understand and identify the tasks involved in supporting Windows 2000 networks. introduces an overview of networking concepts and how they are implemented in Windows 2000. Provides students with the prerequisite knowledge and skills required for course CNG 212, Implementing Windows 2000 Professional and server. Prepares student to take the Microsoft Certified Systems Engineer Exam 70-210 or Exam 70-215.

## CNG 211 WINDOWS XP CONFIGURATION 3 CREDITS

Provides students with the knowledge and skills necessary to address the implementation and desktop support needs of customers who are planning to deploy and support Microsoft Windows XP Professional in a variety of network operating system environments. Prepares student to take the Microsoft Certified Systems engineer Exam 70-270. PREREQUISITE(S): CIS 104 or instructor's permission

## CNG 212 IMPLEMENTING WINDOWS 2000 PROFESSIONAL AND SERVER 4 CREDITS

This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows 2000 Professional on stand-alone and client computers that are part of a workgroup or domain. In addition, this course provides the skills and knowledge necessary to install and configure Windows 2000 Server to create file, print, Web, and Terminal servers. It also provides students with the prerequisite knowledge and skills required for course CNG 213 Implementing a Windows 2000 Network Infrastructure.

## CNG 213 IMPLEMENTING A WINDOWS 2000 NETWORK INFRASTRUCTURE 4 CREDITS

This course is for support professionals who are new to Microsoft Windows 2000 and will be responsible for installing, configuring, managing, and supporting a network infrastructure that used the Microsoft Windows 2000 Server products. It also provides students with the prerequisite knowledge and skills required for course CNG 214 Implementing and Administering Windows 2000 Directory Services.

## CNG 214 IMPLEMENTING AND ADMINISTERING WINDOWS 2000 DIRECTORY SERVICES 4 CREDITS

This course is designed to provide students with the knowledge and skills necessary to install, configure, and administer Microsoft windows 2000 active Directory™ directory services. The course also focuses on implementing Group Policy and performing the Group Policy-related tasks that are required to centrally manage users and computers. It also provides students with the prerequisite knowledge and skills required for course CNG 221, Designing a Windows 2000 Directory Service Infrastructure.

## CNG 215 MANAGING A MICROSOFT WINDOWS NETWORK ENVIRONMENT 3 CREDITS

Provides the knowledge required to implement, manage and troubleshoot existing network and server environments based on the Microsoft Windows/NT platform. These skills are generally required in medium to large size organizations that maintain 200 to 26,000 user desktops and servers, spanning 2 to 100 physical locations via Large Area Networks (LANs) and the Internet or Intranets. PREREQUISITE(S): CNG 214

**CNG 217 IMPLEMENTING MICROSOFT SITE SERVER 3.0 3 CREDITS**

This course covers basic web site development tasks requiring knowledge of hypertext, markup language (HTML) and Microsoft visual Basic<sup>®</sup> Scripting Edition. It provides students with the Knowledge and skills necessary to implement, support maintain, optimize, and troubleshoot web sites using Site Server. Prepares student to take the Microsoft Certified Professional Exam 70-057.

PREREQUISITE(S): student should be familiar with internet protocols and services, administer IIS with Microsoft Management Console, Visual Basic Scripting, or with instructor's approval

**CIS 221 DESIGNING A WINDOWS DIRECTORY SERVICES INFRASTRUCTURE 3 CREDITS**

Provides students with the knowledge and skills necessary to design a Windows directory services infrastructure in an enterprise network. Presents strategies to assist the student in identifying the information technology needs of an organization and to design a Windows Active Directory™ structure that meets those needs. Prepares student to take the Microsoft certified Systems Engineer Exam 70-219

PREREQUISITE(S): CNG 214 or instructor's permission

**CNG 223 DESIGNING A WINDOWS NETWORK INFRASTRUCTURE 3 CREDITS**

Provides students with information and skills needed to create a networking services infrastructure design that supports the required network applications. Each module provides a solution based on the needs of the organization. Covers Windows network solutions that require a single technology, such as DHCP, to provide Internet Protocol (IP) address configurations support. Examines several technology options such as Open Shortest Path First (OSPF), Routing Information Protocol (RIP), and Internet Group Management Protocol (IGMP) to design an IP routing scheme. Prepares student to take the Microsoft Certified Systems Engineer Exam 70-221.

PREREQUISITE(S): CNG 214 or instructor's permission

**CNG 224 MICROSOFT WINDOWS WIRELESS NETWORK 3 CREDITS**

Provides the student with the Microsoft official curriculum from the Microsoft Regional Academy. Offers detailed instruction on the foundation concepts and technologies of wireless data networking. Upon completion of this course, students are prepared to take the Certified Wireless Network Administrator (CWNP) Certification Exam.

PREREQUISITE(S): CNG 101 or instructor consent

**CNG 225 WIRELESS NETWORK SECURITY 3 CREDITS**

This course offers detailed instruction on the security issues related to wireless data networking. Topics include vulnerabilities and attacks, hardware and software solutions, prevention and countermeasures, and implementation and management. Upon completion of this course, students should be prepared to take the certified Wireless security Expert (CWSE) Certification Exam.

PREREQUISITE(S): CNG 224, CWNA Certification, or equivalent documented knowledge and skill level.

**CNG 226 IMPLEMENTING AND MANAGING MS EXCHANGE 3 CREDITS**

Provides the knowledge and skills necessary to install, configure, and administer Microsoft Exchange. Students learn to use Exchange in medium to very large computing environments that typically have multiple physical locations, mixed client connection protocols, and internet messaging connectivity.

PREREQUISITE(S): CNG 214

**CNG 227 ADMINISTERING A MICROSOFT SQL SERVER DATABASE 3 CREDITS**

Provides students with the knowledge and skills required to install, configure, administer, and troubleshoot the client-server database management system of Microsoft® SQL Server.

PREREQUISITE(S): CNG 214

**CNG 228 DESIGNING A MICROSOFT WINDOWS 2000 MIGRATION STRATEGY 3 CREDITS**

Designing a Microsoft Windows 2000 Migration Strategy provides students with the knowledge and skills necessary to select and design a strategy to migrate from a Microsoft Windows NT server 4.0 directory services infrastructure to a Microsoft Windows 2000 Active Directory™ directory service infrastructure by describing the planning processes and implications involved. Prepares the student to take the Microsoft Certified Systems Engineer Exam 70-222.

PREREQUISITE(S): CNG 221 or 214, working knowledge of Active Directory planning and design, experience evaluating forest and site designs for upgrading purposes; or instructor's permission

**CNG 242 DESIGNING A WINDOWS SECURE NETWORK 3 CREDITS**

Provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks by using Microsoft Windows technologies. Students learn to secure access to Local Network Users, Remote Users and Remote Offices, Partners, and to secure access between private and public networks.

PREREQUISITE(S): CNG 241 or instructor approval

**CNG 251 ANTI VIRUS CONCEPTS 3 CREDITS**

Prepares the student for virus eradication. Focuses on how viruses work, how they are designed and how viruses are written. Emphasizes virus eradication and cleaning.

PREREQUISITE(S): CNG 101 or instructor consent

**CNG 252 SECURITY MODELING 3 CREDITS**

Designs various security models using rights and permissions. Covers Microsoft, CISCO, Novell Netware and UNIX, and Standard based security calls. Focuses on security theory with some practical security applications.

PREREQUISITE(S): CNG 261 or instructor consent

**CNG 253 FIREWALLS AND HOW THEY WORK 3 CREDITS**

Introduces students to the design and implementation of firewalls. Covers such topics as firewalls using CISCO Routers, Microsoft server platform and UNIX platform. Focuses on how firewalls function in these environments and the basic steps to plan and implement firewalls.

PREREQUISITE(S): CNG 261 or instructor consent

**CNG 254 DATA ENCRYPTION 3 CREDITS**

Exposes the student to data encryption models. Examines the differences between data storage including Microsoft, Novell Netware and UNIX. Includes encryption and data transmission. Covers encryption over various networks including the Internet.

PREREQUISITE(S): CNG 261 or instructor consent

**CNG 255 INDUSTRY CERTIFICATION 3 CREDITS**

Provides the student with a comprehensive preparation for recognized industry certification exams in personal computer and network technology. Features alternative methods for delivery of instruction, including self-paced instruction assisted by technology.

**CNG 260 CISCO NETWORK ASSOCIATE I 5 CREDITS**

Introduces network fundamentals, the OSI model and industry standards, IP addressing (subnet masks) and basic network design.

PREREQUISITE(S): CNG 101 or instructor permission

**CNG 261 CISCO NETWORK ASSOCIATE II 5 CREDITS**

Focuses on router theory and technologies, including router configurations, protocols, network management and introductory LAN switching.

PREREQUISITE(S): CNG 260

**CNG 262 CISCO NETWORK ASSOCIATE III 5 CREDITS**

Focuses on advanced routing and switching configurations, LAN switching, network management and advanced network design.

PREREQUISITE(S): CNG 261

**CNG 263 CISCO NETWORK ASSOCIATE IV 5 CREDITS**

Focuses on project-based learning, including advanced network design projects and advanced management projects. This course and CNG 260, 261 and 262 prepare students for the CISCO Certified Network Associate (CCNA) certification exam.

PREREQUISITE(S): CNG 262

**CNG 265 CISCO NETWORK PROFESSIONAL I****5 CREDITS**

Focuses on using Cisco routers connected in LANs and WANs typically found at medium to large network sites. Emphasizes selection and implementation of the appropriate Cisco IOSTM services required to build a scalable, routed network. Includes theories and tasks that network managers and administrators need to use and perform when managing access and controlling overhead traffic in growing, routed networks once connectivity has been established. This course is the first in a series of four semesters pertaining to CCNP Certification.  
PREREQUISITE(S): Current Cisco CCNA Certification or Department Approval

**CNG 266 CISCO NETWORK PROFESSIONAL II****5 CREDITS**

Focuses on using and configuring Cisco routers remotely connected in WANs found in medium to large network sites. Emphasizes how to select WAN topologies, devices, protocols, and implement the appropriate Cisco IOS services required for remotely accessing network resources. Includes selecting WAN components, configuring asynchronous modems, PPP, Frame Relay and ISDN protocols, NAT, X.25; TACACS+ Server, Dial Backup, and Managing Network Performance with Queuing and Compression together with requisite router configurations. This is the second course in a series of four semesters pertaining to CCNP Certification.  
PREREQUISITE(S): CNG 265

**CNG 267 CISCO NETWORK PROFESSIONAL III****5 CREDITS**

Focuses on using and configuring Cisco routers and switches to connect LANs and WANs found at medium to large network sites. Covers the selection and implementation of the appropriate Cisco IOS services required to build scalable, routed, switched and multi-layered switched networks. Includes theories and tasks that network managers and administrators need to perform when managing access and controlling overhead traffic in growing, routed networks once connectivity has been established. This is the third course in a series of four semesters pertaining to CCNP Certification.  
PREREQUISITE(S): CNG 226

**CNG 268 CISCO NETWORK PROFESSIONAL IV****5 CREDITS**

Focuses on methodologies that provide systematic and efficient approaches to troubleshooting and support of networks and network components. Emphasizes troubleshooting tools, software testing products, protocol overviews, TCP/IP features, LAN switching, VLAN broadcasts and security, routing and switching architectures, Frame Relay, ISDN, Novel IPX, AppleTalk, EIGRP, OSPF, and BGP. This is the fourth course in a series of four semesters pertaining to CCNP Certification.  
PREREQUISITE(S): CNG 265, CNG 266 and CNG 267

**COMPUTER SCIENCE****CSC 116 LOGIC AND PROGRAM DESIGN 3 CREDITS**

Introduces computer program design using concepts of structured programming and logic. Includes pseudocode, flowcharts, and structure charts. Covers variables, data types, control structures, looping, program breaks, and arrays.

**CSC 150 VISUAL BASIC PROGRAMMING 3 CREDITS**

This course introduces programming and applications development for the Microsoft Windows Programming environment using Visual Basics for Windows.  
PREREQUISITE(S): CIS 115 and 128 or equivalent experience or instructor's permission

**CSC 151 ADVANCED VISUAL BASIC PROGRAMMING 3 CREDITS**

This course is a continuation of CSC 150. You will develop more involved applications, work with more advanced controls, and deal with more advanced topics.  
PREREQUISITE(S): CSC 150 or instructor's permission

**CSC 156 VISUAL BASIC.NET PROGRAMMING 4 CREDITS**

Students are introduced to the Visual Basic.NET programming language. All syntactical components of the language are covered, including arrays, structures, functions, and classes. Content will focus on writing clear properly structured, and well-documented programs using Visual Basic.NET and object oriented methodology.  
PREREQUISITE(S): Familiarity with Visual Basic 6 or instructor's permission

**CSC 157 ADVANCED VISUAL BASIC .NET PROGRAMMING 4 CREDITS**

This course continues the structured Algorithm Development and problem solving techniques begun in CSC 156. The more advanced features of the Visual Basic .NET programming language are introduced. This course will explore the relationships between VISUAL BASIC.NET and the .NET framework and introduces some important.NET services. Collections, copying and comparing objects, and how the .NET framework interfaces to XML will be introduced. Content will focus on writing clear, properly structured, and well-documented programs using VISUAL BASIC .NET and object oriented methodology.  
PREREQUISITE(S): familiarity with the VISUAL BASIC .NET Programming Language or instructor's permission

**CSC 160 COMPUTER SCIENCE I (JAVA) 4 CREDITS**

This course will introduce students to the discipline of computer science. Topics covered will include algorithm development, data representation, arithmetic and logical expressions, sub-programs and input/output operations using a structured programming language.  
PREREQUISITE(S): CIS 116 and MAT 132 or instructor's permission

**CSC 161 COMPUTER SCIENCE II (JAVA) 4 CREDITS**

This course continues the structured algorithm development and problem solving techniques begun in CSC 160. Data structures will be emphasized. Intensive computer laboratory experience required. 45 hours lecture, 30 hours lab.  
PREREQUISITE(S): CSC 160

**CSC 165 DISCRETE STRUCTURES 3 CREDITS**

This course prepares students for a fundamental understanding of computing and computer science. Topics covered will include set theory, Boolean algebra, relations, functions, graph theory and techniques for formal reasoning. 45 hours lecture.  
PREREQUISITE(S): CSC 160, MAT 160

**CSC 170 LINUX/APACHE/MYSQL/PHP(LAMP) 4 CREDITS**

This course introduces the movement of deploying Open Source Software (OSS) into the personal, academic, and business servers and applications arenas. The course provides a structured learning environment with hands-on experience installing, securing, and implementing one of the most popular and cost-effective web integration solutions.  
PREREQUISITE(S):

**CSC 225 COMPUTER ORGANIZATION 4 CREDITS**

This course introduces the student to the organization of a computer at the logic level. Topics covered will include numbering systems, digital logic, digital systems, machine level representation of data, assembly language programming, machine organization and memory system organization. 45 hours lecture, 30 hours lab.  
PREREQUISITE(S):

**CSC 230 C LANGUAGE PROGRAMMING 3 CREDITS**

Students are introduced to the C programming language, which is a "mid-level" language whose economy of expression and data manipulation features allow a programmer to deal with the computer at a "low level".  
PREREQUISITE(S): MAT 160 and any programming language course

**CSC 231 ADVANCED C LANGUAGE PROGRAMMING 3 CREDITS**

This course continues the study of C begun in CSC 230. Topics include pointers, arrays, linked lists, stacks and queues, trees and advanced user interfaces such as menus, windows and cursor control.  
PREREQUISITE(S): CSC 230

**CSC 233 OBJECT-ORIENTED PROGRAMMING IN C++ 4 CREDITS**

Students are introduced to the C++ programming language. All syntactical components of the language are covered, including arrays, structures, pointers, functions, and classes. Content will focus on writing clear properly structured, and well-documented programs using C++ and object oriented methodology.  
PREREQUISITE(S): CIS 116 and MAT 132 or instructor's permission

**CSC 234 C++ PROGRAMMING****4 CREDITS**

This is an advanced level computer programming course. Although it teaches C++ as a complete language, it presumes knowledge of at least one similar language such as C or Pascal. Prior knowledge of C at an advanced level as well as fundamental concepts of algorithms and data structures is highly recommended.

PREREQUISITE(S): CSC 233

**CSC 236 C# PROGRAMMING****4 CREDITS**

Students are introduced to the C# programming language. All syntactical components of the language are covered, including arrays, structures, functions, and classes. Content will focus on writing clear properly structured, and well-documented programs using C# and object oriented methodology.

PREREQUISITE(S): Familiarity with the C++ programming language or permission of the instructor.

**CSC 237 ADVANCED C#****PROGRAMMING 4 CREDITS**

This course continues the structured algorithm development and problem solving techniques begun in CSC 236. Students are introduced to more advanced features of the C# programming language. This course will explore the relationships between C# and the .NET Framework and introduces some important .NET services. Students will learn collections, copying and comparing objects, and how the .NET framework interfaces to XML. Content will focus on writing clear properly structured, and well documented programs using C# and object oriented methodology.

PREREQUISITE(S): familiarity with the C# Programming Language or instructor's permission

**CSC 238 INTRODUCTION TO****C++.NET 4 CREDITS**

Students are introduced to the C++.NET programming language. All syntactical components of the language are covered, including arrays, structures, functions, classes, memory management, object manipulation, inheritance, Windows programming, and MFC. Content will focus on writing clear properly structured and well-documented programs using C++.NET and object oriented methodology.

**CSC 240 JAVA PROGRAMMING****3 CREDITS**

This course is an introduction to the Java programming language and will cover basic graphics, threads, events/procedures, user interface, and libraries. The student will write and execute a variety of Java programs. Java Applets will be incorporated into HTML pages, allowing for the use of real-time sound, graphics, animation and user interaction.

PREREQUISITE(S): C++ or equivalent experience or instructor's permission

**CSC 241 ADVANCED JAVA****PROGRAMMING 3 CREDITS**

Continues the study of the Java programming language. Covers advanced programming topics including multi-threading, network/Internet programming, database programming, and JavaBeans. Enables the student to write advanced, large, and complex programs.

PREREQUISITE(S): CSC 240

**CSC 249 JAVA FOR THE ENTERPRISE****4 CREDITS**

Presents advanced topics in the development of applications on the Java platform. Emphasizes the use of Java's J2EE distributed processing in the development of server-side programs and develops skills in streaming and multithreading.

**CSC 253 DEVELOPING MICROSOFT ASP.NET WEB APPLICATIONS USING VISUAL STUDIO.NET****3 CREDITS**

Teaches programmers and beginning Web developers the fundamentals of Web application site implementation by using Microsoft ASP.NET platform to create an ASP.NET Web application that delivers dynamic content to a Web site. Prepares student to take the Microsoft Certified Professional Exam 70-305 and Exam 70-315.

PREREQUISITE(S): CSC 251, 261 or instructor's permission

**CSC 254 ASP.NET PROGRAMMING****3 CREDITS**

Teaches programmers the fundamentals of Web application and Web Server site implementation by using Microsoft ASP.NET and Microsoft Visual Basic.NET or C#.NET. Focuses on using the Microsoft Visual Studio.NET environment and the Microsoft.NET platform to create an ASP.NET Web application and Web services that delivers dynamic content to Web applications and Web services.

PREREQUISITE(S): CSC 157 or 237 or experience programming in Microsoft's .NET framework

**CSC 255 ADO.NET PROGRAMMING****4 CREDITS**

This course provides a hands-on approach to learning ADO.NET, the data access model provided by the .NET Framework. The class features an in-depth coverage of ADO.NET but also takes an in-depth look at the ADO.NET architecture. It covers concepts of accessing, modifying, and manipulating data in both Connected and Disconnected database environments.

PREREQUISITE(S): CSC 157 or 236

**CSC 261 PROGRAMMING WITH C# FOR THE .NET PLATFORM****3 CREDITS**

Provides students with the knowledge and skills they need to develop C# applications for the Microsoft.NET Platform. Focuses on C# program structure, language syntax, and implementation details.

PREREQUISITE(S): CSC 153 or instructor's permission

**CSC 269 PROGRAMMING IN PERL****2 CREDITS**

This course introduces the knowledge and skills necessary to be able to write programs in the Perl programming language. Will offer a brief introduction of writing CGI programs using Perl.

PREREQUISITE(S): previous programming experience

**COMPUTER TECHNOLOGY****CNT 235 MANAGING A MICROSOFT WINDOWS 2000 NETWORK ENVIRONMENT****2 CREDITS**

This course provides the knowledge required to implement, manage and troubleshoot existing network and server environments based on the Microsoft Windows 2000 platform. These skills are generally required in medium to large size organizations that maintain 200 to 26,000 user desktops and servers, spanning 2 to 100 physical locations via Local Area Networks (LANs) and the Internet of Intranets.

PREREQUISITE(S): CNT 232 or instructor's permission

**CWB 106 MASTERING THE WEB****3 CREDITS**

Focuses on creating and managing web sites, the tasks and tools involved in building and maintaining a web site, and the web administrator's responsibilities and challenges.

PREREQUISITE(S): XML I

**CWB 164 INTRODUCTION TO XML****3 CREDITS**

Provides students with an introduction to the XML language's structure and syntax. Examines supporting tools such as XSL and CSS. This course is not designed to focus on a particular implementation of XML, but examine the possibilities of using XML with popular technologies such as Java SAX, SOAP, RDF, and the DOM.

PREREQUISITE(S): CWB 173 or Complete Web Authoring

**CWB 165 COMPLETE WEB****AUTHORING 3 CREDITS**

Explores the complete set of Web authoring skills using HTML and/or other scripting languages. Includes links, backgrounds, controlling text and graphic placement, tables, image maps, frames and forms.

PREREQUISITE(S): CWB 100 or equivalent experience

**CWB 205 COMPLETE WEB SCRIPTING****3 CREDITS**

Explores the complete set of web scripting skills needed to develop Web Applications. Includes variables, data types, arithmetic operations, logical operations, looping, creating and reading cookies, creating an array, displaying data based on a cookie value, setting flags, working with frames, creating objects in a hidden frame, using the History Object, writing HTML to another window, determining browser and detecting keystrokes.

**CWB 209 MASTERING WEB APPLICATION DEVELOPMENT USING MICROSOFT VISUAL INTERDEV 6**  
**3 CREDITS**

This course teaches site developers who perform architectural planning, technology selection, or web site programming tasks how to create enterprise-level web sites that use Component Object Model (COM) components on both the client and the server. Prepares student to take the Microsoft Certified Professional Exam 70-152.

**PREREQUISITE(S):** Students should be familiar with the internet, HTML and web authoring tools, database development tools, ActiveX controls and Java applets, client/server architecture models, email with mail client, or instructor's permission

## **CONVERGENT TECHNOLOGIES**

**CTC 105 OVERVIEW OF TELECOMMUNICATION**  
**3 CREDITS**

This course provides the student with the background and history of the telecommunication field. Topics covered include transmission systems, LAN's data communication, cable communication, telephone communication and video technology.

**CTC 107 INSTALLER** 3 CREDITS  
Teaches the proper procedures for performing aerial, underground and interior CA TV drop installations.

**CTC 108 BROADBAND CABLE OVERVIEW** 1 CREDITS  
This course provides technical, sales/marketing, customer service, dispatch and management personnel with general understanding of CATV System equipment operation and terminology.

**CTC 109 INSTALLER TECHNICIAN** 4 CREDITS  
This course teaches an experienced installer the CATV signal level fundamentals, test equipment, signal leakage detection procedures, and servicing single and multiple dwelling unit drops.

**CTC 111 SERVICE TECHNICIAN** 4 CREDITS

This course teaches a trained NCTI Installer Technician the basic characteristics and functions of the feeder line system active and passive devices, the fundamentals of cable powering, basic test equipment operation, signal leakage basics, coaxial cable and connectorization, and an overview of fiber optics. The study of AC electronic theory provides the foundation for understanding the lessons on coaxial cable, passive devices, amplifiers and cable powering.  
**PREREQUISITE(S):** CTC 109

**CTC 113 SYSTEM TECHNICIAN** 4 CREDITS

This course teaches a trained NCTI Service Technician how to activate, test and troubleshoot the RF trunk system. It covers RF trunk and distribution amplifier theory of operation. It includes testing and measurement standards, and procedures.

**CTC 116 FIBER OPTICS TECHNICIAN** 3 CREDITS

Provides information on fiber optic system overview, applications, rackmount optical transmitters and receivers, forward and return optical node operations and activation, fiber optic design topologies, fiber design cost studies, fiber optic system design, fiber construction, fiber tests and documentation, and optical test equipment.

**CTC 117 COMPUTERS AND BROADBAND MODEMS** 3 CREDITS

Introduces Personal Computer hardware and software to use as an interface device. Focuses on the fundamentals of Personal Computers and requires no prior technical background or experience. Explains the operation of cable modems and how they work in a broadband cable network. Covers the client-server functions of CMTS and cable modems. Provides course material that is appropriate as a reference tool to understand more about Personal Computer concepts and terminology. Enables individuals to gain a comprehensive understanding of Personal Computer technology and how the PC works with broadband modems.

**COREQUISITE(S):** Employment in the Broadband Industry

**CTC 118 BROADBAND DIGITAL INSTALLER** 3 CREDITS

Introduces the basics of digital video and high-speed Internet access services by presenting the typical features and functions of digital set-top terminals and cable modems. Covers computer hardware and operating system setup basics. Enables students to learn how to certify the reliability of the drop prior to performing the extensive step-by-step installation procedures. Teaches how to effectively educate customers to use these new digital services reducing unnecessary repeat service calls and improving customer satisfaction. Covers installation procedures for twisted-pair inside wiring and constant bit rate telephony equipment. Incorporates information on communication service competitors to answer customer questions regarding competitive technologies offering similar digital services.  
**COREQUISITE(S):** Employment in the Broadband Industry

**CTC 119 DSL INSTALLATION** 3 CREDITS

Introduces the basic operations of the telephone network, DSL technology, today's computer system hardware and software, and the Internet. Describes the procedures of installing twisted-pair inside wiring and connecting the premises to the phone network. Examines techniques on the proper use and maintenance of the tools necessary for installation and examines the step-by-step process of installing internal and external DSL modems. Provides practical techniques for applying customer service skills and instructing new customers how to get the most from their DSL service and the Internet.  
**COREQUISITE(S):** Employment in the Broadband Industry

**CTC 120 UNDERSTANDING VOICE AND DATA NETWORKS** 3 CREDITS

Introduces telecommunications technology and terminology and develops a broad knowledge base for a career in the telecom industry. Requires no prior technical background or experience in the field. Enables a student to gain a comprehensive understanding of telecommunications technologies and their applications and implications for business. Combines computer, electrical engineering and business aspects of telecommunications, providing a thorough, up-to-date presentation of the latest technologies as well as practical industry applications.  
**COREQUISITE(S):** Employment in the Broadband Industry

**CTC 121 UNDERSTANDING BROADBAND TECHNOLOGY** 3 CREDITS

Provides a thorough grounding in the fundamental concepts of broadband technology. Includes an overview of the underlying technologies of the entire broadband network from signal source to the customer premises. Focuses on a review of digital video, telephony, and high-speed data services. Addresses safety and regulatory issues.

**COREQUISITE(S):** Employment in the Broadband Industry

**CTC 123 BASIC BROADBAND TROUBLESHOOTING** 3 CREDITS

Teaches students to diagnose and resolve technical problems for customers over the phone. Provides a thorough understanding of the drop system, interconnection between devices, and other problems faced by broadband customers. Trains customer service representatives to distinguish problems that can be solved over the phone and not require a technician to be dispatched.

**COREQUISITE(S):** Employment in the Broadband Industry

**CTC 124 TROUBLESHOOTING ADVANCED SERVICES** 3 CREDITS

This course helps make the transition from analog to digital services troubleshooting. This course teaches how digital signals are transported, explains the use of test equipment used to test digital signals in the cable plant and teaches specific techniques for troubleshooting digital video, telephony and cable modem services.

**COREQUISITE(S):** Employment in the Broadband Industry

**CTC 125 HIGH SPEED DATA CUSTOMER SERVICE** 2 CREDITS

Focuses on high-speed data services, equipment, operations and troubleshooting. Covers cable modems, and personal computer hardware and software used in high-speed data services. Provides an understanding of data networking, the Internet and how cable modems interface with it, TCP/IP and the open system interconnection model, cable modem termination systems, and the return paths effect on high speed data service.

**COREQUISITE(S):** Employment in the Broadband Industry

**CTC 126 ADVANCED HIGH SPEED DATA CUSTOMER SERVICE**  
**3 CREDITS**

Covers cable modems, computer systems, and troubleshooting of personal computers. Emphasizes the boot process, software, the system board, memory management, floppy and hard drives, input/output devices, return path fundamentals, and data communications. Explores and compares the technology related to wide area networks and broadband access including packet switching, frame relay, SMDS, ISDN, SONET and ATM.  
PREREQUISITE(S): CTC 125 High Speed Data Customer Service  
COREQUISITE(S): Employment in the Broadband Industry

**CTC 127 FIBER INSTALLATION AND ACTIVATION**  
**2 CREDITS**

Fiber Installation and Activation provides the student with current information on the development of fiber in optical broadband networks. The student will learn the basics of light transmission through optical fibers, how fibers are combined into optical cables and how fiber networks are designed and constructed. Network architecture, topology, and design will be covered. Training will also prepare the student to splice fibers using mechanical and fusion methods. The course teaches the topics required to provide the student with the ability to install and activate fiber optic networks. It assumes previous knowledge and experience in RF Broadband Technology.  
COREQUISITE(S): employment in the Broadband Industry

**CTC 128 TESTING AND MAINTENANCE FOR FIBER TECHNICIANS**  
**2 CREDITS**

Testing and Maintenance for fiber Technicians provides the student with an understanding of the application of fiber optic theory on the job. The course concentrates on the test equipment and procedures necessary to perform test and turn-up for new Fiber Optic links, troubleshoot service outages, and restoring fiber optic links to their original standards. The course also describes the process of Fiber Optic restoration planning and implementing preventive maintenance regimens in an HFC network.  
COREQUISITE(S): employment in the Broadband industry

**CTC 150 DATA COMMUNICATIONS**  
**3 CREDITS**

This course will provide the student with an overview of network systems. The architecture of each network, transmission modes, functions, uses, protocols and advantages of each will be discussed in detail. Synchronous as well as Asynchronous data systems will also be addressed.

**CTC 160 CABLE COMMUNICATIONS**  
**3 CREDITS**

This course will provide the student with an overview of cable communication systems and their attributes. Areas of discussion will include: architecture, satellite applications, coaxial cable attributes, typical systems from tap to TV, and common construction practices. Applicable math skills will also be included.  
PREREQUISITE(S): ELT 110

**CTC 165 ADVANCED TECHNICIAN**  
**3 CREDITS**

This course teaches a trained NCTI System Technician how to set up, operate, and maintain the headend. The study of communication electronics theory provides a foundation for understanding broadcast TV, microwave, satellite, and data communication systems. Essentials for headend equipment setup and maintenance, video baseband and RF FCC proof-of-performance tests, and NCTA Recommended Practices provide the necessary technical knowledge to operate and maintain sophisticated broadband cable system headends. The assumed cable system knowledge/skills for enrolling in the advanced Technician course are those in the NCTI system Technician course.  
PREREQUISITE(S): employment in the Broadband Industry

**CTC 170 VOICE COMMUNICATION**  
**3 CREDITS**

This course will provide the students with an overview of telephone communication systems. It will address the components and processes used in a public switched network, residence, business and special telephone service, class 5 switching centers, outside telephone plants, video delivery and video conferencing. The operation and application of pagers will also be covered.  
PREREQUISITE(S): ELT 110

**CTC 175 TELECOMMUNICATIONS CONSTRUCTION & OSHA SAFETY**  
**3 CREDITS**

This course is designed to bring to the student the constant awareness of safety issues. These issues shall be understood for situations in buildings, out in the field and regarding vehicles.  
PREREQUISITE(S): ELT 110, CTC 170

**CTC 180 VIDEO TECHNOLOGY**  
**3 CREDITS**

This course will provide the students with an overview of video technology including the principles, colored as well as black and white signal construction, fundamentals of color and color mixing and color signal construction. Wave form analysis will be discussed as well as both interlaced and non-interlaced scanning schemes. Distortion, signal processing, measurements and video data compression will also be covered.  
PREREQUISITE(S): ELT 110

**CTC 190 EMERGING TECHNOLOGY**  
**2 CREDITS**

This course will provide the student with an opportunity to study concepts and applications of related technologies that are being reviewed and experimented with today. The course will be supplemented with presentations by and discussions with industry experts. Student presentations will address areas of interest in developing technologies. Applications and implications of new discoveries will be discussed.

