Course Descriptions

lab hours
lecture hours
credits

EXAMPLE:
BIO 106 BASIC ANATOMY & PHYSIOLOGY **4 CR (3–2)**
Focuses on basic knowledge of body structures and function, and provides a foundation for understanding deviations from normal and disease conditions. This course is designed for individuals interested in health care and is directly applicable to the Practical Nursing Program and the Paramedic Program. (Contact hours - 75)

ACADEMIC ACHIEVEMENT

AAA 75 SPELLING: WORD STRUCTURE **2 CR (2–0)**
This course 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 learing in on applying structural logic, not memorizing lists of words. (Contact hours–30)

AAA 90 ACADEMIC ACHIEVEMENT STRATEGIES **3 CR (3–0)**
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. (Contact hours–45)

AAA 99 ACTIVE LEARNING SKILLS **1 CR (1–0)**
Allows students a variety of experiences in tutorial and enhanced learning activities in the reading, writing, math, and ESL. Topics include academic support, learning styles, and contextualized learning. Students will acquire reading, English composition, English as a Second Language and/or mathematics skills through the use of course tutorial software and individualized instruction. (Contact hours–15)

AAA 109 ADVANCED ACADEMIC ACHIEVEMENT **3 CR (3-0)**
Examines theories and practices associated with successful learning to enhance college success. Areas of 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. Recommended for new and returning students. (Contact hours – 45)

NJC
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AGRICULTURE BUSINESS MANAGEMENT

ABM 111 RECORDS & BUSINESS PLANNING I **9 CR**
This course is designed to guide the student in the collection of necessary information to implement a computerized record keeping system. Discussion will include computer terminology, application software, balance sheet concepts, accounting principles, computerized accounting reports, and business plan components.

ABM 112 RECORDS & BUSINESS PLANNING II 9 CR
This class includes implementation of a computerized record keeping system. Emphasis will be placed on the application and maintenance of an accurate set of computerized financial records, use of a filing system, and compiling a business plan.

ABM 121 FINANCIAL ANALYSIS I 9 CR
Actual enterprise cost analysis will be calculated to facilitate the development of whole business projected cash flow statements. All facets of record keeping and updating of data will be emphasized, including refining and maintaing of a current accounting system. This course includes a review and revision of business planning goals and objectives. *Prerequisite: Complete set of cash records.*

ABM 122 FINANCIAL ANALYSIS II 9 CR
Business analysis through the development of accurate cost and market value accrual balance sheets for the beginning and ending period is included in this class. Emphasis will be on the measurement and analysis of changes between the two balance sheets. Analysis will include the preparation of an accrual income statement. Financial ratios will be generated to understand their importance to business analysis. Data generated from an established record keeping system will provide the basis for the development of these accrual financial statements. *Prerequisite: complete set of cash records*

ABM 131 COMMODITY MARKETING I 9 CR
Explores the terminology associated with commodity marketing and management of the risks associated with agricultural production and marketing. Discussion will include cash marketing alternatives as well as the basics of utilizing futures and options contracts. This class includes the initial steps towards the development of a marketing plan. Continued maintenance of an established record keeping stystem is a must to provide the cost of production data for enterprises. Cost of production figures for all enterprises will be determined. These enterprise calculations will result in the initial establishment of a cost of production trend for all enterprises. *Prerequisite: cost of production records for one enterprise.*

ABM 132 COMMODITY MARKETING II 9 CR
Marketing alternatives are explored in greater depth. Price behavior will be analyzed using technical and fundamental analysis. The marketing plan will be completed through the application of local marketing alternatives, futures contracts, option contracts, and price behavior information. Cost of production figures for all enterprises will be calculted. The class includes the initial steps toward developing an enterprise trend analysis. *Prerequisite: Consent of instructor.*

ABM 135 MARKETING & RISK MANAGEMENT I 9 CR
Teaches students to conduct marketing research and analysis for the initial steps for developing a marketing plan. The focus will be on defining markets, analyzing competition, identification of products/ services, pricing, and customer wants and needs. In addition, added value products and niche markets will be explored. The maintenance, refining, or implementation of system to provide accurate sales and expense information will be addressed. Sale and expense calculations will result in the establishment of sale/pricing trends for all enterprises along with margin calculations.