**CTC 215 OPTICAL NETWORKS**  
**3 CREDITS**

This course is an introduction to optical networks, which is the next great bandwidth provider. It addresses optical networking from a practical point-of-view, making it clear that although optical networks offer enormous bandwidth solutions, they are not the only answers to evolving transport challenges. This course describes and compares alternatives such as ISDN, xDSL, cable modems, and wireless local loop offerings such as LMDS, MMDS- and satellite and copper-based transport schemes, such as T1, T3 SONET and SDH.  
PREREQUISITE(S): CTC 170

**CTC 220 REGULATIONS AND STANDARDS**  
**3 CREDITS**

This course will provide the students with an overview of the regulations and standards that pertain to technicians in the communication industries. Regulated as well as unregulated business operations will be discussed. The function and control of local regulatory agencies will be addressed.  
PREREQUISITE(S): CTC 150, 170, 215

**CTC 240 TELECOMMUNICATIONS ENGINEERING OUTSIDE PLANT**  
**3 CREDITS**

This course covers the components of engineering the telephone outside plant. It covers the fundamentals of transmission, resistance design, and distribution cable design in serving a customer area.  
PREREQUISITE(S): CTC 130, 170, 215, 220  
COREQUISITE(S): CTC 245

**CTC 267 TELECOMMUNICATIONS INSTALLATIONS, SPLICING & REPAIR**  
**3 CREDITS**

This course provides students with an understanding in the basic phone installation from pedestal to customer premise equipment (CPE). Troubleshooting and testing skills to maintain the integrity of the phone service are included. Students will also receive instruction in print reading, safety, cable locating, fault location and splicing.  
PREREQUISITE(S): CTC 170, 215

**CTC 275 FIELD STUDIES: ENGINEERING PLANNING**  
**3 CREDITS**

The student will have the basic knowledge to articulate the tactical planning functions performed within capacity provisioning. The student will be able to access and apply the various tactical planning tools and data elements to supporting documentation.  
PREREQUISITE(S): CTC 240, 245

**CTC 294 COOP EDUCATION CAREER TRAINING**  
**3 CREDITS**

This course is designed to provide students an opportunity to explore a career. The purpose of the course is to acquaint students with the tasks and working environment of specific occupations. The instructor's will work with the student to select an appropriate work site, establish learning objectives, and to coordinate learning activities with the employer or work site supervisor. Attendance at seminars and/or interaction with the instructor is required.

# CRIMINAL JUSTICE

## CRJ 100 CRIMINAL JUSTICE CAREERS/EVALUATIONS

1 CREDIT

Provides results of criminal justice pre-employment testing and screening and individual advising of the results. Provides the student an opportunity to determine how competitive they would be in the entry-level employment market and any skills they need to develop in order to benefit more fully from law enforcement academy training. Will enhance the student's ability to determine if they should select a career in the criminal justice system. Workshop. Satisfactory/Unsatisfactory grade.  
PREREQUISITE(S): instructor's permission and employable as a Peace Officer

## CRJ 101 BASIC POLICE ACADEMY I

8 CREDITS

The curriculum is designed to conform to POST standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Police Officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning.  
PREREQUISITE(S): Permission of Academy Director

## CRJ 102 BASIC LAW ENFORCEMENT ACADEMY II

6 CREDITS

The curriculum is designed to conform to POST standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Police Officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning.  
PREREQUISITE(S): permission of Academy Director

## CRJ 103 BASIC LAW ENFORCEMENT ACADEMY III

2 CREDITS

The curriculum is designed to enhance the standards established by the P.O.S.T. Board and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Police Officer. Emphasis will be on expanding the P.O.S.T. curriculum to create a unique learning experience.  
PREREQUISITE(S): permission of Academy Director

## CRJ 104 BASIC LAW ENFORCEMENT ACADEMY IV

1 CREDIT

The curriculum is designed to enhance the standards established by the P.O.S.T. Board and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Police Officer. Emphasis will be on expanding the P.O.S.T. curriculum to create a unique learning experience.  
PREREQUISITE(S): permission of Academy Director

## CRJ 105 BASIC LAW

6 CREDITS

The curriculum is designed to conform to P.O.S.T. standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Police Officer. Emphasis will be on United States Constitution, arrest, search and seizure, interrogation and confessions, rules of evidence, Colorado Criminal Code, Colorado Children's code, Victim's rights, Liquor code and controlled substances.  
PREREQUISITE(S): permission of Academy Director

## CRJ 107 LAW ENFORCEMENT DRIVING

3 CREDITS

Provides the skills, knowledge and abilities required for operation of a law enforcement vehicle. Defensive driving will be stressed. Students will demonstrate skills by driving a law enforcement vehicle under simulated law enforcement conditions while attending the Law Enforcement Training Academy or the P.O.S.T. required Mini Skills Academy.

## CRJ 108 FIREARMS

3 CREDITS

The skills, knowledge and abilities necessary to safely use police firearms will be discussed. Students will demonstrate skills by firing weapons on a firing range. The student will demonstrate basic safety techniques and will explain the firearms role in the continuum of force.

## CRJ 110 INTRODUCTION TO CRIMINAL JUSTICE

3 CREDITS

A study of the agencies and processes involved in the criminal justice system, legislature, the police, the prosecutor, the public defender, the courts, and corrections. An analysis of the roles and problems of the criminal justice system in a democratic society, with an emphasis upon inter-component relations and checks and balances.

## CRJ 111 SUBSTANTIVE CRIMINAL LAW

3 CREDITS

Legal definition of crime and defenses; purposes and functions of the substantive criminal law; historical foundations; the limits of the criminal law.

## CRJ 112 PROCEDURAL CRIMINAL LAW

3 CREDITS

This course covers constitutional and procedural considerations affecting arrest, search and seizure, and includes analysis of criminal cases from arrest through final appeal.

## CRJ 125 LAW ENFORCEMENT OPERATIONS

3 CREDITS

An in-depth examination of the complexity and multidimensional aspects of the police role and career; police discretion; police values and culture in modern America. The role and functions of the police occupational, social, political and organizational context.

## CRJ 135 JUDICIAL FUNCTION

3 CREDITS

Examines the criminal court system and criminal process with an analysis of the major judicial decision-makers, i.e., prosecutors, defense attorneys, judges, and the discretionary aspects of adjudication.

## CRJ 145 CORRECTIONAL PROCESS

3 CREDITS

Post-conviction correction process; the development of a correctional philosophy, theory, and practice; a description of institutional operation, programming, and management; community-based corrections, probation and parole.

## CRJ 150 BASIC DEPUTY SHERIFF'S ACADEMY

9 CREDITS

Curriculum is designed to conform to P.O.S.T. standards and State certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Deputy Sheriff. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning. 200 clock hours.  
PREREQUISITE(S): CRJ 100 and/or permission of Academy Director

## CRJ 210 CONSTITUTIONAL LAW

3 CREDITS

A study of the powers of government as they are allocated and defined by the United States Constitution; intensive analysis of United States Supreme Court Decisions.

## CRJ 220 HUMAN RELATIONS/ SOCIAL CONFLICTS

3 CREDITS

Highlights the environmental, organizational and sociopsychological dimensions of social control. Includes the study of individual attitudes, beliefs and behavior involved in role conflicts, community relations and conflict management in a social structure.

## CRJ 230 CRIMINOLOGY

3 CREDITS

Examination of the question of crime causation from legal, social, political, psychological, and theoretical perspectives; history and development of criminology.

## CRJ 240 CRIMINAL INVESTIGATION

3 CREDITS

Criminal investigative methods and procedures will be introduced, from the preliminary through the follow up stages.  
PREREQUISITE(S): CRJ 112

## CRJ 247 PRINCIPLES OF LOSS/ CRIME PREVENTION

3 CREDITS

An overview of the functional operations of specialized security and crime prevention. Emphasis on risk control, security surveys, and loss prevention management.

## CRJ 275 SPECIAL TOPICS

1-6 VARIABLE CREDIT

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

## CRJ 285 INDEPENDENT STUDY

1-6 VARIABLE CREDIT

Course designed to meet the individual needs of students.  
PREREQUISITE(S): Instructor's permission

## CULINARY ARTS (ACTS)

### CUA 101 FOOD SAFETY AND SANITATION 2 CREDITS

Covers the basic rules of sanitation, food-borne illnesses, safe food temperatures, safe food handling techniques, the HACCP Program, pest control procedures, and local/state health rules and regulations for food service operations. At the completion of the course students take a nationally recognized test from the Education Foundation of the National Restaurant Association. If passed with a score of 75% or more, students receive a Certificate of Completion from the Education Foundation.

### CUA 120 WINES AND SPIRITS 2 CREDITS

Enables students to examine types of beverages and equipment including wines, beers, spirits, bar equipment, and staffing. Covers profitability, marketing, federal and local laws, and service. Focuses on the history of making and processing wines, spirits, and beers.

### CUA 121 INTRODUCTION TO FOOD PRODUCTION PRINCIPLES AND PRACTICES 1 CREDIT

Provides students with the fundamental principles of commercial kitchen operations including safety and sanitation applications, use and care of equipment, tools, utensils and knives, recipe use and conversion, organization of work, and basic cooking methods. The class meets a minimum of 22.5 hours.

### CUA 122 INTRODUCTION TO HOT FOODS 1 CREDIT

Focuses on the fundamental principles of stocks, soups, sauces, gravies and thickening agents. Enables students to produce a variety of these products in the college kitchen incorporating practice in the use of tools, utensils, equipment and application of safety and sanitation practices. Students apply pre-preparation skills and efficient organization of work techniques. Meets a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 121 or permission of instructor

### CUA 123 INTRODUCTION TO GARDE MANGER 1 CREDIT

Provides fundamental principles of cold food and non-alcoholic beverage preparation and production. Enables students to produce a variety of cold food and non-alcoholic beverage products incorporating practice in the use of tools, utensils, equipment and application of safety and sanitation methods. Introduces basic cold food decorative work such as fruit and vegetable garnishes and carvings, terrines, and hors d'oeuvres. Focuses on pre-preparation procedures and efficient organization of work techniques. Meets for a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 122 or permission of instructor

### CUA 124 VEGETABLE PREPARATION AND BREAKFAST COOKERY 1 CREDIT

Enables students to describe the characteristics of a variety of vegetable items including preparation procedures. Focuses on the significance of variety of breakfast items and the preparation of vegetable items using a variety of cooking methods. Emphasizes the affects of seasonings and cooking methods on vegetable products. Students prepare, plate and garnish breakfast orders similar to those ordered in restaurants with egg cookery and dairy products emphasized. Meets a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 123 or permission of instructor

### CUA 131 STARCHES, PASTAS, CASSEROLES AND GRAIN PRODUCTS 1 CREDIT

Provides the basics of preparing and/or cooking potatoes, starches, legumes and pastas. Enables students to prepare and cook a variety of casseroles and grain products using the college kitchen for their preparation area. Allows students to apply pre-preparation skills and efficient organization of work techniques. Class meets a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 124 and CUA 101 or permission of instructor

### CUA 132 CENTER OF THE PLATE, MEAT 1 CREDIT

Provides the student with the basics of meat handling, including principles used for selecting meat products, their basic cuts and cooking methods. Focuses on a variety of meat products in the college kitchen. Meets for a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 131 and CUA 101 or permission of instructor

### CUA 133 CENTER OF THE PLATE: POULTRY, FISH & SEAFOOD 1 CREDIT

Provides the basics of handling poultry, fish and seafood including principles used for selection and the basic forms these products have and the methods of cooking them. Focuses on preparation of poultry, fish and seafood products and incorporates practice in the use of these principles and methods. Covers pre-preparation skills and efficient organization of work techniques. Meets for a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 132 and CUA 101 or permission of instructor

### CUA 134 APPLICATION OF FOOD PRODUCTION PRINCIPLES 1 CREDIT

Serves as the practice vehicle for the student to apply food production principles for foods covered in CUA 121, CUA 122, CUA 123, CUA 124, CUA 131, CUA 132, and CUA 133. Enables the student to plan and prepare a variety of complete meals intended for a variety of settings. Meets a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 133 and CUA 101 or permission of instructor

### CUA 141 BAKING, PRINCIPLES AND INGREDIENTS 1 CREDIT

Provides the student with the fundamentals of baking terminology, principles of baking, and the characteristics and functions of the main ingredients used in bakery production. Meets for a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 101 or permission of instructor

### CUA 142 BASIC YEAST-RAISED PRODUCTS AND QUICK BREADS 1 CREDIT

Provides the student with the fundamentals of basic yeast-raised production and quick breads. Enables the student to produce white bread, rolls, variety grain breads, specialty breads, sweet yeast-raised products, and quickbreads. Meets for a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 141 or permission of instructor

### CUA 143 BAKING: CAKES, PIES, PASTRIES AND COOKIES 1 CREDIT

Provides the student with the fundamentals of basic cake, pie, pastry, and cookie production. Enables the student to produce a variety of cakes, pies, pastries, cookies and assorted dessert items. Meets for a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 141 or permission of instructor

### CUA 144 BAKING APPLICATIONS 1 CREDIT

Serves as the practical vehicle for the student to apply basic baking principles and practices to the production of yeast breads, quick breads, cakes, icings, pastries, pies, and cookies. Focuses on the preparation of a variety of baked goods according to a baking production schedule. Enables the student to demonstrate comprehensive knowledge of products as well as speed and efficiency in the production of quality baked goods. Meets a minimum of 22.5 hours.  
PREREQUISITE(S): CUA 141, CUA 142, CUA 143 or permission of instructor

### CUA 150 DECORATING AND PRESENTATION 3 CREDIT

Examines the preparation and production of cakes, pastries, different styles of decorating, equipment and types of products used for decoration. Covers the use of plate painting, national products, and designing show pieces.  
PREREQUISITE(S): CUA 141, CUA 142, CUA 143 and CUA 144  
COREQUISITE(S): 141, 142, 143 AND 144

### CUA 157 MENU PLANNING 3 CREDIT

Introduces the culinary arts student to planning menus and integrating them into foodservice operations. Equips the student with a working knowledge of the function, mechanics, and results achieved by the menu. Provides an overview of the existing and growing foodservice industry as seen through the menu.

**CUA 181 WORK EXPLORATION****2 CREDIT**

Places students in actual work situations to observe the operation of foodservice establishments. Encompasses a variety of positions including customer contact, production, purchasing-inventory-planning, and maintenance. Enables the student to participate in a regularly scheduled weekly class session, complete weekly class assignments and maintain a journal of work-site activities, present a report on the work experience to the class at the end of the course, and turn in a written copy of the report to the class coordinator. PREREQUISITE(S): A minimum of 10 semester hours in Culinary Arts or Hospitality Studies COREQUISITE(S): Two of these hours must be CUA 101, Food Safety and Sanitation.

**CUA 190 DINING ROOM MANAGEMENT****4 CREDIT**

Focuses on service related skills and knowledge used in the foodservice industry. Enables the student, through a laboratory setting, to practice skills and acquire the knowledge of front of the house operations common to dining rooms in the industry. Includes table setting, side work, serving customers, operating a Point-of-Sale system, hosting and supervising dining room personnel. At the completion of the class, students are able to supervise the operation of a sit-down dining operation. Meets a minimum of 90 hours.

**CUA 236 ADVANCED BAKING****2 CREDIT**

Provides students the opportunity to refine their baking skills in the areas of desserts, yeast breads, garnishing and presentation of baked products. Enables the student to bake, garnish and present a variety of baked goods. These products are prepared and displayed for the public in various locations in the college. PREREQUISITE(S): CUA 144 or permission of instructor

**CUA 255 SUPERVISION IN THE HOSPITALITY INDUSTRY****3 CREDIT**

Provides the current/future foodservice operator, manager, or supervisor with a solid foundation for developing communication skills, planning and decision-making skills, and skills for creating a goal-oriented environment utilizing management principles in the selection, training, evaluating, delegating, motivating, rewarding, and disciplining employees. Stresses skills for success through people development.

**CUA 256 MARKETING IN THE HOSPITALITY INDUSTRY****3 CREDIT**

Involves the student in a study of foodservice marketing including marketing planning, use of marketing information in the foodservice operation, marketing research, understanding foodservice customers, advertising and promotion, hospitality group sales, and menu design and pricing strategies. At the conclusion of this course, the student will take a nationally recognized test and receive a certificate from the Education Foundation of the National Restaurant Association.

**CUA 261 COST CONTROLS****3 CREDIT**

Provides students with the opportunity to learn the types of costs usually found in the food service industry. Students will learn to apply control techniques to a variety of costs and sales. They will also learn to interpret a variety of financial reports which reflect the relationship between costs and income. Students may take the national Cost Controls test from the National Restaurant Association Education Foundation. If they pass the test with 75% or higher, they will receive a national certificate for the course.

PREREQUISITE(S): Completion of Fundamental Math course or college math assessment test.

COREQUISITE(S): Permission of instructor

**CUA 262 PURCHASING FOR THE HOSPITALITY INDUSTRY****3 CREDIT**

Emphasizes controlling costs as applied to the selection and procurement of food and supply items. Covers selection and procurement of food and supplies, supplier selection, and distribution systems including the forces affecting them. Students will take a nationally recognized test and may receive a certificate from the Education Foundation, the educational arm of the National Restaurant Association.

**CUA 263 LEGAL ASPECTS OF HOSPITALITY MANAGEMENT****3 CREDIT**

Provides the student with an overview of legal subjects relevant to foodservice. Covers Federal, State, and Local regulations, patron civil rights, liability and safety, laws relating to employment, security, contracts, property rights, franchising, bankruptcy and reorganization, court system and out-of-court settlements, and choosing and managing an attorney.

**CUA 281 INTERNSHIP****2-6 VARIABLE CREDIT**

Places students in an actual work situation where they participate in the operation of a foodservice establishment. Hours of work are arranged by the site supervisor and the intern. The number of hours required are determined by the number of credits the course carries.

PREREQUISITE(S): CUA 181; Other prerequisites will be established at individual educational institutions.

**CUA 285 INDEPENDENT STUDY****1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): Instructor's Permission

**DRAFTING****DRT 101 TECHNICAL DRAFTING I****3 CREDITS**

Introduces the student to basic engineering graphics technology principles through development of basic entry-level drafting skills. Enables the student to develop skills in sketching, reading drafting scales, interpreting line types, lettering techniques, geometric construction, orthographic projection, and drawing reproduction.

**DRT 102 TECHNICAL DRAFTING II****3 CREDITS**

Introduces students to auxiliary views, pictorials, sections, threads, and fasteners, springs, and intersections and developments.

PREREQUISITE(S): DRT 101, CAD 102, or permission of instructor

**DRT 105 BLUEPRINT READING****3 CREDITS**

Focuses on interpretation of shop and working drawings. Examines drawing formats, view selection, hardware, dimensioning and tolerancing systems using the ANSI standards and symbols. Addresses interpretation, calculation and placement of tolerances.

**DRT 109 DESCRIPTIVE GEOMETRY****3 CREDITS**

Enables the student to develop the ability to visualize points, lines, and surfaces in space, to relate them to each other, and to apply these relationships in the solution of drafting assignments.

PREREQUISITE(S): DRT 102 or Instructor's Permission

**EARLY CHILDHOOD EDUCATION**

Arapahoe Community College does have articulation agreements dealing with early childhood and elementary education teacher preparation. Contact Sandy Panetta at 303-797-5784 for information.

**ECE 101 INTRO TO EARLY CHILDHOOD EDUCATION****3 CREDITS**

This course provides an introduction to Early Childhood Education. Topics include the eight key areas of professional knowledge: Child Growth & Development; Health, Nutrition & Safety; Developmentally Appropriate Practices; Guidance; Family & Community Relationships; Diversity; Professionalism; Administration & Supervision. Ages addressed: birth through age 8.

ECE 101 is a pre or corequisite for ECE 102

**ECE 102 INTRODUCTION TO EARLY CHILDHOOD LAB TECHNIQUES 3 CREDITS**

This course includes a classroom seminar and a placement in a child care setting. The supervised placement provides the student with the opportunity to observe children, to practice appropriate interactions, and to develop effective guidance and management techniques. Ages addressed: birth through age 8. Background checks required by the Colorado Department of Human Services may be needed.  
PREREQUISITE(S): ECE 101 or  
COREQUISITE(S): ECE 101

**ECE 103 GUIDANCE STRATEGIES FOR CHILDREN 3 CREDITS**

Explores guidance theories, applications, goals, techniques and factors that influence expectations, classroom management issues, and prosocial skills. Addresses ages birth through age 8.

**ECE 111 INFANT AND TODDLER THEORY AND PRACTICE 3 CREDITS**

This course presents an overview of theories, applications (including observations) and issues pertinent to infant and toddler development in group and/or family settings. State requirements for licensing, health, safety and nutrition issues are included. Ages addressed: prenatal through age 2.

**ECE 112 INTRODUCTION TO INFANT/TODDLER LAB TECHNIQUES 3 CREDITS**

This course includes a classroom seminar and a placement in an infant and/or toddler setting. The supervised placement provides the student with the opportunity to observe, to practice appropriate interactions, and to develop effective guidance and nurturing techniques with infants and/or toddlers. Ages addressed: prenatal through age 2.  
PREREQUISITE(S): ECE 111, Health screening, including TB and HiB tests

**ECE 125 SCIENCE/MATH AND THE YOUNG CHILD 3 CREDITS**

Examines theories of cognitive development as a framework for conceptualizing the way young children acquire scientific and mathematical skills, concepts, and abilities. Enables students to research and develop appropriate individual and group scientific/mathematical activities for young children.

**ECE 126 ART AND THE YOUNG CHILD 2 CREDITS**

This course prepares students to plan and implement a comprehensive and developmentally appropriate art program for young children. Students will also investigate the development of self-taught art techniques in young children.

**ECE 127 MUSIC/MOVEMENT FOR THE YOUNG CHILD 1 CREDITS**

Focuses on the purposes of incorporating music and movement into the early childhood curriculum. Through active participation with hands-on experiences, students work with the concepts of age and developmental appropriateness when designing fun activities with both subjects.

**ECE 175 SPECIAL TOPICS 1-6 CREDITS**

Explores current topics, issues and activities related to one or more aspects of the early childhood profession.

**ECE 178 WORKSHOP 1-6 CREDITS**

Provides students with an experiential learning opportunity.  
COREQUISITE(S): Seminar ECE 179

**ECE 179 SEMINAR 1-6 CREDITS**

Provides students with an opportunity to examine aspects of early childhood education in detail.  
COREQUISITE(S): Workshop ECE 178

**ECE 185 INDEPENDENT STUDY 1-3 CREDITS**

Focuses on structured, guided, and individualized research that is organized and tailored around the interests and needs of the individual student.  
PREREQUISITE(S): When appropriate  
COREQUISITE(S): When appropriate

**ECE 205 NUTRITION HEALTH AND SAFETY 3 CREDITS**

This course focuses on nutrition health and safety as a key factor for optimal growth and development of young children. Content includes nutrient knowledge, menu planning, food program participation, health practices, management and safety, appropriate activities and communication with families. Ages addressed: prenatal through age 8.

**ECE 220 CURRICULUM DEVELOPMENT: METHODS AND TECHNIQUES 3 CREDITS**

This course provides an overview of early childhood curriculum development. The content includes processes for planning and implementing developmentally appropriate environments, materials and experiences, and quality in early childhood programs. Ages addressed: birth through age 8.

**ECE 225 LANGUAGE AND COGNITION FOR THE YOUNG CHILD 3 CREDITS**

This course examines theories of cognitive and language development as a framework for conceptualizing the way children acquire thinking skills. The content includes observing, planning, facilitating creative representation and evaluating strategies within the context of play. Content areas are language, science and math, problem solving and logical thinking. Ages addressed: birth through age 8.

**ECE 226 CREATIVITY AND THE YOUNG CHILD 3 CREDITS**

This course provides an emphasis on encouraging and supporting creative self expression and problem solving skills in children. The content explores creative learning theories and research. It focuses on developmentally appropriate curriculum strategies in all developmental domains. Ages addressed: birth through age 8.

**ECE 240 ADMINISTRATION OF EARLY CHILDHOOD CARE AND EDUCATION PROGRAMS 3 CREDITS**

This course examines Colorado's minimal licensing requirements, as well as optimal standards pertaining to the operation of programs for young children. Course content focuses on new directors' administrative skills and role as a community advocate for young children.

**ECE 241 ADMINISTRATION: HUMAN RELATIONS FOR THE EARLY CHILDHOOD PROFESSIONS 3 CREDITS**

This course focuses on the human relations component of an early childhood professional's responsibilities. Course content includes director-staff relationships, staff development, leadership strategies, parent-professional partnerships and community interaction.

**ECE 260 EXCEPTIONAL CHILD 3 CREDITS**

This class presents an overview of typical and atypical developmental progression. The content includes planning techniques, learning strategies, legal requirements and accommodations and adaptations that are necessary in order to create an integrated classroom environment for a child with a wide range of exceptionalities. Ages birth through age 8.  
PREREQUISITE(S): ECE 226 or PSY 238

**ECE 275 SPECIAL TOPICS I 1-6 VARIABLE CREDIT**

Seminars on special topics that relate to the area of early childhood education. Topics may be general to be of interest to educators or specific to parents, family child care providers, infant-toddler caregivers, preschool/child care educators, kindergarten and/or primary level educators.

**ECE 278 WORKSHOP 1-6 VARIABLE CREDIT**

Provides students with an experiential learning opportunity.  
COREQUISITE(S): Seminar ECE 279 when appropriate

**ECE 279 SEMINAR 1-6 VARIABLE CREDIT**

Provides students with an opportunity to examine aspects of early childhood education in detail.  
COREQUISITE(S): When appropriate

**ECE 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## ECONOMICS

### ECO 105 INTRO TO ECONOMICS

3 CREDITS

This course is a survey of economics. It is designed as a beginning economics class. The course covers how modern economics evolved, supply and demand, national income accounting, money and banking, market structures and contemporary economic issues.

### ECO 201 PRINCIPLES OF MACROECONOMICS

3 CREDITS

Studies the American economy, stressing the interrelationships among the household, business, and government sectors. Explores saving and investment decisions, unemployment, inflation, national income accounting, taxing and spending policies, the limits of the market and government, public choice theory, the Federal Reserve System, money and banking, and international trade.

### ECO 202 PRINCIPLES OF MICROECONOMICS

3 CREDITS

Studies the firm in-depth, the nature of cost, and how these relate to the economy as a whole. Analyzes economic models of the consumer, perfect competition, monopoly, oligopoly, and monopolistic competition. Explores economic issues including market power, population growth, positive and negative externalities, income distribution, poverty and welfare, discrimination, and international economic interdependence.

### ECO 205 CONTEMPORARY ECONOMIC ISSUES

3 CREDITS

A one-term course in economics that looks at the major national economics issues of the day. These issues and problems are examined within the context of basic economic analysis. Some current issues to be explored are in employment and inflation, income policy, health care, crime, energy, etc.  
PREREQUISITE(S): an economics course or BUS 115 or MAR 216

### ECO 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

### ECO 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## EDUCATION

Arapahoe Community College has articulation agreements dealing with early childhood and elementary education teacher preparation. Contact Sandy Panetta at 303-797-5784 for information.

### EDU 145 INTRODUCTION TO LIBRARY RESEARCH

2 CREDITS

This is a formal, 2-hour credit class for which registration is required. It meets 2<sup>3</sup>/<sub>4</sub> hours once a week for ten weeks and introduces the student to a systematic method of research and library use. This course is designed to introduce students to the organization, finding, and critical evaluation of information from print, electronic, and other non-print sources. Students will learn the concepts of the research process and how information is organized. Students will learn the effective use of college library catalogs, periodical indexes and databases, traditional scholarly resources, and the use of the Internet for research. Students will learn to think critically when developing research strategies and evaluating information resources, and to cite and communicate results effectively and appropriately.

### EDU 155 PORTFOLIO DEVELOPMENT CLASS

2 CREDITS

A required course for adults interested in applying for credit for non-college learning gained through work/life experience. Students will learn to identify, describe, and document skills and knowledge gained through non-college learning experiences and to prepare a sample portfolio. A final portfolio, completed after the class, is to be used in applying for non-college learning credit. Class time is supplemented by individual meetings with the instructor's, as needed.

### EDU 175 SPECIAL TOPICS

1-6 CREDITS

Provides students with a vehicle to pursue in depth exploration of special topics of interest.  
PREREQUISITE(S): Permission of instructor

### EDU 185 INDEPENDENT STUDY

1-6 CREDITS

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.  
PREREQUISITE(S): Permission of instructor

### EDU 187 COOPERATIVE EDUCATION

1-6 CREDITS

Provides students an opportunity to gain practical experience in applying their occupational skills and/or to develop specific skills in a practical work setting. The instructor works with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the employer or work site supervisor.  
PREREQUISITE(S): Permission of instructor

### EDU 188 PRACTICUM I

1-6 CREDITS

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the education facility and with the direct guidance of the instructor.

### EDU 219 COLLEGE TEACHING

1 CREDIT

This course introduces new faculty to basic instructional theory including, the adult learner, developing a syllabus, learning objectives, and lesson plans. Other topics include an overview of teaching and learning strategies, assessment and evaluation, and dealing with challenging situations.

### EDU 221 INTRO TO EDUCATION

3 CREDITS

Focuses on the historical, social, political, philosophical, cultural and economic forces that shape the United States public school system. Includes current issues of educational reform, technology as it relates to education and considerations related to becoming a teacher in the state of Colorado

PREREQUISITE(S): College level reading and writing as demonstrated on college level placement scores

COREQUISITE(S): Field-Experience component, if not embedded in the class

### EDU 233 ENGLISH LANGUAGE

LEARNING (K- 6) 3 CREDITS

Prepares teachers who work with limited English proficient students to learn strategies to develop English language learners' (ELLs') social and academic English and supports their transition to US culture and schools. This course is appropriate in a variety of program models: mainstream classrooms, self-contained ESL classrooms, and bilingual programs and may be adapted for use with preservice teachers.

PREREQUISITE(S): A Child Development Course or permission of the instructor

### EDU 234 MULTICULTURAL EDUCATION

3 CREDITS

Focuses on the need to recognize and understand the similarities and differences among people and develop a respect for all individuals and groups. Assists teachers to recognize the special learning needs of children from different racial, ethnic, cultural and socioeconomic groups and to encourage teachers to integrate multicultural/diversity teaching into the school curriculum.

### EDU 242 EXPRESSIVE ARTS IN THE ELEMENTARY CLASSROOM

3 CREDITS

Explores the integration of visual arts, music, and physical education/movement into the self-contained elementary classroom curriculum based upon the theory of multiple intelligences. Familiarizes the student with the Colorado Model Content Standards for each area, basic curriculum development, and the opportunities to practice their skills with students through field experiences.

### EDU 260 ADULT LEARNING AND TEACHING

3 CREDITS

Introduces the basic instructional theory focusing on the adult learner. Includes developing a syllabus, learning goals and outcomes, and lesson plans. Emphasizes teaching to a diverse participant body, classroom management, learning theory, learning styles, teaching styles, and using technology in the classroom.

**EDU 261 TEACHING, LEARNING AND TECHNOLOGY 3 CREDITS**

Prepares students to integrate technology into their teaching curriculum. Enables the student to design educational and training materials incorporating instructional technology. Explores a variety of technologies, including the computer, Internet, multimedia, graphics, audio, and text with an emphasis on increasing learning through their use. Examines combining technology with a variety of instructional methodologies.

PREREQUISITE(S): EDU 221 or EDU 260

**EDU 262 ASSESSMENT OF STUDENT ACADEMIC ACHIEVEMENT 3 CREDIT**

Focuses on assessment as fundamental to the improvement of student academic achievement in the 21st century learning college. Analyzes methods for assessing academic achievement in the classroom, course, program, and institutional level. Defines measurable outcomes, evaluates student academic achievement, and uses the results to improve teaching methods, curriculum design, and outcomes.

PREREQUISITE(S): EDU 221 or EDU 260

**EDU 263 TEACHING AND LEARNING ONLINE 3 CREDITS**

This online course will provide faculty with the knowledge and skills necessary to design, develop, and deliver courses in a distance format. Assessment and evaluation methods and methods to incorporate interactive, collaborative and expanded learning activities will be included.

PREREQUISITE(S): EDU 221 or EDU 260 or permission of instructor

**EDU 264 FACULTY MENTORING 3 CREDITS**

This course will provide the student with an understanding of and skills in mentoring new teachers/faculty in an academic institution. Students will explore the six dimensions of effective mentoring, mentoring phases, how to establish and build the mentor/mentee relationship, and constructive feedback techniques. Student must designate a potential mentee for practical experience throughout this course.

PREREQUISITE(S): EDU 221 or EDU 260 or Instructor's permission

**EDU 265 INSTRUCTIONAL DESIGN 3 CREDITS**

This course introduces the student to a systematic approach to Instructional Design and to designing instruction with multimedia. Students will incorporate learning and instructional theory into course/training design to ensure the quality of instruction. A process of goal analysis and learning needs coupled with the development of a delivery system to meet those needs will be determined. This course includes the development of instructional materials and activities as well as the evaluation of all instruction and learner activities.

PREREQUISITE(S): EDU 221 or EDU 260 or Instructor's permission

**EDU 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**EDU 190-192 COOP EDUCATION CAREER EXPLORATION 3 CREDITS****290-293 COOP EDUCATION CAREER TRAINING 3 CREDITS****294-295 COOP EDUCATION CAREER TRAINING 6 CREDITS****296 COOP EDUCATION CAREER TRAINING 9 CREDITS****297 COOP EDUCATION CAREER TRAINING 12 CREDITS**

See Cooperative Education section for detailed description.

Students enrolled in EDU 190-192/290-293 Cooperative Education Career Training will have background checks performed as required by the Colorado Department of Human Services. There will be fees associated with the performance of these checks.

**EDU 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PREREQUISITE(S): Instructor's permission

**EDU 287 COOPERATIVE EDUCATION 1-6 VARIABLE CREDIT**

Provides students an opportunity to gain practical experience in applying their occupational skills and/or to develop specific skills in a practical work setting. The instructor works with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the employer or work site supervisor.

PREREQUISITE(S): Instructor's permission

**EDU 288 PRACTICUM II 1-6 VARIABLE CREDIT**

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the education facility and with the direct guidance of the instructor.

PREREQUISITE(S): Instructor's permission

**ELECTRONICS ENGINEERING TECHNOLOGY****ELT 101 SURVEY OF ELECTRONICS 3 CREDITS**

An introduction to Electronics for consumers, individuals working in related fields, and those exploring Electronics Engineering Technology as a career option. The course covers fundamental concepts, circuit diagrams, construction of circuits, test instruments, basic troubleshooting, and the operation of common electronic systems and circuits. 23 hours lecture, 46 hours lab.

PREREQUISITE(S): high school algebra

**ELT 106 FUNDAMENTALS OF DC/AC 3 CREDITS**

An introductory course that provides the basic skills needed for many careers in electronics and related fields. Covered are the operations and applications of basic DC and AC circuits, consisting of resistors, capacitors and inductors. The use of common test instruments in troubleshooting is emphasized. 23 hours lecture, 46 hours lab.

PREREQUISITE(S): Minimum CPT algebra score of 40

COREQUISITE(S): MAT 116

**ELT 109 QUALITY BUSINESS PRACTICES 1 CREDIT**

This course covers current business practices designed to improve productivity and quality in the workplace. It addresses practices affecting materials and process control as well as personnel-related issues of performance and work teams. 15 hours lecture.

**ELT 112 ADVANCED DC/AC 3 CREDITS**

Continues to build on ELT 106 and covers advanced concepts of DC-AC circuits, including DC network theorems and analysis of AC series-parallel circuits. Includes an expanded treatment of power supplies, dual-supply rectifier circuits, and Zener diode voltage regulators. Emphasizes troubleshooting. 23 hours lecture, 46 hours lab

PREREQUISITE(S): ELG 106

**ELT 113 ADVANCED CIRCUIT ANALYSIS 4 CREDITS**

Serves as an advanced course in the analysis of passive AC circuits. Emphasizes the use of complex algebra and network analyses. 30 hours lecture, 60 hours lab

PREREQUISITE(S): ELT 112, MAT 117

**ELT 136 INTRODUCTION TO TRANSISTORS 2 CREDITS**

An introduction to the operation and applications of bipolar transistors, JFETs and MOSFETs. Included are switching circuits, single-stage small-signal amplifiers and troubleshooting. 15 hours lecture, 30 hours lab.

PREREQUISITE(S): ELT 106

**ELT 137 ADVANCED TRANSISTORS 3 CREDITS**

A continuation of ELT 136 with specifications and additional applications of bipolar transistors, JFETs and MOSFETs. Covered are voltage regulation, common-collector and power amplifiers. Also included are analysis of single and cascaded amplifier stages. Troubleshooting is emphasized. 23 hours lecture, 46 hours lab.

PREREQUISITE(S): ELT 136

**ELT 138 POWER CONTROL DEVICES 2 CREDITS**

Covers the specifications and operation of SCRs, triacs, diacs, unijunction transistors, PUTs and solid-state relays. Enables the student to construct and test circuits with power control devices. Troubleshooting is emphasized. 15 hours lecture, 30 hours lab

PREREQUISITE(S): ELT 136

**ELT 139 OPTOELECTRONIC DEVICES 2 CREDITS**

Focuses on a study of the specifications and operation of the LED, IRED, photoconductive cell, photodiode, phototransistor, optocoupler and vacuum-fluorescent display. Addresses fiber optics and lasers. Enables students to construct and test circuits with optoelectronic devices. Troubleshooting is emphasized. 15 hours lecture, 30 hours lab  
PREREQUISITE(S): ELT 136

**ELT 147 DIGITAL DEVICES I 3 CREDITS**

This course introduces the operation and application of gates, flip-flops, counters, shift registers, encoders-decoders and LED displays. Also covered are binary numbers, Boolean algebra and troubleshooting. 23 hours lecture, 46 hours lab.  
PREREQUISITE(S): ELT 112

**ELT 148 DIGITAL DEVICES II 3 CREDITS**

A continuation of ELT 147. Covered are the operation and application of programmable logic devices, synchronous counters, multiplexers, liquid crystal displays, ROM and RAM. Included are also specifications of ICs, display multiplexing and design and minimization of circuits. Troubleshooting is emphasized. 23 hours lecture, 46 hours lab.  
PREREQUISITE(S): ELT 147

**ELT 149 DIGITAL DEVICES: TROUBLESHOOTING 2 CREDITS**

After detailed circuit analysis of a digital system that is not microprocessor based, the course focuses on troubleshooting to the component level.  
PREREQUISITE(S): ELT 148

**ELT 161 ELECTROMECHANICAL TROUBLESHOOTING 1 CREDITS**

An introduction to troubleshooting electromechanical systems consisting of switches, relays and motors. Teamwork is emphasized. 8 hours lecture, 16 hours lab.  
PREREQUISITE(S): ELT 101 or 106

**ELT 163 SOLDERING 1 CREDIT**

This course covers the theory and practice of high-reliability hand-soldering in the electronics field. Soldering practice includes wire and terminal soldering as well as PCB soldering of through-hole and surface-mount devices. 8 hours lecture, 16 hours lab.

**ELT 215 OPERATIONAL AMPLIFIERS 3 CREDITS**

A study of integrated operational amplifiers and their applications. Troubleshooting is emphasized. 23 hours lecture, 46 hours lab.  
PREREQUISITE(S): ELT 136

**ELT 216 ANALOG INTEGRATED CIRCUITS 2 CREDITS**

Introduces the operation and applications of integrated voltage regulators, timers, phase-locked loops, analog-to-digital and digital-to-analog converters. Emphasizes troubleshooting. 15 hours lecture, 30 hours lab  
PREREQUISITE(S): ELT 147, 215

**ELT 225 COMMUNICATION ELECTRONICS I 3 CREDITS**

Focuses on a basic analog communication course emphasizing the elements of a communication system, radio frequency analysis and characteristics, radio frequency circuits, AM and FM modulation techniques, and AM and FM transmitters and receivers. 23 hours lecture, 46 hours lab  
PREREQUISITE(S): ELT 137

**ELT 227 FCC LICENSE PREPARATION 1 CREDIT**

A review of electronics, to enable students to pass the General Radiotelephone Operator examination for the FCC Commercial Radiotelephone license. Emphasis will be on questions from Elements 1 and 3 provided by the FCC. A General Radiotelephone Operator license is required to adjust, maintain, or internally repair FCC licensed radiotelephone transmitters in the aviation, maritime and international fixed public radio services. 15 hours lecture.  
PREREQUISITE(S): ELT 225

**ELT 261 MICROPROCESSORS 3 CREDITS**

Basic operation and applications of microprocessors. The student will be able to write machine assembly language programs, interface microprocessors to various devices and troubleshoot microprocessor-based systems. 23 hours lecture, 46 hours lab.  
PREREQUISITE(S): ELT 148

**ELT 265 MICROCONTROLLERS 2 CREDITS**

This course will provide the necessary software and hardware knowledge and skills for the development of microcontroller system. The student will use programming tools and a development software. 15 hours lecture, 30 hours lab.  
PREREQUISITE(S): ELT 261

**ELT 267 INTRODUCTION TO ROBOTICS 1 CREDITS**

Introduces basic robotics. Enables the student to program a robot in a higher-level language to perform various tasks. Covers building and interfacing of sensor circuits. 8 hours lecture, 16 hours lab  
PREREQUISITE(S): ELT 101 or ELT 106

**ELT 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**

These courses provide students with opportunities to study topics of special interest that may lie outside the standard ELT program. A syllabus will specify the content of each course at the time it is offered.

**ELT 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

**ELT 290-293 COOP EDUCATION CAREER TRAINING 3 CREDITS**

**294-295 COOP EDUCATION CAREER TRAINING 6 CREDITS**

**296 COOP EDUCATION CAREER TRAINING 9 CREDITS**

**297 COOP EDUCATION CAREER TRAINING 12 CREDITS**

See Cooperative Education section for detailed description.  
PREREQUISITE(S): instructor's permission

## **EMERGENCY MEDICAL SCIENCES**

**CCN 230 BASIC ECG INTERPRETATION 2 CREDIT**

Develops the ability of the registered nurse to read and interpret the electrocardiogram of the critically ill client and apply treatment modalities. Requires critical thinking and analytic skills.

**EMS 120 EMERGENCY RESPONDER 2 CREDITS**

This course will enable the First Responder to take appropriate action and provide care for injuries or sudden illnesses until more advanced medical personnel arrive. First Responder skills include, assessing patients and intervening in cardiorespiratory emergencies, trauma and other illnesses.

**EMS 125 EMT BASIC 9 CREDITS**

Enables the student after successful completion of this course to take the EMT Certification Examination subject to the requirements of the Colorado Department of Health and Environment. Includes written and practical examinations. Student must be at least 18 years of age.  
COREQUISITE(S): EMS 170

**EMS 126 EMT BASIC REFRESHER 3 CREDITS**

Provides required didactic and skills review for renewing EMT students. Accommodates the needs of the re-entry EMT student.  
PREREQUISITE(S): Current CPR card, Current or less than 36 months expired EMT Basic certification.

**EMS 130 IV FOR THE EMT 2 CREDITS**

This course provides basic understanding of intravenous therapy principles and administration. Topics include the roles and responsibilities of the EMT, legal issues, shock principles of fluid and blood replacement, 50% Dextrose, IV equipment, IV administration and venipuncture techniques.  
PREREQUISITE(S): Current State EMT B Certification

**EMS 132 BASIC EKG INTERPRETATION**

**2 CREDITS**

This course will give the students the ability to analyze EKG tracings and identify common cardiac dysrhythmias with the basic interventions used. There will be a brief review of cardiac anatomy. This course is available to anyone who may have use of EKG interpretation skills.

**EMS 134 ADVANCED EKG**

**2 CREDITS**

This class will build upon basic EKG interpretation. 12 lead EKG interpretation including the diagnosis of myocardial infarction will be studied.

PREREQUISITE(S): EMS 132 or equivalent

**EMS 136 EMT/PARAMEDIC SAFETY ISSUES IN THE FIELD**

**1 CREDIT**

This class will provide the EMT and Paramedic with the skills needed to quickly assess the scene for potential hazards to themselves. Introduced topics on scene safety, evaluation of potential problem patients, verbal communication control techniques, physical control techniques for the problem patient, and specific techniques for scene control.

PREREQUISITE(S): State EMT B Certification or instructor's permission

**EMS 150 PEDIATRIC EDUCATION FOR PREHOSPITAL PROFESSIONALS**

**1 CREDIT**

Provides the student with core knowledge and skills necessary to provide emergency care to the pediatric patient.

PREREQUISITE(S): EMT-Basic or approval from Program Coordinator

**EMS 170 EMT BASIC CLINICAL**

**1 CREDIT**

Provides the EMT student with the clinical experience required of initial and some renewal processes.

COREQUISITE(S): EMS 125 or EMS 126, depending on student status

**EMS 203 EMT INTERMEDIATE I**

**6 CREDITS**

Course provides preparatory information and is the first part of the EMT Intermediate program.

COREQUISITE(S): Valid EMT-Basic, HEP B vac, Current CPR cards, high school grad or GED, CPT 80, Math

**EMS 205 EMT INTERMEDIATE II**

**6 CREDITS**

Serves as the second course for EMT Intermediate certification.

COREQUISITE(S): EMT Intermediate I or EMS 203

**EMS 213 PREHOSPITAL TRAUMA LIFE SUPPORT**

**1 CREDIT**

Provides basic and/or advanced trauma life support information and skill practice.

COREQUISITE(S): EMT Basic or higher

**EMS 214 BASIC TRAUMA LIFE SUPPORT**

**1 CREDIT**

Provides students with information and skill practice to treat trauma patients in the prehospital environment.

PREREQUISITE(S): EMT Basic or higher

**EMS 225 FUNDAMENTALS OF PARAMEDIC PRACTICE**

**3 CREDITS**

Serves as the first course of the National Standard Paramedic Curriculum as approved by the Colorado State Department of Health and Environment.

PREREQUISITE(S): EMT Basic or EMT Intermediate-other requirements vary with site

**EMS 226 FUNDAMENTALS OF PARAMEDIC PRACTICE - LAB**

**2 CREDITS**

Serves as the lab experience to coincide with EMS 225 topics.

PREREQUISITE(S): Acceptance in paramedic program site specific

COREQUISITE(S): EMS 225

**EMS 227 PARAMEDIC SPECIAL CONSIDERATIONS**

**3 CREDITS**

Focuses on a comprehensive study of Advanced Life Support Practice.

PREREQUISITE(S): Acceptance into paramedic program-site specific

**EMS 228 PARAMEDIC SPECIAL CONSIDERATIONS LAB**

**2 CREDITS**

Serves as the lab experience for those students enrolled in EMS 227.

PREREQUISITE(S): Acceptance to paramedic program site specific

COREQUISITE(S): EMS 227

**EMS 229 PARAMEDIC PHARMACOLOGY**

**3 CREDITS**

Focuses on a comprehensive study of emergency pharmacology.

PREREQUISITE(S): Acceptance in paramedic program-site specific

**EMS 230 PARAMEDIC PHARMACOLOGY LAB**

**2 CREDITS**

Serves as the required lab course in the paramedic education program.

PREREQUISITE(S): Acceptance to paramedic program-site specific

**EMS 231 PARAMEDIC CARDIOLOGY**

**5 CREDITS**

Addresses cardiology topics as presented in the National Standard Curriculum for paramedics.

PREREQUISITE(S): Acceptance to paramedic program-site specific

**EMS 232 PARAMEDIC CARDIOLOGY LAB**

**1 CREDIT**

Incorporates a hands-on application of principles of cardiac care in the hospital environment.

PREREQUISITE(S): Acceptance to paramedic program-site specific

**EMS 233 PARAMEDIC MEDICAL EMERGENCIES**

**4 CREDITS**

Focuses on a comprehensive study of adult medical emergencies.

PREREQUISITE(S): Acceptance to paramedic program-site specific

**EMS 234 PARAMEDIC MEDICAL EMERGENCIES LAB**

**1 CREDIT**

Focuses on a clinical study of adult and pediatric medical emergencies.

PREREQUISITE(S): Acceptance to paramedic program-site specific

**EMS 235 PARAMEDIC TRAUMA EMERGENCIES**

**4 CREDITS**

Focuses on a comprehensive study of adult and pediatric trauma emergencies.

PREREQUISITE(S): Acceptance to paramedic program-site specific

**EMS 236 PARAMEDIC TRAUMA EMERGENCIES LAB**

**1 CREDIT**

Serves as a lab presenting various acute trauma scenarios.

PREREQUISITE(S): Acceptance to paramedic program-site specific

**EMS 237 PARAMEDIC INTERNSHIP PREPARATORY**

**2 CREDITS**

Reviews concepts and techniques used in the prehospital setting.

PREREQUISITE(S): Acceptance to paramedic program-site specific

**EMS 270 CLINICAL: EMS INTERMEDIATE**

**3 CREDITS**

Provides the EMT-I student with the required field experiences as required by the Colorado Department of Health.

PREREQUISITE(S): EMS 203-205

COREQUISITE(S): EMS 205 as needed.

**EMS 275 SPECIAL TOPICS**

**0.5-10 CREDITS**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**EMS 280 PARAMEDIC INTERNSHIP I**

**6 CREDITS**

Serves as the preceptor/internship program for paramedic students.

PREREQUISITE(S): Acceptance to paramedic program site specific

**EMS 281 PARAMEDIC INTERNSHIP II**

**6 CREDITS**

Serves as the continuation of EMS 240, preceptor program for paramedic students.

PREREQUISITE(S): Acceptance to paramedic program site specific

**EMS 285 INDEPENDENT STUDY**

**1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

## ENGINEERING

### EGG 100 INTRODUCTION TO ENGINEERING 1 CREDIT

This course is for students interested in a career in engineering. The course will introduce the math and science required in a variety of engineering disciplines. The particular engineering disciplines examined are: Civil Engineering, Mechanical Engineering, Electrical Engineering, Industrial Engineering, and Computer Science. For each discipline the course will examine certification requirements, program of study, types of work and tasks in each discipline and compensation ranges. Tours and speakers will be arranged.

PREREQUISITE(S): two years high school algebra

### EGG 101 ENGINEERING GRAPHICS I 3 CREDITS

This course is an application of engineering graphics as a communication form and a tool to solve three-dimensional design problems. Topics include: Orthographic, axonometric, and isometric projections, sections and auxiliary views, the geometry of lines, planes and curved surfaces. This course is an introduction to PC-based, menu driven, 3D Computer Aided Design Systems, Spreadsheets, and Freehand Drawing.

PREREQUISITE(S): MAT 121, 122 or equivalent

### EGG 105 LOGIC DESIGN 4 CREDITS

The design of combinatorial and sequential switching circuits. Topics include Boolean Algebra, Boolean Function Minimization Techniques, Combinatorial Circuit Analysis and Synthesis, Synchronous Sequential Circuit Analysis and Synthesis, Algorithmic State Machine Design, Asynchronous Sequential Circuit Analysis and Synthesis. Use of computer aided design tools facilitating design, simulation and implementation of digital system using field programmable logic devices is an integral part of the entire course. Laboratory experiments included.

PREREQUISITE(S): MAT 121, 122 or equivalent

### EGG 211 ENGINEERING MECHANICS I (STATICS) 3 CREDITS

This course is a vector and calculus treatment of forces and force systems. Concurrent and non-concurrent force systems will be covered. Also included are calculating moments, friction, trusses, centroids and moments of inertia.

PREREQUISITE(S): MAT 201, PHY 211.  
COREQUISITE(S): MAT 202

### EGG 212 ENGINEERING MECHANICS II (DYNAMICS) 3 CREDITS

This course is a vector and calculus treatment of the dynamics of particles and rigid bodies using Newton's Laws. Topics include work-energy, impulse-momentum, free and forced oscillations.

PREREQUISITE(S): EGG 211, MAT 202, PHY 211

### EGG 221 CIRCUIT ANALYSIS I

4 CREDITS

The basic theorems of circuit analysis. Transient solution of circuits by classical techniques. Steady-state sinusoidal solutions by means of phasors will be introduced. Basic electrical circuit measurements and experimentation using oscilloscopes, various meters and function generators will be performed in the lab.

PREREQUISITE(S): MAT 202, PHY 212

### EGG 222 CIRCUIT ANALYSIS II

4 CREDITS

This course is designed to familiarize students with advanced methods of circuit analysis including computer simulations. Laplace transforms, frequency domain analysis, steady state solutions, two part network, Fourier series, pulses, impulses, and computer-aided analysis will be applied to circuits. Data acquisition, digital-to-analog and analog-to-digital converters will be covered. Laboratory experiments are included.

PREREQUISITE(S): EGG 221

### EGG 275 SPECIAL TOPICS

1-6 VARIABLE CREDIT

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

### EGG 285 INDEPENDENT STUDY

1-6 VARIABLE CREDIT

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PREREQUISITE(S): Instructor's permission

## ENGLISH

All of the degree programs at ACC require students to successfully complete English composition courses; different programs require different courses. Before students enroll in composition courses, the students must demonstrate their writing competencies by means of a placement test. The test will be validated by an impromptu writing sample during the first week of class. Test results normally dictate where students will start in their writing programs. The faculty believe that students succeed more consistently in all their courses when they develop college-level competencies in reading and writing.

English 121-122 is the traditional college-level freshman composition program. The courses are sequential and acceptable for college transfer. All AA and AS students must complete this sequence; however, those students who demonstrate deficiencies in their writing competencies will be required to begin their writing programs in the Developmental Studies sequence: ENG 060 and/or ENG 090.

English 131 and 132 are college-level courses designed especially for students interested in occupational or technical fields. Many occupational programs require English 131; however, some students may need English 090 before enrolling in English 131. English 132, a college-transfer course, was designed for students who need an advanced technical writing class.

Literature courses (listed separately) provide continued opportunities for refinement of reading, writing, and critical-thinking skills. See also JOURNALISM and MASS COMMUNICATIONS.

### ENG 001 LANGUAGE TUTORIAL

1 CREDIT

The content of the course will be determined for each individual student following diagnostic testing. The student and the instructor will agree to a learning contract which will specify content, activities, systems of evaluation and credit hours assigned for the work to be completed. Students may be referred by instructor's in all divisions of the College for specific remedial work in any of the language skill areas, i.e., reading, basic English, speech, listening or writing skills.

### ENG 010 SPELLING 1 CREDIT

A laboratory course designed to acquaint students with basic spelling rules and phonetic structure. Word roots, prefixes and suffixes will be examined.

### ENG 012 SPELLING: WORD STRUCTURE ANALYSIS 2 CREDITS

This class is designed to help students improve their spelling skills by increasing their knowledge of the structure of words in the English language. The focus of learning is on applying structural logic, not memorizing lists of words.

### ENG 020 VOCABULARY 1 CREDIT

A laboratory course designed to acquaint students with new vocabulary. An individualized approach will be used and students will work at a level indicated by an initial diagnostic test score.

### ENG 040 REVIEW OF GRAMMAR

1 CREDIT

This course covers the parts of speech and common problems related to standard English usage and the mechanics of written expression.

### ENG 060 LANGUAGE FUNDAMENTALS

3 CREDITS

This course will focus on paragraph structure and development and will introduce the formal essay. Students will review and improve grammar, usage and punctuation skills while employing critical thinking strategies and the writing process to respond to a wide variety of writing situations.

PREREQUISITE(S): CPT sentence skills score 40-59.  
COREQUISITE(S): concurrent enrollment in REA 060/090 strongly recommended

### ENG 090 BASIC COMPOSITION

3 CREDITS

This course will emphasize critical thinking as students explore writing for specific purposes and audiences. Students will develop skills required for college-level writing while reviewing paragraph structure and focusing on essay development.

PREREQUISITE(S): ENG 060 or CPT sentence skills score 60-82

COREQUISITE(S): concurrent enrollment in REA 090 strongly recommended

**ENG 121 ENGLISH COMPOSITION I**  
**3 CREDITS**

Emphasizes the planning, writing, and revising of compositions, including the development of critical and logical thinking skills. Includes a minimum of five compositions that stress analytical, evaluative, and persuasive/argumentative writing.  
PREREQUISITE(S): ENG 090 with a grade of C or better or CPT sentence skills score of 86+ and reading score of 83+

**ENG 122 ENGLISH COMPOSITION II**  
**3 CREDITS**

Expands and refines the objectives of English Composition I. Emphasizes critical/logical thinking and reading, problem definition, research strategies, and writing analytical, evaluative, and/or persuasive papers that incorporate research.  
PREREQUISITE(S): ENG 121 with a grade of C or better

**ENG 127 BUSINESS ENGLISH**  
**3 CREDITS**

Reviews the fundamentals of grammar, punctuation, spelling, diction, and current trends in the language of the business world.

**ENG 131 TECHNICAL WRITING I**  
**3 CREDITS**

This course develops skills one can apply to a variety of technical documents. Students learn principles for organizing, writing and revising clear, readable documents for industry, business and government. Introduces research strategies.  
PREREQUISITE(S): ENG 090 with a grade of C or better or CPT sentence skills score of 86+ and reading score of 83+

**ENG 132 TECHNICAL WRITING II**  
**3 CREDITS**

This course expands and refines the objectives of ENG 131, emphasizing formal presentations, both written and oral.  
PREREQUISITE(S): ENG 131 or instructor's permission or AP score of 3 or higher on the AP Language and Composition exam

**ENG 221 CREATIVE WRITING I**  
**3 CREDITS**

This course teaches techniques for creative writing. Students explore imaginative uses of language through writing short stories, drama, poetry, and/or literary nonfiction.  
PREREQUISITE(S): ENG 121 or instructor's permission

**ENG 222 CREATIVE WRITING II**  
**3 CREDITS**

This course continues development of written expression in such forms as poetry, fiction, and/or nonfiction writing.  
PREREQUISITE(S): ENG 221 or instructor's permission

**ENG 226 FICTION WRITING**  
**3 CREDITS**

This course teaches techniques for creating fiction, including study and appreciation of the language and forms of the short story.  
PREREQUISITE(S): ENG 221 or permission of instructor.

**ENG 230 CREATIVE NONFICTION**  
**3 CREDITS**

Teaches students to incorporate literary techniques into factual writing. Enables the student to survey a wide range of readings and analyze form and content. Includes critical review, biographical profiles, travel writing, and memoirs. Provides the opportunity for students to write and review their own nonfiction in a supportive, constructive setting.

**ENG 235 RHETORIC AND PROPAGANDA**  
**3 CREDITS**

This course examines in some depth classical and modern theories of rhetoric, understood as effective, ethical means of persuasion, then seeks to examine the ways in which propaganda departs from these means. Students will apply theories of rhetoric and propaganda to examples of presidential rhetoric, Nazi and Soviet propaganda, and other examples of persuasive writing. The course will include the study of visual rhetoric; students will construct criteria for identifying visual propaganda, and will study the complex relationship, historically and in the present, between propaganda democracy, advertising and mass media.

**ENG 275 SPECIAL TOPICS: RHETORIC**

**1 CREDIT**

Explores special topics in rhetoric, such as applied rhetoric, styles, ethics, advanced composition, advanced argument, and expository techniques.

**ENG 285 INDEPENDENT STUDY**

**1 CREDIT**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

**ENGLISH AS A SECOND LANGUAGE**

**ESL 022 INTERMEDIATE GRAMMAR**  
**3 CREDITS**

This course will review beginning grammar structures and introduce intermediate structures. It will provide practice of structures through a variety of oral and written exercises.

**ESL 043 ADVANCED READING**

**3 CREDITS**

This course is for the international student who is enrolled in full-time academic study or the immigrant who wishes to pursue a college degree. It emphasizes reading and note taking skills to prepare students for academic reading assignments. Oral, listening, writing and study skills are also practiced.  
PREREQUISITE(S): Michigan placement test score of 74 or below

**ESL 053 ADVANCED COMPOSITION**  
**3-4 CREDITS**

Reviews paragraph organization and develops the skill of writing essays using selected rhetorical modes. Emphasizes accurate use of advanced grammatical structures. Includes summarizing, paraphrasing, and research writing.  
PREREQUISITE(S): ESL 052 or appropriate placement score.

**ESL 275 SPECIAL TOPICS**  
**1-6 VARIABLE CREDIT**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**ESL 285 INDEPENDENT STUDY**  
**1-6 VARIABLE CREDIT**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.  
PREREQUISITE(S): Instructor's permission

**FINANCE**

**FIN 101 INTRO TO FINANCE**  
**3 CREDITS**

This course provides an in-depth study of the monetary system of the United States, the role of banks as financial intermediaries, and the types of financing available in our monetary system. Other topics include: international financial markets and international financial instruments used in exporting and importing, analysis of stock and bond values, the role and process of the stock and bond market and the derivative marketplace. The student also learns how to produce a cash budget, analyze financial statements including all financial ratios used in credit analysis and how to determine capital requirements and financing arrangements.

**FIN 105 PRINCIPLES OF BANKING**  
**2-3 VARIABLE CREDIT**

As a solid foundation for any career in the financial services industry, Principles of Banking explores nearly every aspect of banking. Just as the industry is constantly changing, this course is continually being revised to provide specific up-to-date information. This course may be taught as a 2 Credit Accelerated Course.

**FIN 110 INTRO TO CREDIT UNIONS**  
**2 CREDITS**

This course is an introduction to the credit union movement. It includes an explanation of the nature of credit unions, their history and a review of affiliated organizations. The legal basis for the operation of a credit union as well as the powers and characteristics of credit unions will be discussed. Roles and functions of credit union management and volunteers will be examined. Bonding, insurance, and the developing credit union financial system will be discussed.

**FIN 113 CREDIT UNION ACCOUNTING PROBLEMS**  
**2 CREDITS**

Explains terms and procedures basic to accounting and unique to credit unions. Topics covered in this course include concepts of credit union accounting, general records and the general ledger, reserves and undivided earnings, the statement of financial condition, the balancing of other subsidiaries, closing the books, various accounting situations, and the credit union cycle.

**FIN 117 RESIDENTIAL MORTGAGE LENDING 2 CREDITS**

Lending institution employees working in all areas of residential lending business should have a thorough knowledge of all aspects of making a residential mortgage loan. The text covers the adjustable rate mortgage, alternative mortgage instruments and government related loan programs. In addition, a brief overview of appraising and the secondary mortgage market are covered as well.

**FIN 119 DEPOSIT ACCOUNTS AND SERVICES 2 CREDITS**

Deposit Accounts and Services provides an in-depth study of the nature, ownership and classification of deposit accounts. You will learn the types of accounts that institutions are currently authorized to offer, the different methods of classifying these accounts and the terms and conditions for payment of interest. By emphasizing the procedural aspects of deposit accounts, Deposit Accounts and Services will provide you with a better understanding of your own institution's procedures and a better perspective of the competitive environment in which savings institutions exist today.

**FIN 201 INTERNATIONAL FINANCE AND ECONOMICS 3 CREDITS**

International Finance and Economics will examine the basics of the foreign exchange market and exchange rate determination. Topics covered include the balance of payments, past and present international monetary arrangements, the role of the International Monetary Fund and the World Bank, import and export financing, financial management of the multinational firm, the international money market and Macroeconomic policy in an Open Economy.

**FIN 205 CONSUMER LENDING 2 CREDITS**

Consumer Lending provides an introduction to the important field of consumer credit and consumer lending activities performed by savings association personnel. The course is specifically developed for students with little or no background in consumer credit.

**FIN 212 CREDIT AND COLLECTIONS 2 CREDITS**

This course covers the fundamentals of credit operations and the role of the Credit Unions in granting and collecting loans. Topics include types of available credit, laws and regulations, business and personal credit and the function of credit in foreign trade. Evaluation techniques for and regulations concerning collections are studied from the perspective of credit management.  
PREREQUISITE(S): FIN 110 or instructor's permission

**FIN 217 PERSONNEL ADMINISTRATION (CREDIT UNIONS) 3 CREDITS**

This course covers the fundamentals of modern personnel administration including the role of personnel, developing viable job descriptions, supervision of office personnel, interviewing and hiring techniques, performance appraisals, compensation management, employee relations and employee training programs. This course is designed for Credit Union personnel operations.  
PREREQUISITE(S): FIN 110

**FIN 226 MONEY AND BANKING 3 CREDITS**

Money and Banking presents a fundamental treatment of how money functions in the United States and world economies. Topics include the concept of money supply, the Federal Reserve System, the role banks play as money creator and participant in the nation's payment mechanism. This course also explains how the various types of financial institutions operate; the workings of monetary and fiscal policies, the role of Central Banks and International Banking.

**FIN 235 ANALYZING FINANCIAL STATEMENTS 2-3 VARIABLE CREDIT**

This course provides you with a practical understanding of financial statement analysis of a business borrower, in order to assess repayment capacity. This course may be taught as a 2 Credit Accelerated Course.  
PREREQUISITE(S): ACC 121, 122

**FIN 240 LAW AND BANKING PRINCIPLES 2 CREDITS**

This course is a banker's guide to law and legal issues with special emphasis on the Uniform Commercial Code.

**FIN 245 LAW AND BANKING APPLICATIONS 3 CREDITS**

This course is an introduction to laws pertaining to secured transactions, letters of credit and the bank collection process. The student will learn to explain the concept of negotiability, analyze the concept of holder-in-ducourse status, define and explain the nature of the letter of credit, describe the nature of primary and secondary contractual liability on an instrument, identify the issues related to secured transactions and discuss the legal issues related to bank collections and check losses.

**FIN 250 FINANCIAL MARKETING FOR BANKERS 3 CREDITS**

This course looks at what motivates customers to purchase financial services and teaches bankers how to develop a successful marketing plan. The student will learn to recognize consumer motivation and buying behavior. Also, he/she will learn to integrate public relations, advertising, sales promotion, selling and service distribution functions in the bank's overall marketing plan. The course conducts situational analysis and formulates a master marketing strategy. Also, the student develops ways to monitor and evaluate marketing performance and objectives.

**FIN 255 UNDERSTANDING AND SELLING BANK PRODUCTS 3 CREDITS**

From the customer's perspective, this course shows you how to pinpoint and practice six human relations skills that encourage smooth, clear and personal communication between the two of you. The student will learn the basic steps of selling, proceed to information about bank products, go on to the product benefits (rather than the features) that appeal to a customer and finally delve into how to spot clues that can tell you what a customer needs. The student will also learn the importance of cross-selling to recognize the typical prospects for various categories of bank products, how to suggest products and overcome their resistance so as to conclude the sale.