ABM 136 MARKETING & RISK MANAGEMENT II 9 CR
Develops an overall marketing plan derived from marketing research and analysis conducted in ABM 135. It includes a look at advertising, promotion, e-commerce, and risk management. This will include the maintenance review of existing software used to track sales and cost information. A trend of historical sales and expenses will be implemented. *Prerequisite: ABM 135*

ABM 137 WEB PRODUCTIVITY/UTILIZATION I 9 CR
Improved understanding and use of the Internet for business productivity. Emphasis will be on understanding and itilizing the tools available and the technical capabilities of the present business in order to develop a web use plan for the business.

ABM 138 WEB PRODUCTIVITY/UTILIZATION II 9 CR
Focus is on the business web use plan. Emphasis will be placed on the improved utilization of the Internet and implementation and refinement of the web use plan relating to business operations and industry. *Prerequisite: ABM 137*

ABM 141 ADVANCED BUSINESS MANAGEMENT I 9 CR
This class explores further in-depth financial analysis of the business. Includes a review of existing financial trends and emphasis of pro forma activities for further analysis of the business. The maintenance of accurate accrual records and historical data provide the data basis for the pro-forma activities and measuring the business performance past and present. (Contact hours - 135) *Prerequisite: Accurate accrual financial records*

ABM 142 ADVANCED BUSINESS MANAGEMENT II 9 CR
Focuses on revision of the business plan on a periodic basis and strengthening of management skills by focusing on the five main sources of risk. The student will be exposed to various methods of finding resource materials needed to keep the business plan current and to manage for the future. The maintenance of accurate accrual records and historical data provides the foundation needed for analysis. (Contact hours - 135) *Prerequisite: Completed business plan.*

ABM 143 INTEGRATED MANAGEMENT I 9 CR
Focuses on the research and identification of data and software technology used in the business and industry. In addition to software applications and data use, research will include areas in online opportunities, credit resources and reduction, and managing risks. (Contact hours - 162.5) *Prerequisite: Consent of instructor.*

ABM 144 INTEGRATED MANAGEMENT II 9 CR
Focuses on the analysis and evaluation of data and software currently used in the business. The primary focus will be the development of a management plan that incorporates improved use of software and data through the integration of current and/or new software applications. (Contact hours - 162.5) *Prerequisite: ABM 143.*

ABM 151 RURAL BUSINESS ENTREPRENEURSHIP I 9 CR
Guides the student in collection of data necessary for a new venture business plan. Focuses on identifying the components of a business plan, defining the business and markets, identifying customer wants and needs, and analyzing the competition. A technological emphasis in the development of a plan is used.

ABM 152 RURAL BUSINESS ENTREPRENEURSHIP II 9 CR
Focuses on the financial component of the business plan. Emphasizes the development of financial statements, creation fo financial projections with support documentation, and identification fo finance issues. A technological approach is used. *Prerequisite: ABM 151*

ABM 153 LEADERSHIP/HUMAN RESOURCE MGT. I 9 CR
Explores concepts and skills associated with effective leadership and ethics in the business environment. Focus is on concepts relating to leadership management, characteristics of functional teams, stress management, and identification of human resource tools.