**FIN 260 RETIREMENT/PENSION PLANNING AND INVESTMENT 3 CREDITS**

This course discusses all types of Defined Contribution and Defined Benefit Pension Accounts, Individual Retirement Accounts including Keoghs and SEPPS. The course will cover the difference between qualified and non-qualified pension accounts and deferred benefit accounts. The student will understand the regulations involving retirement account participation and withdrawal. The course will also cover the types of investments that can be made through the different retirement vehicles. Also, the tax ramifications of the different types of accounts will be studied.

**FIN 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**FIN 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

**FIN 290-293 COOP EDUCATION CAREER TRAINING 3 CREDITS**

For declared Financial Services Majors only. See Cooperative Education section for a detailed description.  
PREREQUISITE(S): instructor's permission and completion of half of program coursework

## **FIRE ACADEMY**

**FST 100 FIREFIGHTER I 5 CREDITS**

Addresses the requirements necessary to perform at the first level of progression as identified in National Fire Protection Association (NFPA) 1001, Firefighter Professional Qualifications. This course is a classroom section in which the IFSTA 200 Essentials of Firefighting Manual is taught.  
PREREQUISITE(S): FST 102, 103, 105, 106  
COREQUISITE(S): FST 297-402

**FST 101 FIREFIGHTER II****3 CREDITS**

Addresses the requirements necessary to perform at the second level of progression as identified in NFPA 1001, level II Fire Fighter Professional Qualifications.

**FST 102 INTRODUCTION TO FIRE SCIENCE AND SUPPRESSION****3 CREDITS**

Introduces the fire service organization and operation from past to present operations. Includes operation and organization of federal, state, local and private protection forces. Emphasizes extinguishing methods and equipment, special extinguishing agents, and special hazard considerations. Serves as a prerequisite for students having no previous fire suppression training or experience.

**FST 104 FIRE PROTECTION SYSTEM****3 CREDITS**

Addresses principles and functions involved in the installation and use of sprinkler systems, special suppression systems, and fire detection and alarm systems. Covers portable fire extinguishing equipment requirements, sprinkler systems, installation, inspection and maintenance, special protection systems, and residential sprinklers  
PREREQUISITE(S): FST 100, 105 or permission of instructor.

**FST 105 BUILDING PLANS AND CONSTRUCTION****3 CREDITS**

Covers various methods of building construction, the materials used in building construction, and their relationship to methods of fire attack and extinguishments. Includes types of building construction, principles of fire resistance, flame spread, smoke and fire containment, basic knowledge of plan review, and blueprint specifications.

**FST 152 WILDLAND FIREFIGHTING****3 CREDITS**

Introduces a basic understanding of wildland fire and the strategies and tactics involved during suppression operations. Includes fire line safety, emphasizing the wildland fire orders and watch out situations. Students receive training qualifying them as Certified Wildland Firefighters under the Incident Command System, recognized by the National Wildfire Coordinating Group. Covers fire behavior, fire weather, fuel types, safety equipment and guidelines, incident size up, determining resource needs, aircraft identification and capabilities, direct vs. indirect attack, burn-out, backfiring and map reading.

**FST 162 FIRE SERVICE LEADERSHIP: STRATEGIES FOR COMPANY SUCCESS****1 CREDIT**

This course is designed to meet the needs of the company officer and to provide the participant with basic skills and tools needed to perform effectively as a leader in the fire service environment. The course addresses ethics, use and abuse of power at the company level, creativity in the fire service environment, and managing the multiple roles of the company officer.  
PREREQUISITE(S): Experience in fire service or instructor's permission.

**FST 163 FIRE SERVICE LEADERSHIP: STRATEGIES FOR PERSONAL SUCCESS****1 CREDIT**

This course is designed to meet the needs of the company officer and to provide the participant with basic skills and tools needed to perform effectively as a leader in the fire service environment. The course addresses techniques and approaches to problem-solving, identifying and assessing the needs of the officer's subordinates, running meetings effectively in the fire service environment, and decision-making for the company officer.  
PREREQUISITE(S): Experience in fire service or instructor's permission.

**FST 164 FIRE SERVICE LEADERSHIP: STRATEGIES FOR SUPERVISORY SUCCESS****1 CREDIT**

This course is designed to meet the needs of the company officer and to provide the participant with basic skills and tools needed to perform effectively as a leader in the fire service environment. The course addresses when and how to delegate to subordinates, assessing personal leadership styles through situational leadership, when and how to discipline subordinates, and coaching/motivating techniques for the company officer.  
PREREQUISITE(S): experience in fire service or instructor's permission.

**FST 183 FIRE DEPARTMENT OCCUPATIONAL SAFETY****1 CREDIT**

This course is designed to meet the needs of the fire service personnel in the area of occupational safety and health. The course addresses the requirements of NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, and identifies and highlights those areas where safety must be an important consideration.  
PREREQUISITE(S): experience in fire service or instructor's permission

**FST 184 FIRE/ARSON DETECTION****1 CREDIT**

This course is designed to meet the needs of the company officer in regards to improving their skills in determining fire causes at the fire scene. The course begins with the study of the motivation of the arsonist and progresses through to the prosecution of the crime of arson.  
PREREQUISITE(S): experience in fire service or instructor's permission

**FST 191 DEPARTMENTAL COMMUNICATIONS****1 CREDIT**

This course is designed to meet the needs of the company officer in regards to communication skills. Both oral and written skills will be covered. Leaderless group exercise, interview simulations, oral presentations, and written exercises will be discussed and practiced.  
PREREQUISITE(S): experience in fire service or instructor's permission

**FST 275 SPECIAL TOPICS****1-6 VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**FST 285 INDEPENDENT STUDY****1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

**FRENCH**

Independent Studies are also available.

**FRE 101 CONVERSATIONAL FRENCH I****3 CREDITS**

This is the first course in a sequence for beginning students who wish to understand and speak French. The material will include basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

**FRE 102 CONVERSATIONAL FRENCH II****3 CREDITS**

This is the second course in a sequence for beginning students who wish to understand and speak French. The material will continue to cover basic conversational patterns, expressions, and grammar.  
PREREQUISITE(S): FRE 101 or instructor's permission.

**FRE 111 FRENCH I****5 CREDITS**

Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading, and writing the language. Note: The order of the topics and the methodology will vary according to the individual texts and instructor's.

**FRE 112 FRENCH II****5 CREDITS**

Continues French I in the development of functional proficiency in listening, speaking, reading and writing the language. Note: The order of the topics and the methodology will vary according to the individual texts and instructor's.  
PREREQUISITE(S): FRE 111 or instructor's permission

**FRE 201 CONVERSATIONAL FRENCH III****3 CREDITS**

This is the third course in a sequence for students who wish to continue their study of understanding and speaking French. The material will cover intermediate level vocabulary, grammar, and expressions.  
PREREQUISITE(S): FRE 102 or instructor's permission

**FRE 202 CONVERSATIONAL FRENCH IV****3 CREDITS**

This is the fourth course in a sequence for students who wish to continue their study of understanding and speaking French. The material will continue to cover intermediate level vocabulary, grammar, and expressions.  
PREREQUISITE(S): FRE 201 or instructor's permission

**FRE 211 FRENCH III 3 CREDITS**  
Continues French I and II in the development of increased functional proficiency in listening, speaking, reading, and writing the language. Note: The order of the topics and the methodology will vary according to individual texts and instructor's. **PREREQUISITE(S):** FRE 112 or instructor's permission

**FRE 212 FRENCH IV 3 CREDITS**  
Continues French I, II, and III in the development of increased functional proficiency in listening, speaking, reading, and writing the language and introduction to literature. Note: The order of the topics and the methodology will vary according to individual texts and instructor's. **PREREQUISITE(S):** FRE 211 or instructor's permission

**FRE 275 SPECIAL TOPICS: 1-6 VARIABLE CREDIT**  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**FRE 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**  
Course designed to meet the individual needs of students. **PREREQUISITE(S):** instructor's permission

## **GEOGRAPHY**

**GEO 105 WORLD REGIONAL GEOGRAPHY 3 CREDITS**  
An introductory course designed to facilitate an understanding of spatial relationships between and among the geographic regions of the world. Included are demographic and cultural (political, economic, and historic) forces related to the physical environments of selected regions. Methods of study include analysis of/and interrelationships between developed and developing regions.

**GEO 106 HUMAN GEOGRAPHY 3 CREDITS**  
An introduction to geographic perspectives and methods with applications to the study of human activities. Special emphasis is placed on the distribution of humans, adjustments to the natural environment, and land use practices.

**GEO 107 PHYSICAL GEOGRAPHY 3 CREDITS**  
Physical Geography is the study of the spatial relationship between humans and the natural environment. The course is divided into five main themes: the atmosphere (weather and climate); the hydrosphere (water bodies and rivers); the lithosphere (Earth's crust and landforms); the biosphere (soil, plant and animal relationships); and the impact of the human population on these environmental factors. This course is recommended for students interested in environmental studies, earth science, and geography.

**GEO 165 HUMAN ECOLOGY 3 CREDITS**  
**FORMERLY GEO 101 INTRO TO ENVIRONMENTAL SCIENCE**  
Provides a current outlook for the global environment, describing the threats imposed on different natural ecological systems. Enables the student to develop a set of intellectual tools and ways of thinking about the environment to evaluate for themselves how serious a given environmental problem will be.

**GEO 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**GEO 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**  
Course designed to meet the individual needs of students. **PREREQUISITE(S):** instructor's permission

## **GEOLOGY**

**GEY 111 PHYSICAL GEOLOGY 4 CREDITS**  
Studies the materials of the earth, its structure, surface features and the geologic processes involved in its development. This course includes laboratory experience.

**GEY 121 HISTORICAL GEOLOGY 4 CREDITS**  
Studies the physical and biological development of the earth through the vast span of geologic time. Emphasizes the investigation and interpretation of sedimentary rocks, the record of ancient environments, fossil life forms, and physical events, all within the framework of shifting crustal plates. Course includes laboratory experience. **PREREQUISITE(S):** GEY 111 or instructor's permission

**GEY 135 ENVIRONMENTAL GEOLOGY 3 CREDITS**  
This course introduces the relationship of applied geology to the human environment. An overview of geologic concepts and terminology precedes a study of natural geologic hazards such as floods, landslides, avalanches, earthquakes, and volcanoes. Surface and groundwater hydrology emphasizes human responsibility to protect these resources from contamination. The geologic aspects of environmental health, land use practices, and resource exploitation are reviewed and related to legislation regarding environmental law.

**GEY 205 GEOLOGY OF COLORADO 3 CREDITS**  
Covers the geologic history of Colorado, with emphasis on formation of mountain ranges, igneous, sedimentary and metamorphic rock types, ore deposits and landforms. Incorporates field experience and/or class room lectures. **PREREQUISITE(S):** Instructor's permission

**GEY 208 GEOLOGY FIELD TRIP 1-3 CREDITS**  
This course involves in-depth field studies into the geology specific regions both within and outside Colorado. Trips lasting from one to several days length to study the area will constitute the major activity of the course. The specific area of investigation will be indicated in the schedule of classes each time the course is offered. **PREREQUISITE(S):** instructor's permission

**GEY 275 SPECIAL TOPICS 0.25-3 CREDITS**  
Presents an overview of the special topic including one aspect of the earth and its history as recorded in rocks and rock formations. May also include current changes and impact of historical events and exploration of current topics, issues and activities related to one or more aspects of the named discipline.

**GEY 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**  
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. **PREREQUISITE(S):** Instructor's permission

## **GRAPHIC DESIGN AND ILLUSTRATION**

**GDI 101 INTRO TO VISUAL COMMUNICATIONS 3 CREDITS**  
A survey of visual communication, its history and impact on society. A foundation course for graphic design and illustration majors and a survey for non-majors who are interested in the field. Assignments require minimal artistic talent.

**GDI 102 VISUAL DESIGN FOR THE COMPUTER PROFESSIONAL 3 CREDITS**  
A class for non-designers who wish to develop their design skills, using the computer to complete the assignments. Coursework includes the elements and principles of design, layout, designing with type and color theory. Projects will focus on design for print and electronic media. Students must have access to Adobe Illustrator, CorelDraw, QuarkXpress or other high-end graphics programs utilizing a variety of typefaces, color, lines, shapes and gradations.

**GDI 103 GRAPHIC DESIGN 3 CREDITS**  
An introduction to basic principles and elements of design and color theory, and applications of those theories to visual and communication processes.

**GDI 104 LETTERING 2 CREDITS**  
The study of lettering and letter forms; the various methods and mediums used in free hand and mechanically rendered lettering; the design of lettering and practical applications of lettering in the field of commercial art.

**GDI 105 TYPOGRAPHY & LAYOUT 3 CREDITS**  
A study of typefaces and their identification. Designing with type; using type creatively in layouts. Using the computer to set type. **COREQUISITE(S):** GDI 106

**GDI 106 GRAPHIC DESIGN  
TECH**

**FOUNDATIONS 3 CREDITS**

An introduction to computer technologies used in graphic design. Topics covered include computer terminology, file management, word processing, simple layout, font use, image scanning, raster and vector graphic properties, design and illustration using various programs. Keyboarding or typing skills highly recommended.

**GDI 120 INTRODUCTION TO  
MULTIMEDIA 3 CREDITS**

This course introduces the fundamentals of creating interactive multimedia using Macromedia Director. Assigned projects and exercises will require students to combine text, bitmap and vector graphics, video and animation, sound and Lingo strips. In later projects, emphasis will be placed on the conceptual foundation, audience analysis, interface design, and production skills required to integrate sources into a successful user experience. Multimedia teams and member roles will be discussed. Some class time will be devoted to basic demonstrations of applications used to prepare media for import into Director projects and cross-platform deliver. The shockwave format will be introduced and discussed as a way to deliver Director-based content over the Web.

**GDI 150 PRINTING AND PREPRESS  
3 CREDITS**

An introduction to the preparation of art for printing, including exercises in computer software as it applies to specific file setup. Coursework addresses camera and printing processes, mechanical color separations, the four-color process, paper and ink selection, screens and halftones, bindery and special printing techniques. PREREQUISITE(S): GDI 103, 106  
COREQUISITE(S): GDI 155, 160

**GDI 155 QUARKXPRESS (MACINTOSH)  
3 CREDITS**

In-depth applications of computer layout and design using the production techniques of QuarkXPress. Construction of various types of documents utilizing the program's word-processing, typography, copy flow, graphics and color capabilities. File management and storage; learning to work with a service bureau to produce camera-ready computer-generated output. Students must have previous Macintosh experience. PREREQUISITE(S): GDI 106 or instructor's permission

**GDI 160 ADOBE ILLUSTRATOR  
(MACINTOSH) 3 CREDITS**

Illustration projects emphasizing the use of Adobe Illustrator. Manipulation of type, integration of text and illustrations. Expanding the student's abilities with the Macintosh computer. PREREQUISITE(S): GDI 106 or 155, or instructor's permission

**GDI 170 ILLUSTRATION I 3 CREDITS**

Coursework addresses methods and techniques used in the profession of illustration in advertising, brochures, books and other forms of printed communications. Concentrates on developing expertise in producing line and continuous-tone black-and-white-art. Emphasis on design and the creation of art for reproduction. PREREQUISITE(S): ART 121

**GDI 180 DESIGN AND PRODUCTION I  
3 CREDITS**

A design course covering typical needs for businesses and institutions: logo design, type and paper selection, stationery design, direct mail, publication page layout, and point-of-purchase materials. Coursework will follow through to the creation of camera-ready art using computer software. Emphasis on black and white and spot color. PREREQUISITE(S): GDI 103 or ART 131 and GDI 105, 106  
COREQUISITE(S): GDI 150, 155, 160

**GDI 200 ADOBE PHOTOSHOP  
(MAC/WIN) 3 CREDITS**

This course will explore the various uses of Adobe Photoshop on the Macintosh and Windows based computers, including photo-manipulation and editing, color scanning and the use of CD-ROM images, converting RGB to CMYK, halftones and duotones, and special visual effects. PREREQUISITE(S): GDI 160 or instructor's permission

**GDI 206 ILLUSTRATION II  
3 CREDITS**

Instruction in the use of various media for color illustration. Using illustrations in design projects with the production of comprehensive layouts. PREREQUISITE(S): GDI 170

**GDI 207 ILLUSTRATION III  
3 CREDITS**

To further refine the illustration techniques learned in Illustration I and II, and to simulate job experience by preparing illustrations from thumbnails to final presentation. PREREQUISITE(S): GDI 206

**GDI 208 ILLUSTRATION IV  
3 CREDITS**

Advanced illustration techniques including manual/computer, mixed medium and airbrush. PREREQUISITE(S): GDI 207

**GDI 220 DESIGN AND PRODUCTION II  
3 CREDITS**

A continuation of design and production techniques with further instruction in preparation of computer file set-up. Use of full color in publication design, business reply mail, promotional and trade show booth materials. Coursework will follow through to the creation of camera-ready art using computer software. PREREQUISITE(S): GDI 180  
COREQUISITE(S): GDI 200

**GDI 225 DESIGN AND PRODUCTION III  
3 CREDITS**

Advanced study in design and production techniques and processes including publication and book formats, advertising campaigns, and editorial design. Use of electronic media for design projects. PREREQUISITE(S): GDI 220

**GDI 230 MACINTOSH SYSTEMS FOR  
THE DESIGNER 2 CREDITS**

A course addressing the needs of the designer in using the Macintosh computer as a production tool. Topics covered include terminology, hardware, graphics software applications, peripherals, working with a service bureau, troubleshooting, and purchasing and setting up a computer system. PREREQUISITE(S): GDI 106 or instructor's permission.

**GDI 240 MULTIMEDIA EQUIPMENT  
OPERATIONS 3 CREDITS**

This course focuses on the personal computer as a platform for multimedia production. In a hands-on lab environment, students will be introduced to the equipment and processes typical to multimedia input, production, output, and storage. The basic systems and functions of the personal computer and peripherals will be examined as well as troubleshooting and basic maintenance. Current peripherals and components examined may include digital cameras, alternative input devices, scanners, audio and video cards, microphones, speakers, printers, CD-ROM/R/RW, DVD, various disk-based storage systems, memory, network communication devices, and video projectors. The course will include demonstrations, lectures, readings and assigned projects that utilize the equipment. PREREQUISITE(S): GDI 120

**GDI 241 DIGITAL VIDEO  
TECHNOLOGY 3 CREDITS**

This course introduces the fundamentals of digital video acquisition, editing, and distribution. Basic recording techniques, digitization, file formats, use of existing commercial "clip" sources, compression/deliver architectures, and DVD will be covered. Video topics will include DV cameras, capture vs. FireWire (IEEE 1394), nonlinear video editing applications, basic post-production and compositing, and disk-based vs. streamed deliver. Audio topics as related to video production are included. PREREQUISITE(S): GDI 120

**GDI 243 NON-LINEAR EDITING AND  
POST-PRODUCTION 3 CREDITS**

This course covers the technical, theoretical and artistic fundamentals of editing on a digital non-linear system using Adobe Premiere. This basic techniques will be applicable to all editing systems including Final Cut Pro. Media 100 and Adobe Premiere. Students learn how to acquire source material, work with clips in the timeline, add a soundtrack, apply transitions, use effects, create composites, and generate titles. Student will also output their projects to videotape and render to disk for DC or Web use. PREREQUISITE(S): GDI 120, 200

**GDI 246 COMPUTER ANIMATION  
(MAC/WIN) 3 CREDITS**

Hands-on projects in the various aspects of animation including modeling and rendering. Projects include creating and presenting an animated sequence with audio, taped for viewing on a VCR.

PREREQUISITE(S): GDI 106 or instructor's permission

**GDI 251 ADVANCED ADOBE  
ILLUSTRATOR  
(MACINTOSH) 2 CREDITS**

A continuation of Adobe Illustrator class, emphasizing advanced techniques and more complex projects. A course designed to broaden computer illustration skills.

PREREQUISITE(S): GDI 250

**GDI 252 ADVANCED QUARKXPRESS  
(MACINTOSH) 3 CREDITS**

Advanced techniques in document design and production using QuarkXPress on the Macintosh computer. Concentration on large, complex documents. Advanced color separation techniques involving trapping. Tips and shortcuts in using QuarkXPress. Students should have previous Macintosh experience.

PREREQUISITE(S): GDI 249

**GDI 253 DESIGN AND  
PRODUCTION IV  
3 CREDITS**

To provide advanced training to design-oriented students in the areas of complex design and production including multi-media concepts and environmental graphics.

PREREQUISITE(S): GDI 225

**GDI 255 PORTFOLIO 2 CREDITS**

Designed as the final class before graduation. Students will prepare a commercial art portfolio and will prepare a gallery talk about their work.

PREREQUISITE(S): GDI 220

**GDI 256 COMMERCIAL ART  
BUSINESS 2 CREDITS**

A guide to free-lance work and a study of business practices and procedures unique to commercial art including retainers, commissions, royalties, copyrights, taxes, licenses, registration, bid processes, and self promotion. Visits by professionals in the field. Discussion of career opportunities and professional organizations.

PREREQUISITE(S): GDI 150, 180

**GDI 259 ADVANCED ADOBE  
PHOTOSHOP (MAC/WIN)  
2 CREDITS**

This course will explore advanced Photoshop techniques on the Macintosh computer including manipulating photographs, experimenting with filters, and using Photoshop images with other software programs for special visual effects.

PREREQUISITE(S): GDI 200

**GDI 260 WEB PAGE DESIGN  
(MAC/WIN) 3 CREDITS**

An introduction to design and programming for Internet sites. Coursework includes the formatting of text and graphics, using frames and links to develop and maintain informative and visually exciting web pages.

PREREQUISITE(S) GDI 200 or instructor's permission

**GDI 265 DIGITAL MEDIA  
PORTFOLIO 3 CREDITS**

This course is designed as a final class before graduation. Students will prepare an interactive multimedia or web-based portfolio. This class includes preparation for interviews, discussion of career opportunities and professional organizations, and visits with professionals in the field.

PREREQUISITE(S): Must be taken in final semester before graduation.

**GDI 270 MACROMEDIA DIRECTOR  
(MAC/WIN) 3 CREDITS**

An introduction to multimedia authoring for the designer, with coursework including the compilation of elements (text, graphics, photography, animation, 3-D images, audio, video) into a variety of digital presentations. Planning the project, creating storyboards, budgeting, and multimedia and the law (intellectual property, copyrights, licensing rights) will be addressed.

PREREQUISITE(S) GDI 155, 160 & 200 or instructor's permission

**GDI 271 EMERGING TECHNOLOGIES  
3 CREDITS**

This course provides a broad-based overview of current trends and issues in multimedia development and related industries. The class format will include lectures, readings, demos, discussion, research, projects, and a final student presentation. Course content changes each semester. May include topics such as voice/data/video integration, virtual environments, broadband, streaming media architectures, telco/CATV/satellite technologies, network-based applications, using technology for building community, wireless technology, current thinking in human factors and usability, XML and the semantic web, groupware and collaborative tools, pervasive computing, and others.

PREREQUISITE(S): GDI 240, 270

**GDI 273 MOTION GRAPHICS WITH  
FLASH 3 CREDITS**

Flash is the industry standard for the creation of animation for the web. The Flash plug-in is installed on over 90% of the browsers in use on the web, making flash a compelling alternative to HTML in many circumstances. This course will cover Flash interface conventions, symbol types and uses, tweening, basic ActionScripting, importing of vector and bitmap graphics, inclusion of sound files, and optimization and publishing of Flash files for web use. Flash's strengths and weaknesses vs. HTML and other web media deliver methods.

PREREQUISITE(S): GDI 200, 260

**GDI 275 SPECIAL TOPICS  
1-6 VARIABLE CREDIT**

These courses provide students with opportunities to study topics of special interest that may lie outside of the standard GDI program. A syllabus will specify the content of each course at the time it is offered.

**GDI 285 INDEPENDENT STUDY  
1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

**GDI 290 COOPERATIVE EDUCATION  
CAREER TRAINING  
3 CREDITS**

See Cooperative Education section for detailed description.

**HEALTH  
INFORMATION  
TECHNOLOGY  
(MEDICAL RECORDS)**

**HIT 101 HEALTH INFORMATION  
MANAGEMENT SCIENCE  
6 CREDITS**

An introduction to the health care field in general and the Health Information Management field in particular. This course addresses organizational structures, regulatory agencies, and health care reform. The health record is analyzed for content as it relates to quality, health care personnel responsibility, and documentation requirements. Retrieval systems are studied as well as retention regulations.

PREREQUISITE(S): acceptance into HIT Program

**HIT 105 PHYSICIAN PRACTICE:  
CODING AND  
REIMBURSEMENT  
5 CREDITS**

This entry level course is designed to provide the student with opportunities to apply basic ICD-9-CM, CPT, and HCPCS principles and guidelines to code outpatient visits. Topics will include physician documentation requirements and guidelines for different payer classes, and fraud and abuse issues.

PREREQUISITE(S): HPR 178

**HIT 111 HEALTH DATA  
MANAGEMENT 3 CREDITS**

A study of the computation of statistical data compiled by health care facilities. Special attention is paid to recognized terminology, accurate computation of formula, and computerized statistical methods and accompanying reports.

PREREQUISITE(S): CIS 118, HIT 101

**HIT 112 LEGAL ASPECTS 2 CREDITS**

The student is introduced to the legal system, identifies the roles of participants in that system, and learns appropriate courtroom behavior. The course considers the medical record as a legal document; it deals with privileged information, confidential information and communication, release of information, and consent and authorization. Specific federal/state laws as they relate to release of information will be explored. Special attention is paid to court decisions which affect health care facilities, their employees, and the medical staff.

PREREQUISITE(S): HIT 101

**HIT 188 HEALTH INFORMATION PRACTICUM I 3 CREDITS**

Provides a directed clinical experience in a health information department in a health care facility. This experience focuses on the practice of skills related to the application of legal principles, record analysis and abstraction and record retention and retrieval.

PREREQUISITE(S): Completion of all first year HIT courses

**HIT 221 CLINICAL CLASSIFICATION SYSTEMS 5 CREDITS**

A study of nomenclatures and classification systems with emphasis on the most recent revisions of ICD-9-CM. Students will study the ICD-9-CM coding conventions and principles. These skills are then applied to the coding of medical records. Further experience will include sequencing of diagnoses, DRG assignment and abstracting.

PREREQUISITE(S): completion of all first year HIT courses, HPR 178, MOT 125, 133

**HIT 222 QUALITY MANAGEMENT 3 CREDITS**

This course is designed to introduce the student to the concepts of quality assessment/quality improvement, utilization review, and risk management. JCAHO, state and federal regulations for quality management will be studied.

PREREQUISITE(S): completion of all first year HIT courses

**HIT 225 HEALTH INFORMATION MANAGEMENT 3 CREDITS**

A comprehensive course designed to give the student a background in the principles of management as they relate to organization and administration of a health information management department.

PREREQUISITE(S): completion of all first year HIT courses

**HIT 231 CLINICAL CLASSIFICATIONS SYSTEMS 5 CREDITS**

An intermediate study of ICD-9-CM coding conventions and principles. CPT-4 will also be studied using the most recent revision of CPT-HCPCS coding books and guidelines. Reimbursement issues also studied.

PREREQUISITE(S): completion of all first year HIT courses and HIT 221

**HIT 241 CPT CODING BASIC PRINCIPLES 2 CREDITS**

This entry level course is designed to provide the student with skill sets to apply the current procedural terminology (CPT) and HCPCS code set principles and guidelines for application in reporting/communication information and data about clinical services provided to patients by healthcare providers. Topics include understanding what the cpt nomenclature is, how and why it is used, and guidelines for each code category and how it is to be applied to represent services within each code category.

PREREQUISITE(S): HIT 221, HPR 178, MOT 125, 133 135 strongly recommended

**HIT 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**HIT 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

**HIT 288 HEALTH INFORMATION PRACTICUM II 3 CREDITS**

Focuses on the ability of the student to apply classroom knowledge in a clinical setting, practice professionalism, gain insight into the functions of the department and understand the relationship of health records to the facility as a whole. Emphasis is on the ability to act independently, complete assigned projects and demonstrate a good understanding of health information management concepts.

PREREQUISITE(S): Completion of all first and second year HIT courses

## HISTORY

**HIS 101 WESTERN CIVILIZATION I 3 CREDITS**

Explores a number of events, peoples, groups, ideas, institutions, and trends that have shaped Western Civilization from the prehistoric era to 1650. Reflects the multiple perspectives of gender, class, religion, and ethnic groups. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

**HIS 102 WESTERN CIVILIZATION II 3 CREDITS**

Explores a number of events, peoples, groups, ideas, institutions, and trends that have shaped Western Civilization from 1650 to the present. Reflects the multiple perspectives of gender, class, religion, and ethnic groups. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline.

**HIS 201 UNITED STATES (U.S.) HISTORY I 3 CREDITS**

Explores events, trends, peoples, groups, cultures, ideas, and institutions in North America and United States history, including the multiple perspectives of gender, class, and ethnicity, between the period when Native American Indians were the sole inhabitants of North America, and the American Civil War. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline.

**HIS 202 UNITED STATES (U.S.) HISTORY II 3 CREDITS**

Explores events, trends, peoples, groups, cultures, ideas, and institutions in United States History, including the multiple perspectives of gender, class, and ethnicity, between the period of the American Civil War and the present. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline.

**HIS 225 COLORADO HISTORY 3 CREDITS**

Presents the story of the people, society, and cultures of Colorado from its earliest Native Americans, through the Spanish influx, the explorers, the fur traders and mountain men, the gold rush, railroad builders, the cattlemen and farmers, the silver boom, the tourists, and the modern state

**HIS 247 CONTEMPORARY WORLD HISTORY 3 CREDITS**

Investigates the major political, social, and economic developments, international relationships, scientific breakthroughs, and cultural trends that have shaped the various global regions and nation-states from 1900 to the present. Emphasizes the interactions of global regions and nation-states.

**HIS 275 SPECIAL TOPICS: 1-5 VARIABLE CREDIT**

Focuses on the exploration of current topics, issues and activities related to one or more aspects of history.

**HIS 285 INDEPENDENT STUDY 1-5 VARIABLE CREDIT**

Incorporates structured and guided, individualized research that is organized and tailored around the interests and needs of the individual student.

PREREQUISITE(S): Instructor's permission

## HONORS

**HON 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**

This course provides seminars on special topics. Topics may be of general interest, or may relate to the honors topic of Phi Theta Kappa. Each year the current honors topic will be offered. The 2002-2004 topic is "The Dimensions and Directions of Health: Choices in the Maze".

PREREQUISITE(S): instructor's permission

**HON 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

## HUMANITIES

### HUM 115 WORLD MYTHOLOGY

3 CREDITS

This course introduces students to the mythologies of various cultures with a special emphasis on Greek, Asian and North American examples. Common themes are illustrated and some artistic reactions are used as examples.

### HUM 116 WORLD RELIGIONS

3 CREDITS

This course introduces the student to religion and to religious traditions. The influence of religion on the arts will be explored. Religions included will be African and Native American, Hinduism, Buddhism, Confucianism and Taoism, Middle Eastern and Persian, Greek and Roman, Judaism, Christianity and Islam.

### HUM 118 RELIGION IN AMERICAN CULTURE

3 CREDITS

Investigates the various ways in which religion and American culture interact. It begins with the religion of Native Americans, which existed in a pre-modern society where religion went unchallenged as the preeminent organizing principle, to our post-modern era, where religion competes with a multiplicity of other belief systems in a complex societal matrix. This course pays close attention to the sundry ways in which religion and American culture interface.

### HUM 121 SURVEY OF HUMANITIES I

3 CREDITS

Introduces students to the history of ideas in Western cultures through a study of the visual arts, literature, drama, music, and philosophy of early civilizations, Greek and Roman antiquity and Christian eras. Emphasizes connections among the arts, values, and diverse cultures.

### HUM 122 SURVEY OF HUMANITIES II

3 CREDITS

Examines the Medieval, Renaissance, and Baroque periods through a study of the visual arts, literature, music, and philosophy. Compares and contrasts diverse cultural ideas and feminine and masculine viewpoints.

### HUM 123 SURVEY OF HUMANITIES III

3 CREDITS

Examines the cultures of the 17th through the 20th centuries by focusing on the inter relatedness of the arts, ideas and history. Considers the influences of industrialism, scientific development and non-European peoples.

### HUM 275 SPECIAL TOPICS

1-6 VARIABLE CREDIT

This course is designed to provide students with opportunity to pursue in depth special areas of interest in the Humanities. The content of the course will be determined by the instructor(s) who will provide a complete syllabus.

### HUM 285 INDEPENDENT STUDY

1-6 VARIABLE CREDIT

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

## INTERIOR DESIGN

### IND 100 INTERIOR DESIGN

FUNDAMENTALS

4 CREDITS

Course currently under revision. Refer to the Interior Design Department for further information.

### IND 107 HISTORY OF INTERIOR DESIGN

3 CREDITS

Offers a study of interior furnishings from the medieval period to the Revival styles of the mid-eighteenth century to the contemporary classics used in modern interiors today. The characteristics of historical interiors, ornamental design, use of color, and architecture will be the primary emphases.

PREREQUISITE(S): Minimum CPT scores: 83 for Reading Comprehension; 86 for Sentence Skills and 61 for Arithmetic; 8 credits of previous IND course work; all degree entrance requirements

### IND 108 PROFESSION SURVEY

1 CREDIT

Guest speakers share experiences and insights concerning job types and opportunities; business practices; current work; professional organizations; tools, methods and educational requirements necessary for various positions; and prevailing professional attitudes.

### IND 111 DRAFTING FOR INTERIORS

4 CREDITS

Introduction to basic drafting tools and techniques, graphic references and symbols, use of pencil and technical pen. Student learns to draft floor plans and interior elevations. Course also covers basic interior dimensioning and lettering as well as isometric drawing construction for interior components.

PREREQUISITE(S): Minimum CPT score of 61 for Arithmetic

### IND 112 GRAPHIC COMMUNICATION

4 CREDITS

Students will learn methods of communicating interior design plans, elements and ideas in 3-D, through perspective drawing construction and quick sketch techniques, and practice rendering and illustration skills.

PREREQUISITE(S): Minimum CPT scores: 83 for Reading Comprehension; 86 for Sentence Skills and 61 for Arithmetic

### IND 114 SPACE PLANNING

3 CREDITS

Students will learn the principles and factors of space planning, and practice the space planning process through residential and light commercial applications. Students are introduced to interior architecture. Use of bubble diagrams and freehand ink presentation techniques are also included.

PREREQUISITE(S): IND 100, 111; Minimum CPT scores: 83 for Reading Comprehension; 86 for Sentence Skills and 61 for Arithmetic

### IND 117 INTERIOR TEXTILES

2 CREDITS

Emphasizes the study of fabrics, fibers, weaves, finishes, dyeing, and printing methods for residential and commercial fabrics and carpets. Resources are discussed and developed.

PREREQUISITE(S): Recommended basic skills standards (ENG 060, MAT 060, REA 090) or Faculty consent

PREREQUISITE(S): Minimum CPT scores: 83 for Reading Comprehension and 86 for Sentence Skills

### IND 118 INTERIOR FINISHES

2 CREDITS

Examines finish materials for residential and commercial interior design; preparation and installation techniques; introduction to specifications and estimating.

PREREQUISITE(S): Minimum CPT scores: 83 for Reading Comprehension; 86 for Sentence Skills and 61 for Arithmetic

### IND 151 RESIDENTIAL DESIGN

4 CREDITS

Student learns and applies the preliminary project phases of the residential design process. Project documentation is introduced and practiced. At least one portfolio project is produced.

PREREQUISITE(S): IND 100, 110, 111, 112, 114, 117, 118 and 205 recommended; Minimum CPT scores: 83 for Reading Comprehension; 86 for Sentence Skills and 61 for Arithmetic  
COREQUISITE(S): IND 112, 114 or 118

### IND 152 COMMERCIAL DESIGN I

2 CREDITS

Introduction to commercial design space planning and procedures. Students will study and apply space planning, code requirements and design documentation techniques for a variety of commercial project types through a series of short exercises. Emphasis will be placed on programming and schematic design. Hand drafting, sketching and various office computer software applications will be utilized.

PREREQUISITE(S): CIS 118, IND 112, 114, 117, 118, and IND 205 recommended; Minimum CPT scores: 83 for Reading Comprehension; 86 for Sentence Skills and 61 for Arithmetic  
COREQUISITE(S): IND 112, 117

### IND 160 ACCESSORIZING

2 CREDITS

Student learns how to assist clients in selection of art, antiques and accessories to aid in defining the character of a space. Styles and the eclectic mix of styles are covered, as well as placement and effective use of themes.

### IND 175 SPECIAL TOPICS

1-4 VARIABLE CREDIT

Explores current topics, issues and activities related to one or more aspects of the named discipline.

### IND 178 SEMINAR

1-6 VARIABLE CREDIT

This course provides students with an experiential learning opportunity.

PREREQUISITE(S): Minimum CPT scores: 83 for Reading Comprehension; 86 for Sentence Skills and 61 for Arithmetic

**IND 200 KITCHEN AND BATH DESIGN 4 CREDITS**  
 The specialized design process and documentation requirements of kitchen and bath design are introduced and applied using NKBA guidelines. Student becomes familiar with trade resources supporting this design field. At least two portfolio projects are produced. Students will be encouraged to produce project documents using a variety of computer software applications.  
 PREREQUISITE(S): IND 151, 205, 211, 225  
 COREQUISITE(S): IND 211, 225

**IND 201 COMMERCIAL DESIGN II 4 CREDITS**  
 Emphasis is on commercial design. Student will study and apply ADA requirements, codes, building systems, office landscape systems and components; produce commercial project drawings and documentation; and prepare both graphic and oral presentations. Student is encouraged to use the Internet for research, and to produce project documents using a variety of computer software applications.  
 PREREQUISITE(S): IND 151, 152, 205, 225  
 COREQUISITE(S): IND 225

**IND 205 PROFESSIONAL PRACTICE FOR INTERIOR DESIGNER 2 CREDITS**  
 Introduces many of the business procedures encountered in the commercial and residential practice of interior design. The student will generate a business plan and a marketing plan and learn how to establish accounts within the industry.  
 PREREQUISITE(S): IND 114, 117, 118

**IND 207 WINDOW TREATMENTS 2 CREDITS**  
 Discusses and demonstrates the hard and soft window treatments used in today's market place. Measuring, installing, pricing, ordering, and resource development are investigated. Fabric weaves and weights, trims and linings are discussed, and creative treatments are designed and specified.

**IND 211 INTERIOR CONSTRUCTION 4 CREDITS**  
 This course introduces the student to interior building systems and assemblies, construction documents and details, and codes applicable to interior architecture. Student will apply this knowledge to various graphic projects, and is encouraged to produce course projects using the computer and CAD software.  
 PREREQUISITE(S): IND 111; CAD 105; CIS 118

**IND 225 LIGHTING DESIGN 2 CREDITS**  
 Student studies and applies basic knowledge of interior lighting technology and design. Content includes lamp classifications, color rendition, how lighting sources effect the perception of space, how to compute and control proper lighting levels, and how to communicate design information using a reflected ceiling plan and luminaire schedule. Students are encouraged to produce projects using a variety of computer software applications.  
 PREREQUISITE(S): IND 114; CIS 118

**IND 278 WORKSHOP 1-6 VARIABLE CREDIT**  
 Provides students with an experiential learning opportunity.

**IND 280 INTERNSHIP 1-4 VARIABLE CREDIT**  
 Provides work experience in a business or industry; 45 fieldwork hours per credit hour.  
 PREREQUISITE(S): ACC: 45 credits of IND coursework PPCC: IND 120, ARC 108  
 CORREQUISITE(S): PPCC: IND 120

**IND 281 INTERNSHIP II 1-4 VARIABLE CREDIT**  
 Provides work experience in a business or industry; 45 fieldwork hours per credit hour.  
 PREREQUISITE(S): IND 280

**IND 289 CAPSTONE 1 CREDIT**  
 Provides a demonstrated culmination of learning within a given program of study.

**IND 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**  
 These special-topics courses are separately designed for specific educational purposes: to offer more in-depth training/instruction in a particular subject; to cover material not found in other IND courses; or to study timely issues. They are offered as time, student demand, facilities, and faculty availability permit, often during summer semester.  
 PREREQUISITE(S): see advisor and/or semester course schedule

**IND 278 WORKSHOP 1 - 6 CREDITS**  
 Provides students with an experiential learning opportunity.

**IND 280 INTERNSHIP 1 - 4 CREDITS**  
 Provides work experience in a business or industry setting. 45 fieldwork hours per credit hour.  
 PREREQUISITE(S): 45 credit of IND coursework

**IND 281 INTERNSHIP II 1 - 4 CREDITS**  
 Provides work experience in a business or industry setting. 45 field work hours per credit hour.  
 PREREQUISITE(S): 45 credit of IND coursework

**IND 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**  
 Course designed to meet the individual needs of students.  
 PREREQUISITE(S): Instructor's permission

**IND 289 CAPSTONE:ADVANCED DESIGN 1 CREDIT**  
 Student completes an advanced design project that aligns with a chosen career path. Scope and content vary. Focus is on synthesizing and demonstrating skills and knowledge gained in prior course work. a final portfolio-quality project is produced and orally presented.  
 PREREQUISITE(S): IND 200, 201, 225, 278:  
 DESIGN RESEARCH

**IND 290-297 COOP EDUCATION CAREER TRAINING**  
**290-293 COOP EDUCATION CAREER TRAINING 3 CREDITS**  
**294-295 COOP EDUCATION CAREER TRAINING 6 CREDITS**  
**296 COOP EDUCATION CAREER TRAINING 9 CREDITS**  
**297 COOP EDUCATION CAREER TRAINING 12 CREDITS**

See cooperative Education section for detailed description.  
 PREREQUISITE(S): instructor's permission

## INVESTMENTS

**INV 115 INVESTMENTS/STOCKS & BONDS 3 CREDITS**

This course is designed to make the student aware of a broad range of investment opportunities. The curriculum includes information about common stocks, corporate bonds, mutual funds, insurance, and real estate. The student will receive the basic general business concepts and information necessary to make a rational decision in the management of personal funds. Prepares for Series 6 Exam.

**INV 215 ADVANCED INVESTMENTS 3 CREDITS**

This class and the subjects covered are for students with a serious interest in investments. Subjects to be covered are: technical analysis, options, ratio analysis, leverages, etc. Prepares for Series 7 Exam.  
 PREREQUISITE(S): an accounting course or investment course; or instructor's permission

**INV 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
 PREREQUISITE(S): instructor's permission

## JAPANESE

**JPN 111 JAPANESE I 5 CREDITS**  
 Japanese I begins a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing Japanese.

**JPN 112 JAPANESE II 5 CREDITS**  
 Japanese II continues Japanese I in the development of functional proficiency in listening, speaking, reading and writing Japanese.  
 PREREQUISITE(S): JPN 111 or instructor's permission

**JPN 211 JAPANESE III 3 CREDITS**  
Continues Japanese I and Japanese II in the development of increased functional proficiency in listening, speaking, reading and writing Japanese. Note: The order of the topics and the methodology will vary according to texts and instructors.  
PREREQUISITE(S): JPN 112

**JPN 212 JAPANESE IV 3 CREDITS**  
JPN 212 continues JPN 111, JPN 112 and JPN 211 in the development of increased proficiency in listening, speaking, reading & writing the language. This class includes an interdisciplinary overview of Japanese culture and society. Topics in literature, the arts, contemporary society, corporate culture are explored.  
PREREQUISITE(S): JPN 211 or Instructor permission.

**JPN 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**JPN 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**  
Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## **JOURNALISM AND MASS COMMUNICATIONS**

**JOU 105 INTRO TO MASS MEDIA 3 CREDITS**  
This survey course places the mass media in a historical and cultural perspective to study the relationship between mass media and society. This course also introduces students to some of the ethical, legal and economic issues that affect the mass media and their consumers.

**JOU 106 FUNDAMENTALS OF REPORTING 3 CREDITS**  
This is an introductory course in news writing, reporting and interviewing, with an emphasis on clarity, accuracy, timeliness and fairness.  
PREREQUISITE(S): ENG 121

**JOU 215 PUBLICATIONS PRODUCTION AND DESIGN 3 CREDITS**  
This intermediate course provides students with practical experience in the design, editing and layout of special non-newspaper publications. Students will work on the college literary magazine.

**JOU 275 SPECIAL TOPICS 1-6 VARIABLE CREDITS**  
Courses offered under the Special Topics heading address special issues in reporting and editing.

**JOU 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**  
Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

**JOU 190-192 COOP EDUCATION CAREER EXPLORATION 3 CREDITS**

**290-293 COOP EDUCATION CAREER TRAINING 3 CREDITS**

**294-295 COOP EDUCATION CAREER TRAINING 6 CREDITS**

**296 COOP EDUCATION CAREER TRAINING 9 CREDITS**

**297 COOP EDUCATION CAREER TRAINING 12 CREDITS**

See Cooperative Education section for detail description.

**MME 101 INTRO TO TELEVISION PRODUCTION 3 CREDITS**  
Introduces the use of television equipment. Emphasizes basic principles of professional production techniques, technology and terminology including special effects, editing, lighting, graphics, audio recording, storyboarding, and scripting. Students will learn how to do productions using both studio and field equipment to develop these skills. Textbook required.

**MME 102 ADVANCED TELEVISION PRODUCTION 3 CREDITS**  
Students will produce their own projects as well as work on in-house projects for in-depth experience in all facets of a complex television production, e.g. directing, producing, writing. Also covered: methods and techniques for budgeting and planning, scheduling for production in terms of time, equipment and cost evaluation of finished programs, competing in the video market, and working with clients.  
PREREQUISITE(S): MME 101, instructor's permission

**MME 103 SCRIPTWRITING FOR FILM AND TELEVISION 3 CREDITS**  
Introduces the technical and creative aspects of writing a dramatic or commercial script for film or television. Covers proper script formatting, timing, developing a story and, for television, storyboarding.

**MME 201 VIDEO PROJECT 3 CREDITS**  
Emphasizes application of all the skills gained in MME 101 and MME 102. Students will complete one or two video productions. If deemed of exceptional quality, the finished project(s) will be entered into a national student-video competition.  
PREREQUISITE(S): MME 101, 102 or instructor's permission

**MME 202 VIDEO COMMUNICATION MODES 3 CREDITS**  
Explores various modes of video communication. Covers Satellite, Microwave, Infrared, Wireless, Fiberoptic, and various video compression methods.  
PREREQUISITE(S): MME 101 or instructor's permission

**MME 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**  
Explores particular areas of interest in Mass Communications.  
PREREQUISITE(S): instructor's permission

**MME 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**  
Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

**MME 190-192 COOP EDUCATION CAREER EXPLORATION 3 CREDITS**

**290-293 COOP EDUCATION CAREER TRAINING 3 CREDITS**

**294-295 COOP EDUCATION CAREER TRAINING 6 CREDITS**

**296 COOP EDUCATION CAREER TRAINING 9 CREDITS**

**297 COOP EDUCATION CAREER TRAINING 12 CREDITS**

See Cooperative Education section for detailed description.

## **LATIN**

**LAT 101 CONVERSATIONAL LATIN I 3 CREDITS**  
This is the first course in a sequence for beginning students who wish to understand and communicate in Latin. The material will cover basic conversational patterns, expressions and grammar.

**LAT 102 CONVERSATIONAL LATIN II 3 CREDITS**  
This is the second course in a sequence for beginning students who wish to understand and communicate in Latin. The material will continue to cover basic conversational patterns, expressions and grammar.  
PREREQUISITE(S): LAT 101

**LAT 111 LATIN I 5 CREDITS**  
This course begins a sequence in the development of functional proficiency in listening, speaking, reading, and writing the language.

## LAW COURSES

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see Paralegal

## LITERATURE

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Recommended: College-level reading ability

### LIT 115 INTRODUCTION TO LITERATURE I 3 CREDITS

Introduces students to fiction, poetry, and drama. Emphasizes active and responsive reading.

### LIT 201 MASTERPIECES OF LITERATURE I 3 CREDITS

Examines significant writings in world literature from the ancients through the Renaissance. Emphasizes careful reading and understanding of the works and their cultural backgrounds.

### LIT 202 MASTERPIECES OF LITERATURE II 3 CREDITS

Examines significant writings in world literature from the Seventeenth Century to the present. Emphasizes careful reading and understanding of the works and their cultural backgrounds.

### LIT 211 SURVEY OF AMERICAN LIT I 3 CREDITS

This course is an overview of American literature from its beginnings through the Nineteenth Century Romantics. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers.

### LIT 212 SURVEY OF AMERICAN LIT II 3 CREDITS

This course is an overview of American literature from the mid-Nineteenth Century to the present. It explores ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers.

### LIT 221 SURVEY OF BRITISH LIT I 3 CREDITS

This course is an overview of British literature from the Anglo-Saxon period into the Eighteenth Century. It explores ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers.

### LIT 220 JEWISH-AMERICAN LITERATURE 3 CREDITS

Surveys some of the major achievements in literature and film by American Jews in late-nineteenth through the twentieth century. We will proceed chronologically, focusing on the fiction of the immigrant experience, on the politicized literature of the 1930s and the 1940s, on the literature of the post-WWII era and its struggle to fashion an adequate response to the Holocaust, and on questions surrounding assimilation, acculturation, and identity politics.

### LIT 222 SURVEY OF BRITISH LIT II 3 CREDITS

This course is an overview of British literature from the Eighteenth Century to the present. It explores ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers.

### LIT 225 INTRO TO SHAKESPEARE 3 CREDITS

This course explores a selection of works by William Shakespeare. It focuses on careful reading and interpretation of the plays and poems, includes pertinent information about Elizabethan England, and examines formal as well as thematic elements of the selected works.

### LIT 240 POETS AND THEIR POEMS 3 CREDITS

Teaches strategies for reading, interpreting, discussion, and evaluating a variety of poems with particular attention to a study of selected major poets in depth.

### LIT 245 LIT OF THE AMERICAN WEST 3 CREDITS

This course examines works in various genres by writers of the American West. It investigates the dominant themes and social and historical backgrounds.

### LIT 255 CHILDREN'S LITERATURE 3 CREDITS

This course examines the criteria for selecting appropriate literature for children. Discussion topics explore age levels, values taught through literature, and literary and artistic qualities.

### LIT 257 LITERATURE AND FILM 3 CREDITS

This course examines the relationship between literature and motion pictures, emphasizing film techniques and the interpretive function of filmmakers.

PREREQUISITE(S): LIT 115 or instructor's permission

### LIT 259 SURVEY OF AFRICAN AMERICAN LITERATURE 3 CREDITS

This course is an overview of African American Literature from 1750 to the present. It explores ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers.

### LIT 260-269 POPULAR LITERATURE AND CULTURE: SPECIAL TOPICS 3 CREDITS

Explores special interests in literature, such as detective fiction and science fiction.

### LIT 266 INTRODUCTION TO C.S. LEWIS 3 CREDITS

An introduction to the essays, fiction, and literary criticism of C.S. Lewis. Emphasis is on the careful reading and understanding of the works, on class discussion, and on the writing of interpretive and critical essays.

### LIT 267 THE BIBLE AS LITERATURE 3 CREDITS

An introduction to the Bible as the textual centerpiece of Western literature. Students will encounter the various literary genres represented in Biblical texts, the process of canonization, ways in which the Bible has been read by its various interpretive communities, and some impacts of the Bible in such areas as law, poetry, fiction, psychology, ethics, and theology.

### LIT 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT

Explores particular authors, topics, themes in depth, such as Ibsen, Faulkner or Twain, great fiction of the Nineteenth Century, the Gothic Novel or Literature of the Holocaust.

### LIT 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

## MANAGEMENT

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### MAN 116 PRINCIPLES OF SUPERVISION 3 CREDITS

The course concentrates on the management skills needed by first line and new supervisors with practical applications taken from common supervisory situations.

### MAN 128 HUMAN RELATIONS 3 CREDITS

This course introduces the student to those aspects of interpersonal relations most directly linked to attainment of organizational and individual goals in the work place. Its focus is on identifying and analyzing those factors which help and hinder such relationships.

### MAN 200 HUMAN RESOURCE MANAGEMENT 3 CREDITS

This course provides the student with a broad overview of the contemporary issues, theories and principles used to effectively manage human resources. Topics include hiring, compensation, development, employee relations and legal issues.

**MAN 210 PERFORMANCE APPRAISAL  
3 CREDITS**

This course is designed to give the student the opportunity to study and practice the Human Resource functions of evaluating employees' past performance and improving employees' future performance through the use of effective appraisal practices. Performance appraisal systems, appraisal interviewing and appraisal research will be studied. PREREQUISITE(S): MAN 200 recommended

**MAN 215 ORGANIZATIONAL  
BEHAVIOR 3 CREDITS**

The course examines the behaviors or groups and individual members of organizations, and how that behavior can be influenced. Course emphasis is on the tools managers use to achieve organizational effectiveness.

**MAN 216 SMALL BUSINESS  
MANAGEMENT 3 CREDITS**

This course examines the elements necessary for the successful formulation of a new small business. Its is also designed to enhance the skills of those already involved in the operation of a small business. The course includes the development of a complete small business plan.

**MAN 220 COMPENSATION  
MANAGEMENT 3 CREDITS**

This course examines the current theory and research related to managing employee compensation, including new developments as well as established approaches to compensation decisions. PREREQUISITE(S): MAN 200 and 210 recommended

**MAN 224 LEADERSHIP 3 CREDITS**

Focuses on the leadership skills necessary to bring about change in an organization. Students learn to develop and communicate a shared vision, to empower employees, to manage conflict, to negotiate, and to develop organizations so that all are working toward common goals. Crosslisted with BUS 251.

**MAN 226 PRINCIPLES OF  
MANAGEMENT 3 CREDITS**

A survey of the principles of management. Emphasis will be on the primary functions of planning, organizing, staffing, directing, and controlling with a balance between the behavioral and operational approach.

**MAN 240 STRATEGIC MANAGEMENT  
3 CREDITS**

Development of Business Policy and the integration of skills learned in prior business study, including strategy formulation, implementation and evaluation. Focus is on the coordination of marketing, production, finance, accounting and ethics and social responsibility to achieve competitive advantage.

**MAN 241 PROJECT MANAGEMENT IN  
ORGANIZATIONS  
3 CREDITS**

This course is designed to introduce students to the planning, implementation, and control activities of Project Management, including project and performance evaluation, quality control and work flow analysis. Emphasis will be on the initiating, planning, executing, controlling and closing activities of Project Management.

**MAN 242 PROJECT MANAGEMENT  
TOOLS AND TECHNIQUES  
3 CREDITS**

This a course in the use of project management tools and techniques, wherein students will learn the necessary skills to track a project, keeping it on time and within budget. Students will apply software to solve project cases and to construct scheduling charts and reports. PREREQUISITE(S): MAN 241 or instructor's permission

**MAN 243 PROJECT MANAGEMENT  
PRACTICUM 3 CREDITS**

This course is a workshop seminar designed to bring into focus the subject material covered in MAN241 and MAN242. Emphasis will be on extracting facts to form patterns, thereby enabling student to see the "big picture" of Project Management. PREREQUISITE(S): MAN 241 and MAN 242, or instructor's permission

**MAN 275 SPECIAL TOPICS  
1-6 VARIABLE CREDIT**

This course is designed to provide students with the opportunity to study topics in management in greater depth than provided by regular course offerings.

## **MANUFACTURING TECHNOLOGY**

**MTE 120 MANUFACTURING  
PROCESSES 3 CREDITS**

Provides the student an overview of the different methods, tools and machines which are used to manufacture industrial and consumer products.

**MTE 141 PRINTED CIRCUIT BOARD  
ECAD/CAM 3 CREDITS**

Introduces the student to the basic computer concepts of creating a production file for the design and manufacture of a printed circuit board. Topics include the computer applications for design capture, PCB library management, databases, integration tools, packaging, design rules and production documents. PREREQUISITE(S): Instructor's permission

## **MARKETING**

**MAR 106 MARKETING YOUR IMAGE  
3 CREDITS**

Teaches students how to market themselves to prospective employers, clients, professional groups, and audiences of all types. Major emphasis will be placed on skills used to gain employment (resumes, interviewing, and professional appearance) and on skills used to achieve continued personal success (professional behavior and attitude). The course will include at least one simulated interview.

**MAR 111 PRINCIPLES OF SALES  
3 CREDITS**

This course enables the student to understand and develop ethical sales techniques and covers the role of selling in the marketing process. Areas of emphasis include behavioral considerations in the buying and selling process and sales techniques.

**MAR 117 PRINCIPLES OF RETAILING  
3 CREDITS**

This course is a study of the basic principles and techniques of merchandising, operations, layout, store organization, site location, and customer service with an emphasis on retailing operations.

**MAR 126 MERCHANDISING  
3 CREDITS**

This course emphasizes facility/store organization and merchandising techniques. The study of what makes a store appealing includes layout, product mix, and techniques of display.

**MAR 160 CUSTOMER SERVICE  
3 CREDITS**

This course enables students to learn the relationship of self to customers, problem solve and understand the importance of communicating with customers. Specific emphasis is given to managing customer expectations by building customer rapport and creating positive outcomes. (This course was previously MAR 136).

**MAR 216 PRINCIPLES OF  
MARKETING 3 CREDITS**

The analysis of theoretical marketing processes and the strategies of product development, pricing, promotion and distribution, and their applications to business and the individual consumer.

**MAR 235 CONSUMER BEHAVIOR  
3 CREDITS**

Enables the the student to understand the variables that affect consumer behavior in the marketplace and the implications of this knowledge for marketing decisions and strategies.

**MAR 249 STRATEGIC MARKETING**  
**3 CREDITS**

Illustrates the connections between a market-driven strategy, customer satisfaction, and profitable growth. Students will examine how marketing strategies are developed and executed within both small and large organizations. The course will emphasize strategy development, implementation, and evaluation.  
PREREQUISITE(S): MAR 216

**MAR 275 SPECIAL TOPICS**  
**1-6 VARIABLE CREDIT**

Provides students with a vehicle to pursue special topics of interest in business. The content of this course is designed on an as needed basis to provide current, up-to-date information.

## **MASS MEDIA**

Please see Journalism and Mass Communications

## **MATHEMATICS**

**MAT 030 FUNDAMENTALS OF**  
**MATHEMATICS 2 CREDITS**

This course includes the vocabulary, basic operations and applications of whole numbers, decimals, and introduction to English and metric measurement, and an introduction to areas and perimeters.  
PREREQUISITE(S): CPT assessment, arithmetic score 20-44

**MAT 060 PRE-ALGEBRA 3 CREDITS**

This course includes the vocabulary, basic operations and applications of fractions, mixed numbers, ratio, proportions, percent, integers, algebraic expressions, and the solution of basic first-degree equations and inequalities. A very brief review of whole numbers and decimal operations and applications may be included.  
PREREQUISITE(S): MAT 030 or Math Assessment

**MAT 080-089 SPECIAL TOPICS:**  
**DEVELOPMENTAL**  
**MATH**  
**VARIABLE CREDIT**

Courses offered under this prefix and title would be designed to introduce students to a specialized area of mathematics.

**MAT 090 INTRODUCTORY ALGEBRA**  
**4 CREDITS**

This course includes solution of first-degree equations, inequalities, and formulas; polynomials; factoring polynomials and solving quadratic equations by factoring; algebraic fractions; coordinate geometry; systems of linear equations; graphing linear equations and inequalities; radical expressions; and applications.  
PREREQUISITE(S): MAT 060 (grade of C or better) or Math Assessment

**MAT 099 ENHANCED MATHEMATICS**  
**SUPPORT**

**1 CREDIT**

Enhanced Mathematics Support, located in M3620/3610, is a student-centered learning environment that will complement mathematics classroom instruction. Students will be able to utilize the following resources: professional and peer tutoring, mathematics and tutorial software, online tutorial resources, video tapes, and training guides for these resources. Students will also be able to obtain help with calculators and mathematical software required in their mathematics courses. Graded on a Satisfactory/ Unsatisfactory basis. Some Financial Aid restrictions may apply.  
COREQUISITE(S): Any other MAT course

**MAT 106 SURVEY OF ALGEBRA**  
**4 CREDITS**

This course emphasizes problem solving with further study of equations, slope, inequalities, systems of equations, polynomials, quadratic equation, rational exponents, radical expressions, graphing and applications.  
PREREQUISITE(S): MAT 090 or Math Assessment  
COREQUISITE(S): MAT 111 required

**MAT 111 TECHNOLOGY LAB FOR**  
**ALGEBRA 1 CREDIT**

Explores and applies algebraic topics in a laboratory course using graphing calculators.  
PREREQUISITE(S): MAT 090  
COREQUISITE(S): MAT 106 required

**MAT 116 APPLIED MATH I, ALGEBRA**  
**2 CREDITS**

This course is designed to give basic algebra skills necessary for vocational courses in areas such as electronics, architecture, business, and interior design. It is intended for students who have limited background in Algebra, and who do not plan to take higher level algebra courses in the future. MAT 090 begins at the same level as this course. Students needing MAT 090 should normally begin there, not in MAT 116. Topics of this course include signed number review, order of operations, algebraic expressions, polynomial operations, exponents, linear equations, and formula manipulation. 30 hours lecture.  
PREREQUISITE(S): MAT 060 or equivalent

**MAT 117 APPLIED MATH II,**  
**GEOMETRY AND**  
**TRIGONOMETRY 2 CREDITS**

This course is designed to give geometry and basic trigonometric skills necessary for vocational courses in areas such as electronics and architecture. Topics included in this course are lines, angles, geometric shapes, calculation of perimeter and area, trigonometric definitions, solution of triangles, and graphs of sine and cosine. 30 hours lecture.  
PREREQUISITE(S): MAT 116 or equivalent

**MAT 120 MATHEMATICS FOR**  
**LIBERAL ARTS 4 CREDITS**

This course is designed to develop mathematical and problem-solving skills. Appropriate technological skills are included. Content is selected to highlight connections between mathematics and the society in which we live. Topics include set theory and logic, mathematical modeling including exponential and logarithmic functions, probability and statistical methods and consumer mathematics. Additional content will include one topic in geometry, numeration systems, decision theory, or management science.  
PREREQUISITE(S): MAT 106 or math assessment

**MAT 121 COLLEGE ALGEBRA**  
**4 CREDITS**

Includes a brief review of intermediate algebra, equations and inequalities, functions and their graphs, exponential and logarithmic functions, linear and nonlinear systems, selection of topics from among: graphing of the conic sections, introduction to sequences and series, permutations and combinations, the binomial theorem and theory of equations.  
PREREQUISITE(S): MAT 106 or 136 or equivalent or math assessment

**MAT 122 COLLEGE TRIGONOMETRY**  
**3 CREDITS**

This is a traditional prerequisite course to the calculus sequence. Topics include trigonometric functions (with graphs and inverse functions), identities and equations, solutions of triangles, complex numbers, and other topics as time permits.  
PREREQUISITE/COREQUISITE: MAT 121 or instructor's permission

**MAT 123 FINITE MATHEMATICS**  
**4 CREDITS**

This course is primarily intended for business, life science or social science majors. Topics include functions, matrix algebra, linear programming, and an introduction to probability and counting techniques. Emphasis is on applications. The course may include other topics such as statistics when time permits.  
PREREQUISITES: MAT 106 or math assessment

**MAT 125 SURVEY OF CALCULUS**  
**4 CREDITS**

For business, life science, and/or social science majors. Includes derivatives, integrals, and their applications, with attention restricted to algebraic, exponential and logarithmic functions.  
PREREQUISITE(S): MAT 121 or 123

**MAT 135 INTRODUCTION TO**  
**STATISTICS 3 CREDITS**

Includes data presentation and summarization, introduction to probability concepts and distributions, statistical inference-estimation, hypothesis testing, comparison of populations, correlation and regression.  
PREREQUISITE(S): MAT 106 or 136 or math assessment  
COREQUISITE(S): MAT 179 required

**MAT 136 TURBO ALGEBRA3 CREDITS**

A course designed to meet the needs of students not prepared for college level math, but with a background in algebra. An intensive review of algebra prerequisite to college level classes MAT 121, MAT 135. Topics covered include: Single variable equation solving, linear and non-linear equations in two variables and their graphs.

PREREQUISITE(S): mathematics course work beyond 1 year of high school algebra or beyond Introductory Algebra, MAT 090

**MAT 155 MATHEMATICS FOR PRE-SECONDARY TEACHERS I 4 CREDITS**

This course is designed to develop a sound background in the concepts underlying the pre-secondary school mathematics curriculum. Teachers making decisions in the diverse contexts of school mathematics classrooms must possess not only sound understanding of mathematical ideas but of the problem-solving processes by which this understanding develops and in which this understanding is applied. These are the "Big Mathematical Ideas" of the course:

- 1) Mathematical problem-solving, reasoning and communication;
- 2) Patterns and their identification, representation, analysis, manipulation, and generalization;
- 3) Geometry and measurement concepts;
- 4) Counting principles, probability and statistics;
- 5) Number systems and computational algorithms.

PREREQUISITE(S): MAT 106

**MAT 156 MATHEMATICS FOR PRE-SECONDARY TEACHERS II 3 CREDITS**

This courses, the second in a sequence of mathematics courses for prospective elementary teachers, is designed to deepen and extend students' understanding of the mathematical concepts underlying a pre-secondary mathematics curriculum aligned with the Colorado Model Content Standards for Mathematics.

These are the "big ideas" of this course [See Colorado Model Content Standards for Mathematics; NCATE Standard 1.5; CDE Standards 5.01, 8.01, 8.02, 8.20; CCHE Performance Standard2]:

- 1) Mathematical problem-solving, reasoning and communication;
- 2) Patterns and their identification, representation, analysis, manipulation, and generalization;
- 3) Geometry and measurement concepts;
- 4) Counting principles, probability and statistics;
- 5) Number systems and computational algorithms.