ABM 154 LEADERSHIP/HUMAN RESOURCE MGT. II 9 CR
Focus on this course is the evaluation and analysis of management practices in the current business environment. Concepts in the development of a leadership and evaluation plan will be looked at. *Prerequisite: ABM 153*

ABM 175 SPECIAL TOPICS 0.5-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours - 0 to 90) *Prerequisite: Consent of instructor.*

ABM 275 AG/BUSINESS MGMT SPECIAL TOPICS 0.5-6 CR
This course provides the student with continued in depth analysis of their business. It allows for the student to keep up with rapidly changing technology available to the industry. *Prerequisite: Consent of instructor.*

ACCOUNTING

ACC 101 FUNDAMENTALS OF ACCOUNTING 3 CR (3–0)
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. (Contact hours–45)

ACC 115 PAYROLL ACCOUNTING 3 CR (3-0)
Studies federal and state employment 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 payroll laws and actual experience in applying regulations. Students are exposed to computerized payroll procedures. (Contact hours-45) *Prerequisites: ACC 101 or ACC 121*

ACC 121 ACCOUNTING PRINCIPLES I 4 CR (4-0)
Introduces the study of accounting principles for understanding of the theory and logic that underlie procedures and practices. Major topics include the accounting cycle for service and merchandising companies, special journals and 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. (Contact hours 60)

ACC 122 ACCOUNTING PRINCIPLES II 4 CR (4-0)
Continues the study of accounting principles as they apply to partnerships and corporations. Major topics include: stocks and bonds, investments, cash flow statements, financial analysis, budgeting, and cost and managerial accounting. (Contact hours 60)
Prerequisites: ACC 121 or equivalent.

ACC 125 COMPUTERIZED ACCOUNTING 3 CR (3–0)
Introduces the capabilities of computer applications in accounting. Includes solving accounting problems of a financial nature and hardware and software controls. (Contact hours–45) *Prerequisites: ACC 121*

ACC 131 INCOME TAX 3 CR (3-0)
This course is the study of basic concepts of federal income taxation, including gross income, deductions, accounting periods and methods, and property transactions, with emphasis on taxation of individuals and sole proprietorships. (Contact hours – 30)

ACC 132 TAX HELP COLORADO 2 CR (2-0)
This course prepares the students for preparation of federal and state income tax returns for individuals. Emphasis is placed on form preparation with the use of tax software. (Contact hours – 30)

ACC 133 TAX HELP COLORADO SITE LAB 1 CR (0-1)
This course allows students to prepare actual federal and state income tax returns for individuals in a real time environment. (Contact hours – 25)

ACC 175 SPECIAL TOPICS 0-6 CR (0 to 6-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours–0 to 90)

ACC 211 INTERMEDIATE ACCOUNTING I 4 CR (4–0)
Focuses on comprehensive analysis of generally accepted accounting principles (GAAP), accounting theory, concepts and financial reporting principles for public corporations. It is the first of a two-course sequence in financial accounting and is designed primarily for accounting and finance majors. Focuses on the preparation and analysis of business information relevant and useful to external users of financial reports. Explores the theories, principles and practices surveyed in Accounting Principles and critically examines `real-world` financial analysis and reporting issues. (Contact hours–60) *Prerequisite: ACC 122 or equivalent with minimum of C grade.*

ACC 216 GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING 3 CR (3–0)
Addresses concepts of budgetary control as a matter of law and public administration theory. Accounting principles and procedures necessary to implement budgetary controls for governmental units and other not-for-profit institutions and organizations are presented. (Contact hours– 45)
Prerequisites: ACC 122

ACC 226 COST ACCOUNTING 3 CR (3–0)
Study of cost accumulation methods and reports. The concepts and procedures of job order, process, standard, and direct cost systems are covered; budgeting, planning, and control of costs are included. (Contact hours–45) *Prerequisite: ACC 122 or equivalent with minimum of C grade.*

ACC 275 SPECIAL TOPICS 1-6 CR (1 to 6-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours–15 to 90)

ACC 235 COMPUTERIZED ACCOUNTING FOR SMALL BUSINESSES 3 CR (3–0)
Introduces a microcomputer package, such as Quickbooks, One-write Plus or similar accounting application, for use in a small business. Focuses on installation, starting the application and converting a manual accounting system to an electronic system. Includes an easy to use bookkeeping system that incorporates all daily transactions and summarizes records in reports for a complete financial picture. (Contact hours–45)