PREREQUISITE(S): MAT 155

**MAT 179 COMPUTER APPLICATIONS FOR STATISTICAL PROCEDURES 1 CREDIT**

Using statistical software and the world wide web, students will engage in an active, visual approach to the topics covered in MAT 135, Introductions to Statistics. Students will work with real world data on problems of a practical nature

PREREQUISITE(S): MAT 106 or 136 or equivalent  
COREQUISITE(S): MAT 135 required

**MAT 201 CALCULUS I 5 CREDITS**

Introduces single variable calculus and analytic geometry. Includes limits, continuity, derivatives, and applications of derivatives, as well as indefinite and definite integrals and some applications.

PREREQUISITE(S): MAT 121 and 122 or equivalent

**MAT 202 CALCULUS II 5 CREDITS**

Continuation of single variable calculus and includes techniques of integration, polar coordinates, analytic geometry, improper integrals, and infinite series.

PREREQUISITE(S): MAT 201, or instructor's permission

**MAT 203 CALCULUS III 4 CREDITS**

This course completes the traditional subject matter of The Calculus. Topics include vectors, vector-valued functions, and multi-variable calculus (including partial derivatives, multiple integrals, line integrals and applications).

PREREQUISITE(S): MAT 202

**MAT 255 LINEAR ALGEBRA 3 CREDITS**

This course includes an introduction to the theory of vector spaces, linear transformations, matrix representations, eigenvalues, and eigenvectors.

PREREQUISITE(S): MAT 202, or instructor's permission

**MAT 260 DIFFERENTIAL EQUATIONS 3 CREDITS**

The primary emphases in this course are on techniques of problem solving and applications. Topics include first, second and higher order differential equations, series methods, approximations, systems of differential equations, and Laplace transforms.

PREREQUISITE(S): MAT 203, or instructor's permission

**MAT 280 DISCRETE MATHEMATICS 3 CREDITS**

This course is designed to introduce some of the mathematical abstractions and formal structures used in computer science and more advanced mathematics courses. Topics include logic, mathematical induction, elementary set theory, relations and functions, combinatorics counting, and graph theory. Applications are drawn from computer science.

PREREQUISITES: MAT 201 or 171, and one course in a computer language

**MAT 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**MAT 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

**MEDICAL LABORATORY TECHNOLOGY****HPR 112 PHLEBOTOMY 8 CREDITS**

Teaches the duties associated with the practice of venipuncture, capillary puncture, and special collection procedures. Students will have experience with quality control, infection control and safety procedures as well as laboratory computer systems. Students successfully completing this course may apply for a National Phlebotomy Registry Examination.

**MLT 120 CLINICAL ASSISTANT CORE MODULE 2 CREDITS**

MLT 120 is the Core Module for the Clinical Assistant Certificate. Topics covered include laboratory safety and regulations, quality control, basic specimen collection, reagent preparation and laboratory medical terminology.

This course is not eligible for financial aid.

**MLT 131 INTRODUCTION TO HEMATOLOGY 2 CREDITS**

MLT 131 is designed as an introduction course to hematology for MLT students and a complete Hematology module for the Clinical Assistant. Basic manual hematology test and basic instrumentation theory are covered. OSHA safety and an introduction to phlebotomy are also included.

COREQUISITE(S): BIO 201

**MLT 132 HEMATOLOGY II 4 CREDITS**

MLT 132 is the continued section of Hematology for the MLT students. Advanced Hematology theory and disease correlation are covered. OSHA safety, phlebotomy and instrumentation are continued, cell differentials, other manual Hematology testing and coagulation are also included.

PREREQUISITE(S): MLT 131 or instructor's permission

COREQUISITE(S): BIO 201

**MLT 141 IMMUNOLOGY/  
IMMUNOHEMATOLOGY**

**4 CREDITS**

Basic principles of immunology are discussed with serological techniques practiced and observed in the clinical laboratory also covered. In addition basic theories of Immunohematology (Blood Banking) such as ABO and Rh typing are taught and experienced in the student laboratory.

PREREQUISITE(S): BIO 201, MLT 131, 132 or instructor's permission

COREQUISITE(S): BIO 202

**MLT 142 URINALYSIS**

**2 CREDITS**

MLT 142 is designed for both MLT and Clinical Assistant (CA) students. Introduction to kidney functions and basic principles of urinalysis with complete urinalysis procedures are discussed and performed. Basic description and recognition of Body Fluids is also included.

COREQUISITE(S): BIO 201 or 202

**MLT 180 INTERNSHIP/BLOOD  
BANK I**

**1 CREDIT**

Presents the clinical internship rotation in one or two blood banking facilities or lab. Student attends for 40 hours per week for 2 weeks. Additional practice of blood bank principles and procedures, experience with automated instrumentation and exposure to clinical environment provided.

PREREQUISITE(S): MLT 141

**MLT 182 INTERNSHIP II/  
HEMATOLOGY,  
COAGULATION &  
URINALYSIS**

**5 CREDITS**

Presents the clinical internship rotation in a hematology laboratory. Student attends for 40 hours per week for 5 weeks. Additional practice of hematology principles and procedures, experience with automated instrumentation and exposure to clinical environment provided.

PREREQUISITE(S): MLT 131, 132, 142

**MLT 231 CLINICAL MICROBIOLOGY**

**4 CREDITS**

A brief introduction to the field of microbiology followed by the more technical aspects of clinical microbiology. Infectious diseases will also be discussed. Specimen types from different anatomical sites will be covered for the culture of bacteria in the clinical laboratory. Use of media for isolation and differential tests for identification of bacteria will be performed in the student laboratory.

PREREQUISITE(S): BIO 201, 202 or instructor's permission

**MLT 232 PARASITOLOGY/  
MYCOLOGY**

**2 CREDITS**

An introduction to protozoa, Helminths and blood tissue parasites with special emphasis on microscopic morphology in the detection and correct identification of parasites. This combined course also includes an introduction to fungi with emphasis on microscopic and culture methods.

PREREQUISITE(S): BIO 201, or instructor's permission

**MLT 241 INTRODUCTION TO  
CLINICAL CHEMISTRY**

**2 CREDITS**

MLT 241 is designed as an introduction course to clinical chemistry for MLT students and a complete chemistry module for Clinical Assistant students. Basic laboratory math, instrumentation, safety and quality control are discussed along with basic theory and result evaluation of electrolytes, kidney function and liver function test.

PREREQUISITE(S): CHE 101 or instructor's permission

**MLT 242 CLINICAL CHEMISTRY II**

**4 CREDITS**

MLT 242 is the continued section of clinical chemistry for the MLT student. Advanced clinical chemistry theory, organ functions and disease correlations are covered.

PREREQUISITE(S): CHE 101, MLT 241 or instructor's permission

**MLT 243 CLINICAL PRACTICES**

**1 CREDIT**

This course is designed for both MLT and CA students. Common Healthcare practices such as point of care testing, vital signs, capillary blood collection and specimen processing are covered. Additionally, information on Healthcare regulatory agencies, medical ethics and patient services are discussed.

**MLT 253 MLT SEMINAR**

**1 CREDIT**

Guest speakers present on current laboratory technology topics and employability skills. Grade determination also includes successful completion of three MLT program Comprehensive Exams and 15 hours of community service.

PREREQUISITE(S): ALL MLT courses

**MLT 275 SPECIAL TOPICS**

**1-6 VARIABLE CREDIT**

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**MLT 280 INTERNSHIP III/CLINICAL  
CHEMISTRY**

**5 CREDITS**

Provides a clinical internship rotation in a chemistry laboratory. Student attends for 40 hours per week for 5 weeks. Additional practice of clinical chemistry principles and procedures, experience with automated instrumentation and exposure to clinical environment provided.

PREREQUISITE(S): MLT 241, 242

**MLT 282 INTERNSHIP IV/  
MICROBIOLOGY**

**5 CREDITS**

Provides a clinical internship rotation in a microbiology laboratory. Student attends for 40 hours per week for 5 weeks. Additional practice of clinical chemistry principles and procedures, experience with automated instrumentation and exposure to clinical environment provided.

PREREQUISITE(S): MLT 231, 232

**MLT 285 INDEPENDENT STUDY**

**1-6 VARIABLE CREDIT**

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PREREQUISITE(S): Instructor's permission

## **MEDICAL OFFICE TECHNOLOGY**

**MOT 102 INTRODUCTION TO  
MEDICAL TERMINOLOGY**

**2 CREDITS**

Provides an emphasis on verbal and written communication of medical terms including defining, spelling, pronunciation and analysis of component parts.

**MOT 110 MEDICAL OFFICE  
ADMINISTRATION**

**4 CREDIT**

Introduces the administrative duties specifically used in medical offices.

**MOT 125 BASIC MEDICAL SCIENCES I**

**3 CREDITS**

This course introduces the allied health professional to basic anatomy and physiology and pathophysiology. Introductory concepts of chemistry and biology as it applies to healthcare will be discussed as well as an overview of disease and an introduction to pharmacology. The student will learn anatomy and physiology, pathophysiology, and related pharmacology of the immune, musculoskeletal, and digestive systems. Pediatric and geriatric considerations will be integrated throughout the course. This course is a prerequisite for MOT 133 and MOT 135.

PREREQUISITE(S): MOT 178 for HIT students and MOT 102 for MOT students

**MOT 133 BASIC MEDICAL SCIENCES II**

**3 CREDITS**

Teaches the anatomy and physiology, pathophysiology and drug therapy of the cardiovascular, respiratory, and dermatology systems. This course is a follow-on course from MOT123. Students may take MOT125, MOT133, and MOT135 in any order after successfully completing MOT123.

PREREQUISITE(S): MOT 123

**MOT 135 BASIC MEDICAL SCIENCES III**  
**3 CREDITS**

Covers the anatomy and physiology, pathophysiology and drug therapy of the Renal, Reproductive, Neurological, and Endocrine systems. This course is a follow-on course from MOT123. Students may take MOT125, MOT133, and MOT135 in any order after successfully completing MOT123.  
PREREQUISITE(S): MOT 123

**MOT 136 INTRODUCTION TO CLINICAL SKILLS**  
**2 CREDITS**

Provides hands-on experience with the basic clinical skills required for assisting with patient care. Delivers the theory behind each skill presented as well as proper technique for performing each skill. Includes knowledge and/or performance of blood-borne pathogens/OSHA regulations, medical asepsis, procedural gloving, patient gowning, positioning, and vital sign measurement.

**MOT 138 LABORATORY SKILLS**  
**4 CREDITS**

Introduces the student to basic routine laboratory skills and technique for collection, handling and examination of laboratory specimens often encountered in the ambulatory care setting. Emphasizes hands-on experience with lab procedures.

**MOT 140 MEDICAL ASSISTING CLINICAL SKILLS**  
**4 CREDITS**

Provides hands on experience with the clinical skills required for assisting with patient care. Delivers the theory behind each skill presented as well as proper technique for performing each skill.  
PREREQUISITE(S): Determined by individual program guides.  
COREQUISITE(S): Determined by individual program guides.

**MOT 181 ADMINISTRATIVE INTERNSHIP**  
**2 CREDITS**

Provides supervised placement in a contracted facility for guided experience and application of knowledge and skill acquired in the classroom. The student assists with a variety of business and billing procedures. Positions are non-paid. Student must have permission by program coordinator to begin internship.  
PREREQUISITE(S): Determined by individual program  
COREQUISITE(S): Determined by individual program

**MOT 182 CLINICAL INTERNSHIP**  
**3 CREDITS**

Provides supervised placement in contracted facility for guided experience in applications of knowledge and skills acquired in the classroom. Positions are non-paid due to CAAHEP requirement. Student must have permission by program coordinator to begin internship.

**MOT 183 MEDICAL ASSISTANT INTERNSHIP**  
**5 CREDITS**

Provides supervised placement in contracted facility for guided experience in applications of knowledge and skills acquired in the classroom. Positions are non-paid due to CAAHEP requirement. Student must have permission by program coordinator to begin internship.

**MOT 184 MEDICAL ASSISTANT INTERNSHIP**  
**5 CREDITS**

Provides supervised placement in contracted facility for guided experience in applications of knowledge and skills acquired in the classroom. Positions are non-paid due to CAAHEP requirement. Student must have permission by program coordinator to begin internship.

**MOT 225 MEDICAL PRACTICE MANAGEMENT ISSUES**  
**4 CREDITS**

This course will be a culmination of the knowledge the student has learned in the program. Students will focus their attention on bringing acquired knowledge to issues faced specifically by medical practice managers. Content will include management priorities, principles of practice management, financial, clinical, personal, and service, financial management control, information management systems, marketing, managed care contracting and negotiations, basic business policies of medical office compliance, coding and documentation.  
PREREQUISITE(S): Students must have completed 45 of the 61 credits toward the Medical Practice Management degree option or Academic Coordinator permission

**MOT 230 ADMINISTRATIVE INTERNSHIP**  
**2 CREDITS**

The internship involves placement in selected physician's offices and/or clinics for 90 hours of guided experience that provides the student with a practical application of knowledge and skills acquired in the classroom setting. The student will attend on-campus discussion for resume preparation, interview skills and experience review.  
PREREQUISITE(S): Satisfactory completion of all required courses for administrative competency and Academic Coordinator approval

**MOT 285 INDEPENDENT STUDY**  
**1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## **MORTUARY SCIENCE**

**MOR 100 INTRO TO FUNERAL SERVICE**  
**3 CREDITS**

This course is designed to provide students with an overview of funeral customs and practices which have lead to our current industry. The course will begin by examining ancient practices of the Egyptians, and will conclude with the practices of post World War II. The course will concentrate on the American History of "undertaking". This course will help students to determine more clearly their level of interest in and aptitude toward this profession.

**MOR 210 EMBALMING THEORY I AND LAB**  
**4 CREDITS**

Embalming Theory I is an intensive study of the basic fundamentals of the embalming process including the purpose of embalming, history of embalming, modes of death, signs of death, tests for death, postmortem physical and chemical changes, ethics of embalming, and laws of decomposition. Included are the physical and chemical changes in the dying process and moral and ethical considerations in preparation of human remains. The academic lab portion of this course includes active participation by the student in 5 embalmings.

PREREQUISITE(S): BIO 201, 202, MOR 224 and 243 for Track II students

COREQUISITE(S): MOR 224 for Track I students

**MOR 215 FUNERAL SERVICE MERCHANDISING**  
**3 CREDITS**

This course presents a study of marketing and merchandising techniques analogous to small business and the funeral profession in particular. The student will have the opportunity to study casket and burial vault construction, pricing methods, merchandising, and sales techniques. The counselor presents goods and services to client families. The course will utilize theory and role playing to convey knowledge and self-confidence. The course will include: basic terminology; financing and pricing; organization and management; personnel management; and specific theories inherent to the funeral service profession.  
PREREQUISITE(S): program admission or BUS 216

COREQUISITE(S): MOR 220

**MOR 220 MORTUARY LAW AND COMPLIANCE 3 CREDITS**

This course is designed to provide students with an overview of laws, regulations and ethics in the profession. Major emphasis of this course will deal with government compliance issues such as OSHA, FTC, ADA, and EPA; the definition of legal next-of-kin, the dead human body as "quasi-property", obtaining legal authorizations, and confidentiality.

PREREQUISITE(S): program admission and BUS 216

COREQUISITE(S): MOR 215

**MOR 224 THANATO-MICROBIOLOGY/PATHOLOGY 4 CREDITS**

Designed to present the basic principles of microbiology, nature and cause of disease, and the pathogenicity associated with specific diseases.

PREREQUISITE(S): program admission and BIO 201

**MOR 225 EMBALMING THEORY II AND LAB 4 CREDITS**

Embalming Theory II is an intensive study beyond the basic skills involved in the embalming process. Topics covered include case analysis, formulating chemical solutions, a complete analysis of the circulatory system, an explanation of the equipment used in the embalming process, and methods of injection and drainage. This course will introduce the student to theoretical practice in the art of embalming by means of case analysis. The academic lab portion of this course includes active participation by the student in 5 embalmings.

PREREQUISITE(S): MOR 210

COREQUISITE(S): MOR 230

**MOR 230 RESTORATIVE ART AND LAB 4 CREDITS**

Restorative art is defined as "the care of the deceased to recreate natural form and color". This course is an in-depth study of anatomical modeling, forming of expression, and familiarization with instruments, materials, and techniques of restoring human features. These principles and practices will be used in the every day embalming operations in our industry. 45 hours lecture, 30 hours lab.

COREQUISITE(S): MOR 225

**MOR 235 FUNERAL DIRECTING AND COUNSELING 3 CREDITS**

The total funeral service education environment and counseling aspects will be examined. This will include duties, responsibilities, skills, and ethical obligations. There will be an introduction to various religious, fraternal, and military types of funeralization. An appreciation of care-giving roles in relation to grieving persons will be considered.

PREREQUISITE(S): program admission and PSY 101.

**MOR 243 THANATO-CHEMISTRY 3 CREDITS**

To provide the student with the knowledge necessary to safely and effectively utilize potentially harmful chemicals necessary for the sanitation, disinfection, restoration and preservation of dead human remains currently in practice in the funeral service industry.

PREREQUISITE(S): Program admission

**MOR 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**MOR 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

**MOR 290 FUNERAL SERVICE INTERNSHIP 4 CREDITS**

Practical experience in an off-campus funeral service firm as assigned by the Mortuary Science Department. The student will take part in: removals, cosmetizing, restorative art, dressing-casketing, arrangements, visitations, funeral directing, internment procedures, merchandising, office procedures, and general funeral home management.

PREREQUISITE(S): Must have completed all MOR courses.

## MUSIC

**MUS 100 FUNDAMENTALS OF MUSIC THEORY 3 CREDITS**

This course is designed to help the beginning music student, or those students with a limited background in music theory. The course focuses upon the basic elements of music, including notation, rhythm, scales, key signatures, intervals, and chords.

**MUS 120 MUSIC APPRECIATION 3 CREDITS**

Course covers the basic materials of music, musical forms, media genres, and musical periods. Emphasizes the development of tools for intelligent listening and appreciation.

**MUS 121 MUSIC HISTORY I 3 CREDITS**

Studies the various periods of music history with regard to the composers, aesthetics, forms, and genres of each period. Considers music from the Middle Ages through the Classical period.

**MUS 122 MUSIC HISTORY II 3 CREDITS**

Continues Introduction to Music History I with a study of music from the early Romantic period to the present.

**MUS 125 HISTORY OF JAZZ MUSIC 3 CREDITS**

Provides an overview of the history of jazz in America, and to provide basic listening skills for the understanding and appreciation of jazz music.

**MUS 131 MUSIC CLASS 2 CREDITS**

Applies the fundamentals of music to the voice or specific musical instruments. This course also introduces basic techniques, repertoire, and sight-reading. First year, first term.

**MUS 141 PRIVATE INSTRUCTION 1 - 2 CREDITS**

Description: Offers private instruction consisting of a thirty or sixty-minute lesson per week. Participation in a student performance is required at least once each term. First year, first term  
PreRequisite: Class instruction or permission of the instructor. An additional fee is required.

**MUS 142 PRIVATE INSTRUCTION II 1 - 2 CREDITS**

Description: Offers private instruction consisting of a thirty or sixty-minute lesson per week. Participation in a student performance is required at least once each term. First year, second term.  
PreRequisite: Class instruction or permission of the instructor. An additional fee is required.

**MUS 151 ENSEMBLE 1 CREDIT**

Description: First year, first term. Rehearses and performs various types of musical literature.

PreRequisite: Permission of the instructor.

CoRequisite: None

**MUS 152 ENSEMBLE II 1 CREDIT**

Description: Rehearses and performs various types of musical literature. First year, second term.

PreRequisite: Permission of the instructor

**MUS 241 PRIVATE INSTRUCTION 1 CREDIT**

Description: Offers private instruction consisting of a thirty or sixty-minute lesson per week. Participation in a student performance is required at least once each term. Second year, first term.

PreRequisite: Class instruction or permission of the instructor. An additional fee is required.

CoRequisite: None

**MUS 242 PRIVATE INSTRUCTION 2 CREDITS**

Description: Offers private instruction consisting of a thirty or sixty-minute lesson per week. Participation in a student performance is required at least once each term. Second year, third term.

Course ID: MUS 251

**MUS 251 ENSEMBLE I 1 CREDIT**  
Description: Rehearses and performs various types of musical literature. Second year, second term.  
PreRequisite: Permission of the instructor.  
CoRequisite: None.

**MUS 252 ENSEMBLE II 1 CREDIT**  
Description: Rehearses and performs various types of musical literature. Second year, second term.  
PreRequisite: Permission of the instructor.

**MUS 177 PRIVATE INSTRUCTION-INSTRUMENTAL 2 CREDITS**  
Private instruction consists of one thirty-minute lesson per week. Participation in a student performance is required at least once each term.  
PREREQUISITE(S): class instruction or instructor's permission

**MUS 275 SPECIAL TOPICS 1-6 VARIABLE CREDIT**  
Courses on special topics that relate to music. Topics may be of interest to the general population and/or of interest to special populations such as music majors, educators, etc.

**MUS 285 INDEPENDENT STUDY 1-6 VARIABLE CREDIT**  
Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## **NURSE AIDE**

**NUA 101 CERTIFIED NURSE AIDE HEALTH CARE SKILLS 4 CREDITS**  
Prepares the student to perform the fundamental skills of the nurse aide. Basic nursing skills, restorative services, personal care skills, safety and emergency care issues are covered in theory and lab. The student will learn skills that address mental health needs as well as patient/resident/client rights.  
This course is not eligible for financial aid

**NUA 170 NURSE AIDE CLINICAL 1 CREDIT**  
Applies knowledge gained from NUA 101 in a clinical setting.  
PREREQUISITE(S): Successful completion of NUA 101.

**NUA 171 ADVANCED NURSE AIDE CLINICAL 1 CREDIT**  
NUA 171 prepares the student to move toward more independent functioning in applying knowledge and skills gained in NUA 101 and NUA 170. The student will learn skills that address cultural competency care of the dying patient and organizational skills.  
PREREQUISITE(S): Current CPR card. Negative TB test or chest X-ray and immunizations current.  
COREQUISITE(S): NUA 101, 170  
This course is not eligible for financial aid

## **NURSING**

**NUR 101 PHARMACOLOGY CALCULATIONS 1 CREDIT**  
Introduces the nursing student to the concepts and techniques of dosage calculations and medication administration by a variety of routes. Learners will apply basic math concepts to complex conversion of dosages between and among various systems of weights and volumes. Learners will apply critical thinking skills to the calculation and administration of medications by oral and parenteral (including intravenous) routes of administration.  
PREREQUISITE(S): Basic Skills Assessment, Admission to the program and BIO 201 or 202 with a grade of C or better (must be completed within 7 years of application and entry into NUR courses), or instructor's permission

**NUR 106 MEDICAL AND SURGICAL NURSING CONCEPTS 7 CREDITS**  
Introduces the student to the role of the nurse in assessing and meeting the medical and surgical nursing needs of adults across the life span in various health care settings. The student learns nursing concepts to assist the patient in achieving optimal functioning. Knowledge from foundational nursing, the sciences, pharmacology, and nutrition along with the continued integration of mental health and cultural concepts provides foundations for nursing care planning for medical and surgical clients.  
PREREQUISITE(S): Successful completion of NUR 101, 107, 108, 112, 170, BIO 201, 202, HWE 100, HPR 205, PSY 101, 235, ENG 121 or instructor's permission

**NUR 107 NURSING CONCEPTS AND SKILLS I 4 CREDITS**  
Introduces the nursing student to applications of critical thinking and the nursing process to provide care to clients in a variety of community and acute care settings. Emphasis is on holistic health care across the health-illness continuum. Introduces learners to the clinical skills essential for the nursing role of care provider including safe and effective clinical environment, skill preparation, implementation and evaluation. Emphasizes use of caring, critical thinking, and communication while completing nursing skills.  
PREREQUISITE(S): Basic Skills Assessment. Admission to the program and BIO 201 or 202 with a grade of C or better (must be completed within 7 years of entry into NUR courses) or instructor's permission

**NUR 108 NURSING CONCEPTS & SKILLS II 3 CREDITS**  
Introduces more complex concepts and behaviors of nursing roles within the context of the nursing process, holistic care and health care. Emphasizes the theoretical and practical aspects of more complex nursing skills required to meet the needs of clients in a variety of settings.  
PREREQUISITE(S): NUR 101, 107 or instructor's permission

**NUR 111 SOCIALIZATION INTO PRACTICAL NURSING 1 CREDIT**  
Introduces roles and responsibilities of the graduate Practical Nurse as defined by established standards, including the Colorado Nurse Practice Act. Emphasis is placed on accountability, delegation, and perspectives in health care. Career and job readiness skills are developed.  
PREREQUISITE(S): BIO 201, 202, HPR 205, HWE 100, PSY 101, 235, ENG 121, NUR 101, 107, 108, 112, 170 or instructor's permission

**NUR 112 BASIC CONCEPTS OF PHARMACOLOGY 2 CREDITS**  
Introduces the basic concepts of pharmacology related to the actions, therapeutic and adverse effects, interactions of drugs, drug classifications, and the basic pharmacology of commonly used medications. Emphasis is placed on nursing considerations and client education. Learners will apply knowledge gained in selected clinical settings in caring for clients across the lifespan.  
PREREQUISITE(S): NUR 101, 107 or instructor's permission

**NUR 117 NURSING CARE OF THE CHILDBEARING FAMILY 3 CREDITS**  
Provides a foundational course in the nursing care of the childbearing family. The focus is on normal pregnancy, physiologic and psychological changes experienced, and care of the normal newborn. The nursing process is used in identifying and meeting the needs of the childbearing family to facilitate optimal functioning. The impact of psychosocial and cultural values and practices of the childbearing family are explored. Legal and ethical issues are addressed.  
PREREQUISITE(S): HWE 100, HPR 205, ENG 121, PSY 101, 235, BIO 201, 202, NUR 107, 108, 101, 112, 170 or instructor's permission

**NUR 118 NURSING CARE OF CHILDREN 3 CREDITS**

Introduces the role of the nurse in meeting the individual needs of the child from infancy through adolescence in health and illness. Beginning assessment and use of the nursing process, basic growth and development, pathophysiology, nutrition, and relevant emotional, cultural and family concepts are integrated throughout. PREREQUISITE(S): BIO 201, 202, HPR 205, HWE 100, PSY 101, 235, ENG 121, NUR 101, 107, 108, 112, 170, or instructor's permission

**NUR 120 FAMILY-CENTERED MATERNITY NURSING 6 CREDITS**

This course examines the normal physiological, psychosocial and developmental adaptations occurring during the family-centered maternity cycle. The nursing process and the seven roles of the nurse are applied to the following content areas: antepartum, intrapartum, postpartum, newborn, contraception, sterilization, abortion, infertility, sexually transmitted disease and complications of pregnancy. Family theory and social/cultural implications are included. This seven-week course alternates with NUR 123 in the spring semester. 30 hours lecture and 90 clinical hours.

PREREQUISITE(S): NUR 110, 112, 253, or instructor's permission, ALH 106, 107, 205, ENG 121, PSY 101, PHT 102  
COREQUISITE(S): PSY 235

**NUR 123 PSYCHIATRIC MENTAL HEALTH NURSING 6 CREDITS**

This course builds upon previous knowledge of human behavior and interpersonal relationships in application of the nursing process. Therapeutic use of self is examined and practiced as well as common diagnostic classifications and treatment modalities utilized in current psychiatric care and legal considerations, as well as applying the nursing process to psychiatric patients. 30 lecture and 90 clinical hours.

PREREQUISITE(S): NUR 110, 112, 253, ENG 121, PSY 101, PHT 102, OR Instructor's permission  
COREQUISITE(S): PSY 235

**NUR 170 CLINICAL 2 CREDITS**

Offers the clinical practicum to apply the related nursing theory.

PREREQUISITE(S): NUR 101, 107 or instructor's permission

**NUR 171 CLINICAL II 1 CREDIT**

Offers the clinical practicum to apply the related nursing theory.

PREREQUISITE(S): NUR 101, 107, 108, 112, 170, BIO 201, 202, HWE 100, HPT 205, PSY 101, 235, ENG 121 or instructor's permission

**NUR 175 SPECIAL TOPICS 1-6 CREDITS**

This course provides students with a vehicle to pursue in depth exploration of special topics of interest.

**NUR 178 SEMINAR: TRANSITION PN TO RN 1 CREDIT**

Introduction to selected concepts related to the role of the AD nurse as a provider of care, teacher, manager, client advocate and member of the profession. Emphasis is placed on application of critical thinking in providing and managing comprehensive care in a variety of health care settings with clients across the lifespan. This course is designed to assist the Licensed Practical Nurse with the transition into the practice of professional nursing.

PREREQUISITE(S): Admissions to the PN-RN advanced placement option, PSY 101, 235, ENG 121, BIO 201, 202, HPR 205 or instructor's permission

**NUR 185 INDEPENDENT STUDY 1-3 VARIABLE CREDIT**

Structured and guided, individualized study that is organized and tailored around the interest and needs of the individual student.

PREREQUISITE(S): instructor's permission

**NUR 204 NURSING PROCESS: MEDICAL/ SURGICAL PEDIATRIC DISORDERS 2 10 CREDITS**

This course examines the utilization of the nursing process in providing care to adults and children. Content related to the following systems is included: immunoresponse, oncology/hematology, cardiovascular, gastrointestinal, endocrine, and renal. Burns and spinal cord injuries are discussed. Pharmacologic concepts used in the treatment of disorders for the identified systems is integrated. The seven roles of the nurse will be further developed. This 10 week course includes 61 hours of lecture, 4 hours on-campus Lab and 128 hours caring for adults and/or children.

PREREQUISITE(S): NUR 231

**NUR 205 ROLE TRANSITION: RN STUDENT TO GRADUATE NURSE 4 CREDITS**

This course focuses on the student nurse adapting to the role and the responsibilities of the graduate registered nurse. Theory content includes employment skills and job opportunities, the process of delegation vs. assignment making, group decision making, the Nurse Practice Act, licensure and role of the Board of Nursing, ethical choices, professional organizations, and current issues and controversies in Registered Nursing. The specific content and learning methods provide a theory capstone for the 7 roles of an ACC graduate. These are Provider of Care, Member of the Profession, Manager of Care, Teacher, Advocate, Communicator and Critical Thinker. These roles are practiced in the clinical setting. This last clinical experience focuses on the student nurse's change and adaptation to graduate nurse roles and responsibilities. The students are mentored 1:1 by staff nurses with faculty supervision on an intermittent basis. The course includes 15 lecture hours and 136 hours of clinical internship.

Prerequisite(S): NUR 204

**NUR 206 ADVANCED CONCEPTS OF MEDICAL- SURGICAL NURSING I 5 CREDITS**

Focuses on the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the nursing needs of adults across the life span. Utilizing the nursing process, the student is expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various health care settings.

PREREQUISITE(S): NUR 106, 111, 117, 118, 171 or instructor's permission

**NUR 210 NURSING CARE OF COMPLEX OBSTETRICAL AND PEDIATRIC CLIENTS 5 CREDITS**

Prepares the professional nurse to comprehend and apply advanced concepts in care of the high-risk child bearing family and for children with complex health problems from birth through adolescence. Emphasizes special needs and complications during the perinatal experience and altered functioning, special needs, and disease processes manifested in children. The nursing process is used as a framework to attain optimal levels of maternal-newborn and pediatric health and wellness. Legal and ethical accountability are integrated throughout the course. Critical thinking skills are utilized throughout.

PREREQUISITE(S): NUR 106, 111, 117, 118, 171 or instructor's permission

**NUR 211 NURSING CARE OF  
PSYCHIATRIC CLIENTS  
5 CREDITS**

Develops concepts of psychosocial integrity and emphasizes the function and responsibility of nursing in promoting and maintaining mental health of individuals and families. This course emphasizes communication and caring through the application of the therapeutic relationship and nursing process in the care and treatment of common clinical conditions/disorders.  
PREREQUISITE(S): NUR 206, 210, 272, 288 or instructor's permission

**NUR 216 ADVANCED CONCEPTS OF  
MEDICAL SURGICAL  
NURSING II 4 CREDITS**

Continues to focus on the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the complex medical and surgical health care needs of adult clients. Utilizing the nursing process, the student is expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various complex health care situations and settings.  
PREREQUISITE(S): NUR 206, 210, 272, 288 or instructor's permission

**NUR 217 LEADERSHIP FOR  
PROFESSIONAL NURSING  
PRACTICE 2 CREDITS**

Socializes the student into the graduate registered nurse role. The focus is on the exploration and analysis of contemporary nursing practice, current trends and issues impacting nursing care delivery. Advanced leadership and management concepts are discussed as part of the nursing role.  
PREREQUISITE(S): NUR 206, 210, 272, 288 or instructor's permission

**NUR 230 MEDICAL/SURGICAL/  
PEDIATRIC NURSING I  
12 CREDITS**

This course examines the utilization of the nursing process in providing care to adults and children. Content related to the following systems is included: immunoresponse, endocrine, cardiovascular, genitourinary, respiratory, orthopedic, oncology/ hematology, peripheral vascular, and gastrointestinal. The 7 roles of the nurse will be further developed. This is a fifteen-week course that includes 58 hours of lecture, and 180 hours caring for adults and/or children and 6 hours in the on-campus lab. (Note: Students who do not provide care for children in NUR 230 will do so in NUR 240).  
PREREQUISITE(S): NUR 120, 123 or instructor's permission, completion of all first year nursing requirements  
COREQUISITE(S): NUR 232

**NUR 231 NURSING PROCESS:  
EMOTIONAL DISORDERS  
6 CREDITS**

This course builds upon previous knowledge of human behavior and interpersonal relationships in application of the nursing process. Therapeutic use of self is examined and practiced. Topics include common diagnostic classifications and treatment modalities utilized in current psychiatric care and legal considerations, as well as applying the nursing process to psychiatric patients. 45 lecture hours, 64 clinical hours and academic lab, 5 hours.  
PREREQUISITE(S): NUR 203, PSY 101 or instructor's permission

**NUR 232 PHARMACOLOGY IN  
NURSING 2 CREDITS**

This course examines selected drugs used in therapy. Discussion will include names, dosage, administration routes, uses, actions, and factors modifying actions with emphasis on nursing responsibilities and interventions in drug therapy. Calculation of dosage and nursing techniques of administration will be expanded and practiced. The 7 roles of the nurse will be further developed. Course content will include medications used in the treatment of immunological disorders, neoplasms, cardiovascular, gastrointestinal, endocrine, respiratory, musculoskeletal, sensory disorders. Content will also include poisoning and diagnostic agents. Consideration of growth & development and the aging process is included in the course content. This is a 15-week course which includes 24 hours of lecture/ discussion and 12 hours in the on-campus lab.  
PREREQUISITE(S): NUR 112, 120, 123, or instructor's permission.  
COREQUISITE(S): NUR 230

**NUR 240 MEDICAL/SURGICAL/  
PEDIATRIC NURSING II  
6 CREDITS**

This course examines the utilization of the nursing process in providing care to adults & children. Content related to the following systems is included: cardiovascular, renal disease, special senses & central nervous system, spinal cord, & burns. The 7 roles of the nurse will be refined. This is a 5 week course which includes 30 hours of lecture & 90 hours caring for adults and/or children and also provides an opportunity to explore various practice settings. These settings may include but are not limited to community based clinics/offices, homes, schools, ambulatory care facilities, extended care facilities, and expanded in-patient sites such as Critical Care Units, Dialysis and GI labs. An opportunity to explore some expanded roles of the nurse will be provided. Note: Students who did not provide care for children in NUR 230 will do so in NUR 240.  
PREREQUISITE(S): NUR 230, 232 or instructor's permission

**NUR 243 CURRENT ISSUES IN  
REGISTERED NURSING  
2 CREDITS**

This course focuses on a variety of issues which involve decision making for the new graduate and the Registered Nurse. Content areas include employment skills and job opportunities, the process of delegation versus assignment making and group decision making, the Nurse Practice Act, licensure and role of the Board of Nursing, ethical choices, professional organizations, political processes, and current issues and controversies in Registered Nursing. The content and learning methods provide a theory capstone for the 7 roles of an ACC graduate. 30 lecture hours.  
PREREQUISITE(S): NUR 240, or instructor's permission

**NUR 244 THE TRANSITION PROCESS:  
FROM STUDENT TO  
GRADUATE NURSE  
4 CREDITS**

This is the last clinical course of the nursing program. It focuses on student nurse change and adaption to graduate nurse roles and responsibilities. Student and faculty select clinical internship sites which correlate to individual learning needs and goals for future job placement. The students are mentored 1:1 by staff nurses with faculty supervision on an intermittent basis. The 7 roles of the ACC Nursing Program graduate will be practiced in the "real world" setting. This clinical internship is 180 hours. An additional 45 hours (1 credit) may be elected by the student.  
PREREQUISITE(S): All previous courses required in nursing curriculum

**NUR 253 PHYSICAL ASSESSMENT  
3 CREDITS**

This course is designed for beginning nursing students and other nurses who wish to develop and/or update their physical assessment skills to provide care for clients in a variety of clinical settings. The course presents the information necessary to obtain a comprehensive health history and skills necessary to perform a complete physical examination on adults with special emphasis on geriatric clients. It includes lecture and supervised student practice in an on-campus laboratory setting. Content is organized by body systems with a systematic, organized approach to data collection. It includes history taking, preparation of the client for a physical examination, the techniques for physical examination and special considerations related to the age and special needs of the client. The course includes discussions of normal findings and some variations from health. Students will be expected to collect, analyze and document history and physical examination findings and relate the information to nursing diagnosis. 33.5 lecture and 22.5 lab hours.  
PREREQUISITE(S): BIO 201, 202, or equivalent Anatomy and Physiology; LPN/RN, first semester nursing student or instructor's permission  
COREQUISITE(S): NUR 110, 201, for students currently enrolled in ACC basic RN program

**NUR 272 EXPANDED CLINICAL III  
1-6 VARIABLE CREDIT**

Offers practical experience and continues to build upon the principles, that are expected to be understood by students in the nursing discipline. PREREQUISITE(S): NUR 106, 111, 117, 118, 171 or instructor's permission

**NUR 275 SPECIAL TOPICS  
1-6 VARIABLE CREDIT**

Courses on Special Topics that relate to Nursing. Topics may be of interest to nursing students or graduates. Useful in meeting license renewal (LPN/RN) requirements. 22 lecture and 15 lab hours. PREREQUISITE(S): NUR 205

**NUR 285 INDEPENDENT STUDY:  
ADVANCED NURSING CONCEPTS I  
1-3 VARIABLE CREDIT**

Structured and guided, individualized study that is organized and tailored around the interest and needs of the individual student. PREREQUISITE(S): instructor's permission

**NUR 288 PRACTICUM: HEALTH  
AND PHYSICAL ASSESSMENT  
FOR NURSING PRACTICE  
1 CREDIT**

Develops skills of nursing assessment across the life span using effective communication, interview techniques and beginning physical assessment. The course develops critical thinking skills in assessment, data analysis and derivation of actual/potential health needs. PREREQUISITE(S): NUR 106, 111, 117, 188, 171 or instructor's permission

**NUR 289 CAPSTONE:  
COMPREHENSIVE  
NURSING INTERNSHIP  
2-3 VARIABLE CREDIT**

Facilitates transition from student to graduate nurse through application of nursing principles and skills in an area of health care delivery. Critical thinking, life long learning, nursing process, caring, collaboration, and health teaching and promotion are emphasized. PREREQUISITE(S): Successful completion of preceding nursing program course work or program director permission. COREQUISITE(S): Successful completion of concurrent nursing program coursework or program director permission.

## **PARALEGAL**

**PAR 110 LEGAL ANALYSIS 3 CREDITS**  
A basic course in legal authority and analysis.

**PAR 115 INTRODUCTION TO LAW  
3 CREDITS**

Provides an understanding of the role of paralegals, issues facing paralegals, the working of the legal system, and ethical questions. Legal terminology and an overview of the substantive areas of law will be discussed.

**PAR 116 TORTS 3 CREDITS**

A basic course in tort law, including negligence, intentional torts and strict liability with an emphasis on personal injury litigation.

**PAR 117 FAMILY LAW 3 CREDITS**

This course covers domestic law, common property, dissolutions, adoptions, legal separation, and other family law issues.

**PAR 118 CONTRACTS 3 CREDITS**

This course covers the basic principles of contract law.

**PAR 125 PROPERTY LAW 3 CREDITS**

This course covers real estate law, ownership, sale, leasing, financing and government regulation of land.

**PAR 202 EVIDENCE 3 CREDITS**

Course is designed to introduce students to State and Federal Rules of Evidence, and application to the trial process.

PREREQUISITE(S): PAR 115, or with permission of instructor

**PAR 203 CIVIL LITIGATION 3 CREDITS**

This course covers the beginning of the civil litigation process from the perspective of the paralegal, including jurisdiction, pleadings, interviewing, and investigation.

**PAR 204 CIVIL LITIGATION II 3 CREDITS**

This course covers the trial phase of the civil litigation process from the perspective of the paralegal, including discovery, trial management, jury instructions, exhibits, and post trial issues.

PREREQUISITE(S): PAR 203

**PAR 205 CRIMINAL LAW 3 CREDITS**

Introduces basic concepts of criminal law and criminal procedure, including Colorado statutes and Rules of Procedure.

PREREQUISITE(S): PAR 115, or instructor's permission

**PAR 206 BUSINESS ORGANIZATIONS  
3 CREDITS**

Study of the major types of business organizations. PREREQUISITE(S): PAR 115, or instructor's permission

**PAR 208 PROBATE AND ESTATES  
3 CREDITS**

The course provides an understanding of the creation and administration of an estate, including wills and trusts, and the probate process. PREREQUISITE(S): PAR 115, or instructor's permission

**PAR 210 LEGAL RESEARCH AND  
WRITING 3 CREDITS**

A course in topical legal research and writing. PREREQUISITE(S): PAR 110, 115, ENG 121 or instructor's permission

**PAR 215 ALTERNATIVE DISPUTE  
RESOLUTION 3 CREDITS**

This course will introduce the students to Negotiation, Mediation, Arbitration and other forms of dispute resolution.

PREREQUISITE(S): PAR 115 or instructor's permission

**PAR 216 EMPLOYMENT LAW  
3 CREDITS**

Provides an understanding of current legal issues in the area of employer/employee relationships. PREREQUISITE(S): PAR 115, or instructor's permission

**PAR 217 ENVIRONMENTAL LAW  
3 CREDITS**

This course covers state and federal laws concerning the environment, including chemical safety laws, workplace safety, and hazardous waste.

**PAR 218 BANKRUPTCY LAW  
3 CREDITS**

This course covers the federal and state laws and procedures involving bankruptcy. PREREQUISITE(S): PAR 115, or instructor's permission

**PAR 226 SECURITIES LAW  
3 CREDITS**

This course covers federal and state laws governing regulation and registration of securities. PREREQUISITE(S): PAR 115, PAR 206 or instructor's permission

**PAR 228 INTELLECTUAL PROPERTY  
3 CREDITS**

This course covers the federal and state laws regarding intellectual property.

**PAR 275 SPECIAL TOPICS  
1-6 VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**PAR 285 INDEPENDENT STUDY  
1-6 VARIABLE CREDIT**

This course meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. PREREQUISITE(S): instructor's permission

**PAR 287 COOPERATIVE EDUCATION  
1-6 VARIABLE CREDIT**

Provides students an opportunity to gain practical experience in applying their occupational skills and/or to develop specific skills in a practical work setting. The instructor will work with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the employer or work site supervisor.

**PAR 289 PARALEGAL CAPSTONE  
3 CREDITS**

Emphasizes a synthesis of the information and skills that students learned throughout their paralegal studies.

**PREREQUISITE(S):** All required courses in certificate and AAS degree programs.

## **PHARMACY TECHNICIAN**

**PHT 102 PHARMACY CALCULATIONS  
AND TERMINOLOGY  
1 CREDIT**

This course will provide the student with a math prereview necessary for pharmaceutical calculations. This course will also expose the student to common pharmacy symbols and terminology, as well as, the metric system.

**PHT 111 ORIENTATION TO  
PHARMACY 2 CREDITS**

This module orients students to the work of pharmacy technicians and the context in which technician's work is performed. Students will learn the concept of pharmaceutical care and technician's general role in its delivery. The development of new drug products is discussed as well as a variety of issues that touch on attitudes, value and beliefs of success for pharmacy technicians. Students gain an appreciation for the value of obtaining technician certification, and the benefits of technicians active involvement in local, state, and national pharmacy organizations.

**PHT 112 PHARMACY LAW  
1.5 CREDITS**

The students are introduced to the profound influence that drug laws, standards, and regulations have on practice. Students learn to abide by the laws, regulations and standards which govern the preparation and dispensing of drugs.

**PHT 113 PHARMACY CALCULATIONS  
AND TERMINOLOGY  
1.5 CREDITS**

This course will provide the pharmacy technician student with a math preview necessary for pharmaceutical calculations and necessary pharmaceutical terminology.

**PHT 114 COMPUTER SKILLS FOR  
PHARMACY TECHNICIANS  
1 CREDIT**

Students learn the organization of the computer databases with which they will work in data collection, and master skills in retrieving data. They also learn to organize the data collected. Student master the keyboard and achieve a minimum of 35 wpm typing competence.

**PHT 115 PHARMACOLOGY OF THE  
GI, RENAL, REPRODUCTIVE,  
IMMUNE, DERMATOLOGIC  
AND HEMATOLOGIC  
SYSTEMS 3 CREDITS**

This course will present the basic concepts of normal body function and the changes caused by disease. Focus will be on the gastrointestinal, pharmacology of the GI, renal, reproductive, immune, dermatologic and hematologic systems. The student will learn basic concepts of pharmacology, the diseases affecting the systems listed above, and the drugs used in treating diseases of these systems.

**PHT 116 INSTITUTIONAL  
PHARMACY 3 CREDITS**

This course will give pharmacy technician students exposure to the unique aspects of hospital/home care pharmacy practice. The student learns the proper method for receiving an order, screening it for completeness, and adding any missing information. Students learn current methods for distributing medications. Students learn to compound sterile products according to the appropriate techniques. Students learn techniques to compound cytotoxic and other hazardous drug products. Students will also learn procedures for maintaining pharmacy equipment such as the laminar air-flow cabinet. Students will learn methods of handling hazardous waste sharp, and infection control. This course will prepare the student for the hospital/clinical internship.

**PHT 117 COMMUNICATION FOR  
PHARMACY TECHNICIANS  
1 CREDIT**

Students learn to communicate in a clear, logical manner at the appropriate level when performing the job responsibilities of a pharmacy technician. Communication skills in interviewing, preparing resumes and employer interviews, as related to pharmacy, will be covered.

**PHT 118 PHARMACOLOGY OF THE  
NERVOUS, ENDOCRINE,  
MUSCULOSKELETAL  
3 CREDITS**

This course will present the basic concepts of normal body function and the changes caused by disease. Focus will be on the nervous, endocrine, musculoskeletal, cardiovascular and respiratory systems. The student will learn the basic concepts of pharmacology, the disease affecting the systems listed above, and the drugs used in treating diseases of these systems.

**PHT 119 COMMUNITY PHARMACY  
3 CREDITS**

Students will experience hands on approach to learning the technical aspects of community pharmacy practice. This course teaches the students to receive and screen written medication prescriptions. The skill of drug preparation are taught. Students learn to compound nonsterile products using the correct compounding techniques. Students also learn various methods of inventory control of pharmaceuticals, devices, and supplies including handling their receipt, storage, removal and documenting of these activities. This course will prepare the student for a community clinical internship.

**PHT 120 MEDICAL INSURANCE  
PROCEDURES 1 CREDIT**

This course will expose students to some various third party insurance companies and their billing procedures. Students learn billing and collection of payment for pharmacy goods and services. Students learn methods of payment and verification of coverage by third party payers. They also learn the determination of payment, taxable and nontaxable items, operation of a cash register, and making change.

**PHT 170 PHARMACY PRACTICE II  
(HOSPITAL CLINICAL)  
4 CREDITS**

This course is designed to provide students with hands on experience in an inpatient hospital pharmacy setting within the State of Colorado. Students must complete all didactic course work prior to enrolling for this course. The course involves a minimum of 160 hours including 8 hours of seminar class time and 152 hours of on-the-job work experience. Each student is required to work under the supervision of a licensed pharmacist (i.e. preceptor) who may, in turn, delegate some supervisory and/or training responsibilities to another licensed pharmacist or certified pharmacy technician. During their work time at their hospital pharmacy site, students are expected to participate in the pharmacy practice activities delineated in the Clinical Site Manual provided each student and each preceptor. Such activities include, but are not limited to, dispensing, compounding, inventory handling and control, drug distribution, and the preparation of intravenous (IV) admixture products, chemotherapy products and total parenteral nutrition (TPN) products. Students are also expected to complete daily and weekly reports of their work activities and are required to evaluate both their work site and their preceptor at the conclusion of their clinical rotation. Similarly, each preceptor is asked to complete an evaluation of, and provide a grade for, each student at the completion of the student's rotation. The course instructor is also required to evaluate each student after completing a visit to the student's work site and discussing the student's performance with

both the student and his/her preceptor.  
PREREQUISITE(S): PHT 116, 111, 113

**PHT 171 PHARMACY PRACTICE III  
(COMMUNITY CLINICAL)  
4 CREDITS**

This course is designed to provide students with hands on experience in a community pharmacy setting within the State of Colorado. Students must complete all didactic course work prior to enrolling for this course. The course involves a minimum of 160 hours including 8 hours of seminar class time and 152 hours of on-the-job work experience. Each student is required to work under the supervision of a licensed pharmacist (i.e. preceptor) who may, in turn, delegate some supervisory and/or training responsibilities to another licensed pharmacist or certified pharmacy technician. During their work time at their community pharmacy site, students are expected to participate in the pharmacy practice activities delineated in the Clinical Site manual provided each student and each preceptor. Such activities include, but are not limited to, dispensing, compounding, inventory handling and control, drug distribution, processing of third party claims, maintenance of patient profiles and interaction and communication with patients. Students are also expected to complete daily and weekly reports of their work activities and are required to evaluate both their work site and their preceptor at the conclusion of their clinical rotation. Similarly, each preceptor is asked to complete an evaluation of, and provide a grade for, each student at the completion of the student's rotation. The course instructor is also required to evaluate each student after completing a visit to the student's work site and discussing the student's performance with both the student and his/her preceptor.

PREREQUISITE(S): PHT 119 Community Pharmacy

**PHT 275 SPECIAL TOPICS  
VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**PHT 285 INDEPENDENT STUDY  
VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

## PHILOSOPHY

**PHI 111 INTRO TO PHILOSOPHY  
3 CREDITS**

Introduces significant human questions and emphasizes understanding the meaning and methods of philosophy. Includes the nature and theory of knowledge, freedom, ethics, the future, and religion.

**PHI 112 ETHICS 3 CREDITS**

Examines human life, experience, and thought in order to discover and develop the principles and values for pursuing a moral existence. Theories designed to justify ethical judgments are applied to a selection of contemporary personal and social issues.

**PHI 113 LOGIC 3 CREDITS**

Studies effective thinking using language-oriented logic. Provides tools and develops skills for creative and critical thinking. Emphasizes the development of decision-making and problem solving skills.

**PHI 214 PHILOSOPHY OF RELIGION  
3 CREDITS**

Focuses on the critical examination of the fundamental concepts, ideas, and implications of religion. Specific topics will include: the nature of God, the varieties of religious experience, argument concerning God's existence, the Problem of Evil, faith and reason, religion and human destiny, and the connection between religion and ethics.

**PHI 275 SPECIAL TOPICS  
1-6 VARIABLE CREDIT**

Students explore in depth significant philosophical topics, movements, or persons in the history of Western philosophy. This study might include, e.g., Plato, Greek philosophy, Hume, periods in the history of philosophy, philosophy and literature, medical ethics, the problem of evil, logical positivism, philosophy of mind, etc. Readings will be selected by the instructor's as appropriate to the topic. Course may be repeated for credit provided topics are not repeated.

PREREQUISITE(S): prior philosophy class, sophomore standing, or instructor's permission

**PHI 285 INDEPENDENT STUDY  
1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

## PHOTOGRAPHY

**PHO 101 PHOTOGRAPHY I  
3 CREDITS**

This course is an introduction to black and white photography as a fine art medium, and develops skills necessary for basic camera and lab operations.

**PHO 102 PHOTOGRAPHY II  
3 CREDITS**

This course is a further exploration in camera and lab operations with an emphasis on individual creativity. It includes the development of a comprehensive portfolio.

**PHO 103 COLOR PHOTOGRAPHY I  
3 CREDITS**

This course covers fundamentals of color photography such as color theory and light, production, processing and printing of color negatives.

PREREQUISITE(S): PHO 101

**PHO 202 PHOTOGRAPHY III  
3 CREDITS**

This course further explores photography technique with emphasis on history, theory, and assimilation of ideas into the student's creative work. Included is the development of a comprehensive portfolio.

PREREQUISITE(S): PHO 101 and PHO 102 or demonstrated competency

COREQUISITE(S): None

**PHO 203 COLOR PHOTOGRAPHY II  
3 CREDITS**

Designed for students who are approaching a personal style and aesthetic in the medium of color photography. It is an extension of Color Photography I. Personal expression will be stressed through individual critiques.

PREREQUISITE(S): PHO 103

**PHO 205 DIGITAL PHOTOGRAPHY I  
3 CREDITS**

This course provides each student with an introduction to the basic concepts of digital imaging as applied to Photography. With hands-on experience using applicable technology, modern developments will be presented which have led to the present applications of digital imaging which combine traditional photographic ideas with electronic media. The student will have the opportunity to learn how to operate image manipulation software using a variety of scanning equipment, software tools and output devices by executing new assignments and applying these technologies to their photographic process.

PREREQUISITE(S): PHO 101

**PHO 206 DIGITAL PHOTOGRAPHY II**  
**3 CREDITS**

This course is a continuation of the beginning digital photography class. This class will look at digital photography in terms of design and communication factors including color, visual design, lighting, graphics, and aesthetics.

PREREQUISITE(S): PHO 205 Digital Photography I

**PHO 209 LANDSCAPE PHOTOGRAPHY WORKSHOP**  
**2 CREDITS**

This class is designed to present participants with both traditional and contemporary approaches to landscape photography. Technical and aesthetic aspects of landscape photography will be discussed through group discussions, a field study, lectures, and print and slide critiques.

PREREQUISITE(S): PHO 101

**PHO 211 STUDIO PHOTOGRAPHY**  
**3 CREDITS**

This course will explore the creative uses of studio lighting from the perspective of Fine Art Photography with an emphasis on portraiture, three dimensional object photography, and two dimensional collage photography.

PREREQUISITE(S): PHO 101

**PHO 275 SPECIAL TOPICS: PHOTOGRAPHY**  
**1-6 VARIABLE CREDIT**

This course provides students with a vehicle to pursue in depth exploration of special topics of interest.

**PHO 285 INDEPENDENT STUDY**  
**1-6 VARIABLE CREDIT**

Description: This course meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PreRequisite: Permission of the Instructor.

## **PHYSICAL EDUCATION- ACTIVITY CLASSES**

**PED 100 GOLF** **1 CREDIT**

A basic course in golf designed for those who have had little or no formal instruction or for those with some experience who are interested in improving some aspect of their game. Instruction will be by certified golf professionals. Driving range, putting green and on course play will be included.

**PED 106 TENNIS** **1 CREDIT**

This course is designed to introduce and improve the skill level in tennis. The primary emphasis is teaching students the elements of tennis: rules of the game, groundstrokes, serving, the various shots, and singles and doubles play and strategies.

**PED 108 BEGINNING SWIMMING**  
**1 CREDIT**

This course is designed to teach the fundamentals of swimming, including the front crawl, elementary backstroke, back crawl, and the fundamentals of treading water. Students may also be introduced to the breaststroke and sidestroke and the basics of turning at a wall. This course is for the non-swimmer or novice swimmer looking to improve aquatic skills.

**PED 109 ADVANCED SWIMMING**  
**1 CREDIT**

This course is designed to coordinate and refine the major swimming strokes. Students are introduced to the butterfly stroke, open turns and surface dives. Students develop endurance swimming using the primary swimming strokes.

PREREQUISITE(S): PED 108 Beginning Swimming or equivalent.

**PED 110 FITNESS CENTER ACTIVITY I** **1 CREDIT**

This course is designed for individuals interested in improving total fitness via an aerobic circuit training program. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All of the basic components of fitness including: flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition will be addressed. Weight machines, stationary bicycles, and computerized cardiovascular equipment will be used to elicit improvements in fitness.

**PED 111 FITNESS CENTER ACTIVITY II** **1 CREDIT**

This is an advanced course designed for individuals interested in reaching a higher level of total fitness via an aerobic circuit training program. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All of the basic components of fitness including: flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition will be addressed. Weight machines, stationary bicycles, and computerized cardiovascular equipment will be used to elicit improvements in fitness.

PREREQUISITE(S): PED 110

**PED 113 FITNESS CONCEPTS**  
**1 CREDIT**

This course is designed for individuals who are seeking information and guidelines for moving toward a more healthy lifestyle. The course will include classroom instruction, an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program utilizing the equipment and exercise options available in the Fitness Center.

**PED 115 BODY SCULPTING AND TONING** **1 CREDIT**

This course is designed to introduce exercise techniques to improve overall physical fitness. The primary emphasis is the interaction between cardiovascular conditioning, muscular strength and endurance, flexibility and program design that are integrated into an aerobic format. Emphasis is placed upon blending together different combinations and sequences of exercises while conditioning the entire body. Students exercise using various types of resistance equipment.

**PED 116 WEIGHT TRAINING**  
**1 CREDIT**

This course offers basic instruction and practice in weight training. Students utilize weight training equipment in accordance to their abilities and goals. Emphasis is placed upon weight training equipment orientation, correct lifting techniques, and basic program design for men and women. 30 Contact Hours.

**PED 118 INDOOR STATIONARY GROUP CYCLING**  
**1 CREDIT**

An indoor stationary group cycling course designed to improve cardiovascular fitness, burn calories and enhance muscular endurance. Designed specifically to enhance aerobic work capacity and improve pedalling skills. Each exercise session is choreographed to music and includes a complete workout with a warm-up, endurance and cool-down component.

**PED 126 WATER AEROBICS**  
**1 CREDIT**

This course offers water exercise to develop physical fitness. In addition, this course offers instruction in a variety of water exercises and vigorous activities to develop cardiovascular and muscular endurance, flexibility and the promotion of body composition management.

**PED 129 SCUBA DIVING**  
**1 CREDIT**

This course provides basic instruction in scuba diving. This course provides the knowledge and skills related to swimming and snorkeling, diving equipment, communications, the environment, safety, dive tables, and other pertinent information a student needs for safe scuba diving. This course prepares the student for open-water (PADI) certification.

PREREQUISITE(S): Basic Swimming Skills

**PED 131 NORDIC SKIING**  
**1 CREDIT**

This course is designed to provide students with the fundamental skills of nordic skiing. The emphasis is on skiing technique, conditioning, safety, and equipment. The course has classroom and activity sessions. Conditioning in the fitness center and trips to local ski areas are part of this course.

**PED 133 BEGINNING SNOWBOARDING**

**1 CREDIT**

A basic Snowboarding course designed for those who have had little or no prior snowboarding experience. The course will consist of a combination of on the snow classes at an established ski area and classroom instruction at the college. For purposes of instruction, students will be assigned to small groups based on their present snowboarding ability. All on snow instruction will be by certified ski instructors employed by the ski area.

**PED 134 ADVANCED SNOWBOARDING**

**1 CREDIT**

An advanced Snowboarding course designed for those who have had prior snowboarding experience and can link skidded turn with good speed and control on green and blue terrain. The course will consist of a combination of on the snow classes at an established ski area and classroom instruction at the college. For purposes of instruction, students will be assigned to small groups based on their present snowboarding ability. All on snow instruction will be by certified ski instructors employed by the ski area.

PREREQUISITE(S): PED 133

**PED 135 INTERMEDIATE TENNIS**

**1 CREDIT**

An advanced course in tennis for students who already have playing experience and skill in the basic strokes. Emphasis will be placed on learning the lob, smash, half-volley, serve variations and tennis strategy for singles and doubles.

PREREQUISITE(S): PED 106

**PED 141 BEGINNING ALPINE SKIING**

**1 CREDIT**

Designed for students who have little or no prior experience in downhill skiing. The course will consist of a combination of on the snow classes at one of the mountain ski areas and classroom sessions at ACC. For purposes of instruction, students will be assigned to small groups based on their present skiing ability. students must furnish or rent all skiing equipment. 30 hours lecture/activity.

**PED 142 ADVANCED ALPINE SKIING**

**1 CREDIT**

Designed for students who are ready for advanced instruction in parallel skiing. the course will consist of a combination of on the snow classes at one of the mountain ski areas and classroom sessions at ACC. Student will be divided into small groups and assigned to instructor's based on present ability. student must furnish or rent all skiing equipment. 30 hours lecture/activity. PREREQUISITE(S): alpine skiing or intermediate skiing ability

**PED 143 TAI CHI I**

**1 CREDIT**

This course is designed to introduce Tai Chi as an expression of understanding of self-control, exercise and self-defense. The primary emphasis is to gain an understanding of the history (origins and changes) of Tai Chi, the movements and their names, application of movements and terminology.

**PED 144 TAI CHI II**

**1 CREDIT**

This course will emphasize the instruction of Tai-Chi from a practical and scientific approach with illustrations of applications for each of the movements in daily life. Cardiovascular training, strength and flexibility training, balance and coordination will be integral parts of the Tai-Chi training. In addition psychosocial skills such as meditation, relaxation and self-efficacy will be addressed.

**PED 146 MARTIAL ARTS**

**1 CREDIT**

This course is designed to introduce basic martial arts techniques and forms designed to improve the physical and mental capacity of an individual. The primary emphasis is to gain an understanding of the basic philosophies and concepts around the martial arts; the approach to ethics and provides a clear-cut guide for developing a powerful sense of character and will.

**PED 147 YOGA**

**1 CREDIT**

This course offers a guided instruction in yoga. Students practice yoga according to their individual fitness levels and abilities. Emphasis is placed on enhancing general health and well-being through the performance of yoga strength, flexibility, balance and relaxation techniques and exercises.

**PED 148 YOGA II**

**1 CREDIT**

Concepts of basic yoga are carried into additional areas. Increases awareness of yoga an its physical and mental benefits.

PREREQUISITE(S): Yoga I or permission of instructor

**PED 149 SELF-DEFENSE-ADVANCED KARATE**

**1 CREDIT**

Designed for individuals who have previous experience in self-defense and who already have some prior experience in any style of Karate. The Sho To Kan style of self-defense will be taught. 30 hours activity. Note: The approximate cost for uniform is \$29.00.

PREREQUISITE(S): self defence karate or instructor's permission

**PED 200 ADVANCED GOLF**

**1 CREDIT**

Designed for individuals with advanced golf skills who are interested in improving their game. Instruction will be by certified golf professionals. Driving range, putting green and on course play will be included. Use of woods, irons, wedges and putting will be stressed. All instruction and play will be at Centennial golf Course located at Federal and Bowles. 30 hours activity.

**PED 210 FITNESS CENTER ACTIVITY III**

**1 CREDIT**

This is an advanced exercise course designed for individuals interested in attaining a high level of total fitness. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All of the basic components of fitness including : flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition will be addressed. The primary mode of training will be Aerobic Circuit Training. The circuit training will be supplemented with additional work on the specialized weight machines, dumbbells, treadmills, rowers, stair climbers, cross trainers, nordic track, versa climbers, and running track available in the Fitness Center.

PREREQUISITE(S): PED 110, 111

**PED 211 FITNESS CENTER ACTIVITY IV**

**1 CREDIT**

This is an advanced course designed for individuals interested in attaining a high level of total fitness. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All of the basic components of fitness including : flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition will be addressed. The primary mode of training will be Aerobic Circuit Training. The circuit training will be supplemented with additional work on the specialized weight machines, dumbbells, treadmills, rowers, stair climbers, cross trainers, nordic track, versa climbers, and running track found in the Fitness Center.

PREREQUISITE(S): PED 210, 110, 111 and 210

**PED 213 FIRE ACADEMY FITNESS**

**2.5 CREDITS**

This course is designed for Basic Fire Academy students who are interested in improving total fitness. The course will include an individual fitness evaluation, computerized analysis of results and a prescribed exercise program. Special emphasis will be placed on improving cardiovascular fitness, muscular strength, muscular endurance and addressing any fitness deficiencies revealed in the initial testing.

**PED 279 SPECIAL TOPICS**  
**1-6 VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**PED 285 INDEPENDENT STUDY**  
**1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.

PREREQUISITE(S): instructor's permission

## **PHYSICAL EDUCATION/OTHER CLASSES**

Health, Physical Education and Recreation

**PHR 120 ACEP COACHING CERTIFICATE** 1 CREDIT

This course will satisfy the CHSAA (Colorado High School Activities Association) Coaching education requirement for those who coach at the high school level but are not certified teachers. The course will cover the following areas: 1) coaching philosophy 2) sport psychology 3) sport pedagogy 4) sport physiology and 5) sport management.

**PER 151 LIFE GUARD TRAINING** 2 CREDITS

This course is designed to provide the necessary minimum knowledge and skills training for a person to qualify as a non-surf lifeguard. The course content and activities prepare lifeguard candidates to recognize emergencies, respond quickly and effectively to emergencies and prevent drowning and other incidents. The course also teaches other skills in individual needs to be a professional lifeguard.

PREREQUISITE(S): Advanced Swimming or equivalent.

## **PHYSICAL THERAPIST ASSISTANT**

**PTA 110 BASIC PATIENT CARE IN PHYSICAL THERAPY** 5 CREDITS

This course examines the basic patient care skills for the healthcare practitioner. Students will gain an understanding and demonstrate these skills that include; positioning, body mechanics, transfers, range of motion, palpation, vital signs, aseptic techniques, bandaging, intermittent venous compression, medical terminology, activities of daily living, wheelchair management, architectural barriers, and gait training.

PREREQUISITE(S): Admission to the PTA program OR instructor permission.

**PTA 115 PRINCIPLES AND PRACTICES OF PHYSICAL THERAPY** 2 CREDITS

This course explores the history of the profession of Physical Therapy including its definition, development and areas of practice. The role of the APTA, the physical therapist assistant and the relationship between the physical therapist, PTA and other health care professionals are investigated. Current issues and trends in Physical Therapy including professionalism, ethics, quality assurance, communications and reimbursement issues such as Medicare, Medicaid, Workers Compensation and commercial insurance are discussed as they relate to the delivery of health care.

**PTA 120 MODALITIES IN PHYSICAL THERAPY** 5 CREDIT

The theory and principles of physical therapy modalities will be examined. Course includes therapeutic heat and cold, traction, massage and hydrotherapy.

PREREQUISITE(S): PTA 110

**PTA 131 PROFESSIONAL COMMUNICATIONS I** 1 CREDIT

Introduce Physical Therapist Assistant (PTA) program students to oral and written professional communication in their field. The course develops skills in verbal and non-verbal communication, conducting self-critiques and peer reviews, research of professional literature, medical documentation, and professional presentations.

**PTA 141 PROFESSIONAL COMMUNICATIONS II** 1 CREDIT

The course builds on Professional Communications I and develops skills in writing professional documents to patients and other health care professionals, participating effectively in meetings, and medical documentation skills.

**PTA 135 PRINCIPLES OF ELECTRICAL STIMULATION (FORMERLY PTA 235)** 2 CREDITS

This course will investigate the principles and application of electrical stimulation (ES) modalities currently used in physical therapy practice. This course will help the student understand the electrochemical and physiological effects of electrical stimulation and identify the various forms and applications of ES.

PREREQUISITE(S): program admission

**PTA 150 ROLE TRANSITION ATC TO PTA I** 2 CREDITS

This course builds on the current knowledge and skill of the ATC and develops additional patient care skills in the areas of Basic and instrumental Activities of Daily Living; Assistive/Advaptive Equipment; Body Mechanics and Transfers; Gait and Locomotion Activities; Wheelchair Management Skills; Home, Community and work Re-integration; and Aseptic Techniques.

PREREQUISITE(S): Admission to PTA program

**PTA 155 ROLE TRANSITION ATC TO PTA II** 3 CREDITS

Building on the Orthopedic knowledge and skills of the ATC, this course examines the principles and practices of Goniometry, manual muscle testing, gait analysis, postural assessment and training, orthotics, and prosthetics.

PREREQUISITE(S): PTA 120

**PTA 205 PSYCHOSOCIAL ISSUES IN HEALTH CARE** 2 CREDITS

This course explores the psychosocial aspects of the patient/client and health care practitioner. Recognition of and adjustment for psychological, sociological, educational, cultural, economic and political concerns on the delivery of health care services are investigated. Communication skills and social and advocacy responsibilities of the health care practitioner will be discussed in order to assist the development of a health care practitioner committed to meeting the expectations and needs of the members of society receiving health care services.

**PTA 230 ORTHOPEDIC ASSESSMENT AND MANAGEMENT TECHNIQUES** 5 CREDITS

The theory and principles and practices of orthopedic conditions will be examined. Course includes an understanding of assessment and management techniques pertaining to orthopedic conditions, goniometry, manual muscle testing, gait analysis, and posture analysis

PREREQUISITE(S): PTA 120, 140

**PTA 240 NEUROLOGICAL ASSESSMENT AND MANAGEMENT TECHNIQUES**

**5 CREDITS**

The theory and principles of physical therapy will be expanded with an introduction to assessment, management techniques and advanced physical therapy procedures as they relate to neurologic, cardiac and pulmonary conditions.

PREREQUISITE(S): PTA 230 or Program Director Permission

**PTA 245 PHYSICAL THERAPIST ASSISTANT SEMINAR**

**1 CREDIT**

This course provides a summary of clinical affiliations and prepares for student transition into the PT community. Career information, resumes, goal-setting, licensing and employment opportunities will be discussed in relation to securing employment. The supervisory process, policies and procedures, and performance evaluations will be discussed in relation to continued employment.

**PTA 251 PROFESSIONAL COMMUNICATIONS III**

**1 CREDIT**

The course promotes the concepts from Professional Communications II and further develops written and oral communication skills in the professional arena through correct documentation of patient progress based on observations, dictating progress notes, development of resume, job interview skills, portfolios, and an awareness of the national PTA exam.

**PTA 255 ADVANCED ORTHOPEDICS**

**2 CREDITS**

Principles and practices of involved in the differential diagnosis and subsequent treatment of musculoskeletal disorders including orthopedic assessments, extremity joint mobilization; and an introduction to specialized treatment techniques being utilized in the management of orthopedic conditions are covered in this course. The course emphasis is on understanding evaluation methods and utilizing the finding to appropriately treat a given condition. 15 hours lecture, 30 hours lab.

PREREQUISITE(S): PTA 230

**PTA 275 SPECIAL TOPICS: CLINICAL PATHOPHYSIOLOGY I**

**2 CREDITS**

This course investigates the pathophysiological changes resulting from disease processes. Course includes the etiology of disease such as trauma, genetic, immunological, inflammatory and degenerative processes. Pathology and pharmacology of musculoskeletal and neurological system diagnoses as they relate to physical therapy is emphasized.

**PTA 275 SPECIAL TOPICS: CLINICAL PATHOPHYSIOLOGY II**

**2 CREDITS**

This course investigates the pathophysiological changes resulting from disease processes. Course includes the etiology of disease such as trauma, genetic, immunological, inflammatory and degenerative processes. Pathology and pharmacology of cardiovascular, respiratory, endocrine and chronic pain diagnoses as they relate to physical therapy is emphasized.

**PTA 275 SPECIAL TOPICS: ANATOMICAL KINESIOLOGY**

**4 CREDITS**

This course focuses on an understanding of anatomical structures of the human body. Includes the composition and adaptability of tissues and the identification and function of the skeletal, muscular and nervous systems as they relate to physical therapy.

PREREQUISITE(S): admission to the PTA program or instructor's permission

**PTA 278 PTA SEMINAR**

**2 CREDITS**

This course provides a summary of all coursework, internships and prepares the student for transition into the workforce as an entry level PTA. It includes a comprehensive review and mock exam in preparation for the national PTA exam, employment benefits, licensing, state practice act review, professional development, employment opportunities and community service.

PREREQUISITE(S): PTA 230, PTA 280, (student should be in final semester of degree).

**PTA 280 PTA INTERNSHIP I**

**4 CREDITS**

Initial clinical exposure providing hands on of various types of patient practicum skills and techniques. Includes application of basic patient care skills including transfers, range of motion, modalities, bandaging, aseptic techniques, and gait training. Students will demonstrate professional behavior and communication principles appropriate in the physical therapy setting. A designated clinical instructor in an acute care, geriatric, or outpatient setting will provide supervision.

PREREQUISITE(S): PTA 110, 120

**PTA 281 PTA INTERNSHIP II**

**5 CREDITS**

The intermediate clinical experience providing hands on of various types of patient practicum skills and techniques learned. Includes continued application of physical therapy procedures of Internship I with the addition of therapeutic exercise, goniometry, manual muscle testing and motor learning techniques. Students will demonstrate professional behavior and communication principles appropriate in the physical therapy setting. A designated clinical instructor in an acute care, rehabilitation, outpatient geriatric, or home health setting will provide supervision. During the internship, the student will present an inservice on a physical therapy related topic.

PREREQUISITE(S): successful completion of all previous PTA curriculum OR permission of program director

**PTA 282 PTA INTERNSHIP III**

**5 CREDITS**

Advanced clinical experience providing hands on of various types of patient practicum skills and techniques learned. Students will refine all physical therapy skills in preparation to enter the field as an entry level physical therapist assistant. This final experience in any physical therapy setting will include independent practice with an assigned caseload under the on-site supervision of a clinical instructor. The student will research and present in-depth physical therapy case study.

PREREQUISITE(S): successful completion of all previous PTA curriculum OR permission of program director

**PTA 285 INDEPENDENT STUDY**

**1-6 VARIABLE CREDIT**

This course meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PREREQUISITE(S): Instructor's permission

## PHYSICS

### PHY 101 BASIC PHYSICS

4 CREDITS

This course teaches basic understanding of the laws of physics. Emphasis is on critical thinking skills which allow the student to apply the laws to a wide variety of fields. Applications are illustrated by demonstrations and simple hands-on exercises which involve careful observation, measurement, analysis, and interpretation of phenomena, allowing the student to draw conclusions based on the laws of physics. In addition, the student learns problem solving techniques in which the basic laws are applied in simple, logical or mathematical ways. A variety of media such as strobe photography, diagrams, graphs and films are used to reinforce understanding of the basic laws and their applications.

PREREQUISITE(S): Student should be familiar with the most basic algebra concepts-elementary algebra should suffice.

### PHY 105 CONCEPTUAL PHYSICS

4 CREDITS

This course provides a conceptual approach to the laws of physics. Topics include mechanics, heat, wave motion, electricity, magnetism, and optics. This course includes laboratory experience.

### PHY 111 PHYSICS: ALGEBRA-BASED I

5 CREDITS

Studies include mechanics and heat. This course includes laboratory experience.

PREREQUISITE(S): MAT 160

### PHY 112 PHYSICS: ALGEBRA-BASED II

5 CREDITS

Studies electricity and magnetism, light, and modern physics. This course includes laboratory experience.

PREREQUISITE(S): PHY 111

### PHY 211 PHYSICS: CALCULUS-BASED I

5 CREDITS

Studies include mechanics and heat. This course includes laboratory experience.

COREQUISITE(S): MAT 201

### PHY 212 PHYSICS: CALCULUS-BASED II

5 CREDITS

Studies include wave motion, electricity and magnetism, and light. This course includes laboratory experience.

PREREQUISITE(S): PHY 211

### PHY 275 SPECIAL TOPICS

1-6 VARIABLE CREDIT

To be determined by individual instructor. A specific course description, list of competencies, and topical outline will be developed for each special topics course.

### PHY 285 INDEPENDENT STUDY

1-6 VARIABLE CREDIT

This course meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.  
PREREQUISITE(S): Instructor's permission

## POLITICAL SCIENCE

### POS 105 INTRODUCTION TO POLITICAL SCIENCE

3 CREDITS

This course is a survey of the discipline of political science, including political philosophy and ideology, democratic and non-democratic governments and processes, and international relations.

### POS 111 AMERICAN GOVERNMENT

3 CREDITS

Includes the background of the U. S. Constitution; the philosophy of American government; general principles of the Constitution; federalism; civil liberties; public opinion and citizen participation; political parties, interest groups, and the electoral process; and the structure and functions of the national government.

### POS 125 AMERICAN STATE AND LOCAL GOVERNMENT

3 CREDITS

This course is a study of the structure and function of state, county, and municipal governments including their relations with each other and with national government. Colorado government and politics are emphasized.

### POS 205 INTERNATIONAL RELATIONS

3 CREDITS

This course examines of the relationships among modern nation states. Topics include diplomacy, nationalism, ideologies, power and influence, conflict and cooperation, the role of non-state actors, the international economy and theoretical attempts to understand international behavior.

### POS 215 CURRENT POLITICAL ISSUES

VARIABLE CREDIT

This course is an in-depth analysis of critical issues in political science. Topics will be determined each term.

### POS 225 COMPARATIVE GOVERNMENT

3 CREDITS

This course is a comparison of the basic features of selected developed and developing countries. Topics include ideologies, political parties, interest groups, and governmental institutions.

### POS 275 SPECIAL TOPICS

1-6 VARIABLE CREDIT

This course provides students with a vehicle to pursue in depth exploration of special topics of interest.

### POS 285 INDEPENDENT STUDY

1-6 VARIABLE CREDIT

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## PSYCHOLOGY

### PSY 101 GENERAL PSYCHOLOGY I

3 CREDITS

Scientific study of behavior including motivation, emotion, sexuality, physiological psychology, stress and coping, research methods, consciousness, sensation, perception, learning, and memory.

### PSY 102 GENERAL PSYCHOLOGY II

3 CREDITS

Scientific study of behavior including cognition, language, intelligence, psychological assessment, personality, abnormal psychology, therapy, life span development and social psychology.

### PSY 110 CAREER DEVELOPMENT

3 CREDITS

This course assists students in recognizing their career potential, and provides tools for making realistic decisions concerning educational and occupational objectives. This course also helps students develop skills needed for job search, employer search and resume development.

### PSY 116 STRESS MANAGEMENT

3 CREDITS

This course identifies the physiological, emotional and behavioral aspects of stress. Techniques of stress reduction and management are explored and applied.

### PSY 200 RESEARCH METHODOLOGY

3 CREDITS

A survey of research methods and designs including correlational studies, experimental designs and quasi-experimental designs. Additional topics include evaluations of scientific research, data analysis, report writing, and research ethics.  
PREREQUISITE(S): PSY 101 or 102

### PSY 226 SOCIAL PSYCHOLOGY

3 CREDITS

This course covers behavior of humans in social settings including attitudes, aggression, conformity, cooperation and competition, prejudice, and interpersonal attraction.  
PREREQUISITE(S): 3 hours of general PSY; 3 hours of introductory SOC, or instructor's permission

### PSY 235 HUMAN GROWTH AND DEVELOPMENT

3 CREDITS

This course is a survey of human development from conception to death emphasizing physical, cognitive, emotional and psychosocial factors.  
PREREQUISITE(S): 3 hours of general PSY or instructor's permission

**PSY 238 CHILD DEVELOPMENT**  
**3 CREDITS**

This course covers growth and development of the child from conception through the elementary school years, emphasizing physical, cognitive, emotional and psychosocial factors.  
PREREQUISITE(S): 3 hrs. general PSY or instructor's permission

**PSY 247 CHILD ABUSE AND NEGLECT**  
**3 CREDITS**

This course examines the causes and effects of physical, sexual and psychological abuse and neglect. Intervention and prevention strategies are emphasized.

**PSY 190-192 COOP EDUCATION CAREER EXPLORATION**  
**3 CREDITS**

**290-293 COOP EDUCATION CAREER TRAINING**  
**3 CREDITS**

**294-295 COOP EDUCATION CAREER TRAINING**  
**6 CREDITS**

**296 COOP EDUCATION CAREER TRAINING**  
**9 CREDITS**

**297 COOP EDUCATION CAREER TRAINING**  
**12 CREDITS**

See Cooperative Education section for detailed description.

**PSY 275 SPECIAL TOPICS:**  
**1-6 VARIABLE CREDIT**

This course enables students who have a strong interest in a special psychological topic to pursue the topic through research, field trips, classroom, or laboratory setting.

**PSY 285 INDEPENDENT STUDY**  
**1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## READING

All courses at ACC require students to read materials at college level. The CPT placement test, given when a student enrolls, helps to determine the level at which the student is currently reading. The test results identify the reading class appropriate to the student's present reading level. (The CPT test may be reinforced by a specialized reading test given in the reading class). Students succeed more consistently in all their courses when they develop college level reading skills. Therefore, following the advice of the CPT recommendation is strongly suggested.

**REA 060 FOUNDATIONS OF READING**  
**3 CREDITS**

The student will learn strategies for vocabulary development, improved reading comprehension and enrichment.

PREREQUISITE(S): CPT reading score 40-59  
COREQUISITE(S): ENG 060 is recommended

**REA 080-089 SPECIAL TOPICS: DEVELOPMENTAL READING**  
**VARIABLE CREDIT**

Courses offered under this prefix and title would be designed to introduce students to a specialized area of reading skills.

**REA 090 COLLEGE PREPARATORY READING**  
**3 CREDITS**

The student will apply strategies for improving comprehension, developing vocabulary and increasing rate for reading college textbooks.  
PREREQUISITE(S): CPT reading score 60-82  
COREQUISITE(S): ENG 060/090 is recommended

**REA 112 SPEED READING 2 CREDITS**

Designed for the those whose reading test score is 83 or above and who are interested in increasing reading rate of comprehension through computer pacing, reading flexibility, skimming and scanning techniques and general reading theory. Concurrent enrollment in REA 090 or REA 060 is not recommended.  
PREREQUISITE(S): CPT reading score 83-120

## REAL ESTATE

**REE 103 REAL ESTATE PRACTICE AND LAW, PRACTICAL APPLICATIONS, AND CURRENT LEGAL ISSUES**  
**6 CREDITS**

This course, in conjunction with REE 104, is designed to meet the educational requirements of the Colorado Real Estate Commission for Associate and Independent Broker licensing. The course introduces the student to the practice of real estate through the study of a common body of knowledge including key terms and concepts in real estate as well as the related federal laws practiced in the majority of states on a national level. The study of the application of laws, rules and standard practices. To develop or enhance students knowledge and awareness of current real estate and real estate related statutes, regulations, important legal issues, developments, and practices.

**REE 104 REAL ESTATE CONTRACTS, REGULATIONS, CLOSINGS, RECORDKEEPING**  
**5 CREDITS**

This course, in conjunction with REE 103, is designed to meet the educational requirements of the Colorado Real Estate Commission for Associate and Independent Broker. The course is designed to have students prepare and understand Colorado Real Estate Commission approved contracts and understand Colorado real estate regulations. Basic skills necessary to properly close a real estate transaction, including responsibilities from the contract through and after the closing, plus accounting for all funds received and disbursed as well as a comprehensive review of the legal documents prepared by the broker. Proper recordkeeping procedures required by the Real Estate Commission to maintain and account for funds belonging to others. A certificate of completion is issued to students who successfully complete REE 103 and 104.  
PREREQUISITE(S): REE 103 or equivalent experience  
COREQUISITE(S): REE 103

**REE 106 COLORADO BROKER TRANSITION COURSE**  
**2 CREDITS**

This course is designed to provide a course of study for the transition from a Colorado Salesperson's license to a broker associate license pursuant to 12-61-103.5 C.R.S. This course includes the study of the relationship among listing contracts and the closing.

**REE 115 INTRO TO REAL ESTATE**  
**3 CREDITS**

The function of the real estate broker; sales techniques, real estate ethics. Course is for those who intend to enter the profession, for salespeople who need a review, and for those desiring a basic knowledge of the real estate business.

**REE 118 REAL ESTATE APPRAISAL  
5 CREDITS**

This course confines its scope to the technique and theory of Appraisal as it relates to single family residences with emphasis on market data correlation. Course includes standard and ethics section. Course qualifies for application to State Registered License.

**REE 275 SPECIAL TOPICS  
1-6 VARIABLE CREDIT**

Special Topics courses may be offered to provide students with an opportunity to study special areas in the discipline. Course content will be determined by the instructor with a complete syllabus each time the course is offered.

**REE 285 INDEPENDENT STUDY  
1-6 VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## **SOCIOLOGY**

**SOC 101 INTRO TO SOCIOLOGY I  
3 CREDITS**

Examines the basic concepts, theories, and principles of sociology, as well as human cultures, social groups, and the social issues of age, gender, class and race.

**SOC 102 INTRO TO SOCIOLOGY II  
3 CREDITS**

Examines social institutions and organizations from the macro perspective. Emphasizes issues of social change, demography, social movements, and conflicts and trends within education, religion, family, political, and economic structures.

**SOC 205 SOCIOLOGY AND FAMILY  
DYNAMICS 3 CREDITS**

This course will help develop an understanding of marriage, family and kinship. It examines the family as an institution and how social, cultural, and personal factors influence family relations. The stability and diversity of the family will be explored, along with current trends and some alternative life styles.

**SOC 215 CONTEMPORARY SOCIAL  
PROBLEMS 3 CREDITS**

This course explores current social issues that result in societal problems. It focuses on such issues as: civil liberties, gender discrimination, substance abuse, crime, poverty, and social change.

**SOC 218 SOCIOLOGY OF  
DIVERSITY 3 CREDITS**

This course explores the variety of inter group relations; race, nationality, ethnicity, income and other minority classifications. Patterns of prejudice, discrimination, and possible solutions to these issues will be examined.

**SOC 275 SPECIAL TOPICS 1-3CREDITS**

This course enables students who have a strong interest in a specific sociological topic i.e, Suicide Prevention, sociology of Nursing, Death & Dying, Gerontology, Juvenile Delinquency, Sociology of Music, etc., to pursue the topic through research, field trips, classroom or laboratory setting.

**SOC 190-192 COOP EDUCATION  
CAREER EXPLORATION  
3 CREDITS**

**290-293 COOP EDUCATION  
CAREER TRAINING  
3 CREDITS**

**294-295 COOP EDUCATION  
CAREER TRAINING  
6 CREDITS**

**296 COOP EDUCATION  
CAREER TRAINING  
9 CREDITS**

**297 COOP EDUCATION  
CAREER TRAINING  
12 CREDITS**

See Cooperative Education section for detailed description.

**SOC 299 INDEPENDENT STUDY  
VARIABLE CREDIT**

Course designed to meet the individual needs of students.  
PREREQUISITE(S): instructor's permission

## **SPANISH**

Independent Studies are also available.

**SPA 101 CONVERSATIONAL  
SPANISH I 3 CREDITS**

This is the first course in a sequence for beginning students who wish to understand and speak Spanish. The material will include basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

**SPA 102 CONVERSATIONAL  
SPANISH II 3 CREDITS**

This is the second course in a sequence for beginning students who wish to understand and speak Spanish. The material will continue to cover basic conversational patterns, expressions, and grammar.  
PREREQUISITE(S): SPA 101 or instructor's permission

**SPA 111 SPANISH I 5 CREDITS**

Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading, and writing the language. Note: The order of the topics and the methodology will vary according to the individual texts and instructor's.

**SPA 112 SPANISH II 5 CREDITS**

Continues Spanish I in the development of functional proficiency in listening, speaking, reading and writing the language. Note: The order of the topics and the methodology will vary according to the individual texts and instructor's.  
PREREQUISITE(S): SPA 111 or instructor's permission

**SPA 114 FAST-TRACK SPANISH I  
AND II 3 CREDITS**

Description: Designed to bridge beginning SPA courses with intermediate SPA courses. It is designed for students who have studied two years of the target language in high school and possess linguistic and cultural knowledge that true beginners do not, but are not ready yet to move to the intermediate level because they need an in-depth review of essential structures.

PREREQUISITE(S): Two years of the target language in high school or equivalent placement test scores

**SPA 115 SPANISH FOR THE  
PROFESSIONAL I 3 CREDITS**

Description: Designed as an introduction to a working knowledge of the target language, cultural behaviors and values useful in various professional fields such as health care, law enforcement, bilingual education, business, and others  
PreRequisite: College Level Reading

**SPA 201 CONVERSATIONAL  
SPANISH III 3 CREDITS**

This is the third course in a sequence for students who wish to continue their study of understanding and speaking Spanish. The material will cover intermediate level vocabulary, grammar, and expressions.

PREREQUISITE(S): SPA 102 or instructor's permission

**SPA 202 CONVERSATIONAL  
SPANISH IV 3 CREDITS**

This is the fourth course in a sequence for students who wish to continue their study of understanding and speaking Spanish. The material will continue to cover intermediate level vocabulary, grammar, and expressions.

PREREQUISITE(S): SPA 201 or instructor's permission

**SPA 211 SPANISH III 3 CREDITS**

Continues Spanish I and II in the development of increased functional proficiency in listening, speaking, reading, and writing the language. Note: The order of the topics and the methodology will vary according to individual texts and instructor's.  
PREREQUISITE(S): SPA 112 or instructor's permission

**SPA 212 SPANISH IV 3 CREDITS**  
Continues Spanish I, II, and III in the development of increased functional proficiency in listening, speaking, reading, and writing the language and an introduction to literature. Note: The order of the topics and the methodology will vary according to individual texts and instructor's. PREREQUISITE(S): SPA 211 or instructor's permission

**SPA 215 SPANISH FOR THE PROFESSIONAL II 3 CREDITS**  
Description: Continues SPA 115 in the development of a working knowledge of the target language, cultural behaviors and values useful in various professional fields such as health care, law enforcement, bilingual education, business, and others.

**SPA 275 SPECIAL TOPICS 1 6 CREDITS**  
Description: Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**SPA 285 INDEPENDENT STUDY 1 -6 CREDITS**  
Description: Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.  
PreRequisite: Permission of the Instructor

## **SPEECH**

**SPE 107 DYNAMICS OF LEADERSHIP 3 CREDITS**  
This course provides classroom training, discussions, and challenging exercises to develop leadership communication skills. Communication theory and research will be explored through discussions, practical application and experiential learning. This course will provide knowledge and communication tools for people who intend to directly apply their leadership skills and improve their leadership effectiveness in the work place, classroom, and community.

**SPE 115 PUBLIC SPEAKING 3 CREDITS**  
This course combines basic theories of speech communication with public speech performance skills. Emphasizes speech delivery, preparation, organization, support, and audience analysis.

**SPE 125 INTERPERSONAL COMMUNICATION 3 CREDITS**  
This course is an examination of communication involved in interpersonal relationships occurring in family, social, and career situations. Relevant concepts include self-concept, perception, listening, nonverbal communication, and conflict negotiation.

**SPE 216 ADVANCED PUBLIC SPEAKING 3 CREDITS**  
This course is a continuation of SPE 115 with special emphasis on informative and persuasive public speaking skills and techniques using longer, in-depth speeches. Work in other speech formats may include extemporaneous, impromptu, manuscript, special occasion speeches, and group decision making.  
PREREQUISITE(S): SPE 115

**SPE 225 ORGANIZATIONAL COMMUNICATION 3 CREDITS**  
This course is a study of human communication systems and patterns in business and organizational settings. Topics include exploration of leadership strategies, effective managerial communication skills with peers, superiors, and subordinates, and organizational communication environments, networks and goals.  
PREREQUISITE(S): SPE 115

**SPE 275 SPECIAL TOPICS 1 - 6 CREDITS**  
Description: Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**SPE 285 INDEPENDENT STUDY 1-6 CREDITS**  
Description: Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.  
PreRequisite: Permission of the Instructor

## **STUDY SKILLS**

please see page 73. STS has been changed to AAA, Academic Achievement

## **TECHNICAL ENGINEERING**

**TEC 201 ENGINEERING MATERIALS 3 CREDITS**  
Description: Investigates the types, properties and behavior of state-of-the-art and advanced materials. Lectures include an introduction to the classifications, properties and behavior of ferrous and nonferrous metals, polymers (plastics), woods, ceramics, and advanced materials.

**TEC 205 GEOMETRIC DIMENSIONING AND TOLERANCING 3 CREDITS**  
This course enables students to interpret and apply geometric dimensioning and tolerancing (GD&T) in machining or drafting. The course covers math formulas, tolerancing systems, modifiers, symbols, datums, and tolerances of form, profile, orientation, runout and location. Students learn the generation of a working drawing is a team effort between design, drafting, manufacturing and quality control.

## **THEATRE**

### **THE 110 THEATRE IN DENVER 3 CREDITS**

The purpose of this course is to acquaint students with the range of theatre companies and productions in the Denver area. The itinerary is designed to provide the greatest variety of theatrical experiences within the logistical circumstances of a given semester's offerings. Accordingly, students will confront a broad spectrum of dramatic literature performed by various companies in distinct milieus.

### **THE 105 INTRO TO THEATRE ARTS 3 CREDITS**

This course includes discussions, workshops, and lectures designed to discover, analyze, and evaluate all aspects of the theatre experience: scripts, acting, directing, staging, criticism, and theory.

**THE 111 ACTING I 3 CREDITS**  
This course covers basic acting techniques and approaches including scene study, improvisation and script analysis. It includes practical application through classroom performance.

**THE 112 ACTING II 3 CREDITS**  
This course continues to explore basic acting techniques and approaches, including scene study, improvisation, and script analysis. It includes practical application through classroom performance.  
PREREQUISITE(S): THE 111

**THE 116 TECHNICAL THEATRE 3 CREDITS**  
Description: Introduces hands-on methods of constructing and painting scenery and properties and operating stage lighting. Students also learn the proper procedures of using shop equipment and serving on stage crews.

**THE 211 DEVELOPMENT OF THEATRE I 3 CREDITS**  
This course surveys the history and evolution of drama from Ancient Greece to the renaissance, emphasizing all aspects of the art form from period values to the analysis of dramatic literature and performance.

**THE 212 DEVELOPMENT OF THEATRE II** 3 CREDITS

This course surveys the history and evolution of drama from the Renaissance to the present, emphasizing all aspects of the art form from period values to the analysis of dramatic literature and performance.

**THE 275 SPECIAL TOPICS** 1 - 3 CREDITS

Description: Explores current topics, issues and activities related to one or more aspects of the named discipline.

**THE 285 INDEPENDENT STUDY** 1 - 3 CREDITS

Description: Emphasizes structured and guided, individualized study that is organized and tailored around the interests and needs of the individual student.

## **TRAVEL AND TOURISM**

**TRA 110 INTRO TO TRAVEL CAREERS** 3 CREDITS

Introduces student to all travel industry segments with a heavy emphasis on travel industry terms and definitions. Emphasizes the importance of specialization. Encourages students to apply other areas of expertise to the travel industry, e.g. human resources, CIS, etc.

**TRA 120 TRAVEL RESERVATIONS** 2 CREDITS

Introduces student to all travel industry segments with a heavy emphasis on travel industry terms and definitions. Emphasizes the importance of specialization. Encourages students to apply other areas of expertise to the travel industry, e.g. human resources, CIS, etc.

**TRA 121 TRAVEL SALES AND SERVICE** 2 CREDITS

Interpersonal skills are necessary to sell and service the traveling public. This course provides the basics of customer service, business etiquette, telephone communication, sales styles, client styles, sales processes, sales components and travel sales in the context of the leisure travel market as well as business and professional travel.

**TRA 125 AIRLINE RESERVATIONS** 2 CREDITS

Prepares the travel and tourism student to research and plan itineraries. By providing complete product information, codes, printed resources and sample CRS displays, reservation procedures and sales and service techniques, the student will have the necessary information to book air travel, car rentals, hotel accommodations, rail travel and cruises.

**TRA 126 TRAVELOGRAPHY** 1 CREDIT

Prepares students to identify countries on a map by covering every country in the world, using outline maps. This course involves a lot of memory work and is only offered by arrangement.

**TRA 128 TRAVEL DESTINATIONS - DOMESTIC** 3 CREDITS

Acquaints student with domestic travel destinations. Requires student to plan a travel itinerary to a domestic destination.

**TRA 130 AIR FARES AND TICKETS** 2 CREDITS

Focuses on the basic skills necessary to correctly prepare a handwritten airline ticket and documents for domestic air travel. The most up-to-date instruction available to provide a thorough introduction to flight and fare sources and ticketing procedures.

**TRA 141 LEISURE TRAVEL** 3 CREDITS

Presents a comprehensive look at the introduction to tourism. Tours, modes of travel, tourism planning, and tourism development are some of the subjects covered. Also covered are economic and political impacts of tourism along with the environment and social/cultural impacts.

**TRA 142 EVENT PLANNING** 2 CREDITS

Presents the components of event planning; organization, personnel, finances, site selection, transportation, program design, promotion, arranging exhibits, and evaluation. promotion, arranging exhibits, and evaluation.

**TRA 210 TRAVEL AGENCY MANAGEMENT** 3 CREDITS

Provides specific applications of basic business management principles as applied to the travel agency in an entrepreneurial environment. This includes the legal framework, the office environment, management accounting, budgets, risk management and management theory and practice.

**TRA 224 LEISURE TRAVEL MANAGEMENT** 3 CREDITS

Brings the student up to date on leisure travel management trends and topics. This includes group travel, tour development and management, destination popularity, destination cycles, ecotourism and redeveloping the leisure travel market.

**TRA 227 CORPORATE TRAVEL MANAGEMENT** 3 CREDITS

Takes the student through the steps involved in Corporate Travel Management and related tasks from the creation of a Corporate Travel Department to roles, interrelationships in the industry, financial management and payment systems, internal considerations and establishing policies.

**TRA 230 HOME-BASED TRAVEL AGENT** 3 CREDITS

Description: Provides a complete overview for becoming a home-based travel agent, the opportunities that exist to get involved in organizing and selling travel on a part-time or full-time basis, and the resources you need for professional organizations, magazines, books and other resources.

**TRA 275 SPECIAL TOPICS** 1 - 6 CREDITS

Description: Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**TRA 280 INTERNSHIP** 1 - 6 CREDITS

Description: Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor. PreRequisite: To be determined by the instructor. CoRequisite: To be determined by the instructor.

## **ATTACH DEGREE PLAN HERE**

PLEASE NOTE: Students are required to keep a copy of the Degree Plan developed and signed by an Academic Advisor to qualify for the CCCS AA & AS Two Year Guarantee.

Please use this page to develop a plan for your educational career here at ACC.

**Course Planning Guide**

**Notes**

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Semester \_\_\_\_\_  
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