DIESEL TECHNOLOGY

ADE 231 HAY & FORAGE HARVESTING EQUIPMENT 1 CR (1–0)
Enables the student to understand the operation, adjustment and repair of hay and forage harvesting equipment both in the field and for pre-delivery. Various types of hay packaging and hay handling equipment are discussed. (Contact hours–15)

ADE 232 COMBINE REPAIR 1 CR (1–0)
Focuses on the operation, adjustment and arepair of combine harvesting equipment both in the field and for pre-delivery. Both the conventional cylinder and the rotary machines are discussed during the class. (Contact hours–15)

ADE 241 TRACTOR TUNE-UP & REPAIR 4 CR (2-3)
Helps the student understand a systematic procedure to effectively tune-up and maintain both gasoline and diesel engines. Timing, electrical systems, proper lubrication, and selection of fuels are also presented. (Contact hours–75)

AGRI-BUSINESS

AGB 120 AGRICULTURAL SALESMANSHIP 3 CR (3–0)
Principles and techniques of agricultural sales as applied to goods and services being sold to individual producers or agricultural businesses. Emphasis will be placed on building business relationships and product training. (Contact hours–45)

AGB 180 AGRI–BUSINESS INTERNSHIP I 5-8 CR
As an employee in the agri–business industry, the student will receive practical training on the job. The student will gain experience in various phases of the business through performing the functions and duties assigned by their employer. (Contact hours–200-320 or 40 hours = 1 credit)

AGB 218 COMPUTERIZED FARM RECORDS 3 CR (3-0)
Provides hands–on experience with a detailed computerized accounting system. The activities will lead students through entering transactions that develop the financial statements. Time will be provided for exploration with different accounting software. (Contact hours–53)
Prerequisites: CIS 118 or approval of instructor.

AGB 228 AGRI–BUSINESS MANAGEMENT 3 CR (2–1.5)
Provides the student with basic management principles and practical experience in applying principles of economics, business, marketing, and finance to the management of an agri-business operation.
(Contact hours-53) *Prerequisite: AGE 102*

AGB 244 INDUSTRY EQUIPMENT TECHNOLOGY 4 CR (2–3)
Studies of sprayer and spreader equipment variations, calibration systems and methods, selection of nozzles and boom spacings and height adjustments, pumps and plumbing, tank, boom and plumbing care and maintenance, dry spreader equipment and dispensing systems and actual operation of floater. (Contact hours–60)

AGB 275 SPECIAL TOPICS 1-6 CR (1 to 6–0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

AGB 280 AGRI–BUSINESS INTERNSHIP II 0.25-6 CR
Upon successful completion of a first agri–business internship (AGB 199), the student may enroll in this second internship to gain additional experience in an agri–business field.
(Contact hours–10 - 240 40 hours = 1 credit.)

AGB 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

AGB 289 AGRI–BUSINESS CAPSTONE 1 CR (1–0)
Covers information necessary for employment and for developing job search skills. Students will receive instruction in writing resumes and cover letters, filling out job applications and developing interviewing skills.
(Contact hours–15) *Prerequisite: Sophomore Agri–business student.*

AGRICULTURAL ECONOMICS

AGE 102 AGRICULTURE ECONOMICS 3 CR (3–0)
Focuses on economic principles as applied to agriculture through price discovery with producer supply and consumer demand, governmental policies, rural development , and resource management.
(Contact hours–45) State Guarantee Transfer Course.

AGE 205 FARM AND RANCH MANAGEMENT 3 CR (2–2)
Students will gain practical experience in applying principles of economics, marketing and finance to the management of an agricultural operation. Students will create their own sample farm or ranch and emphasis will be placed on utilizing computer technology for budgeting and financial planning. (Contact hours–60) *Prerequisite: CIS 118 or approval of instructor.*

AGE 208 AGRICULTURAL FINANCE 3 CR (3–0)
An introductory course in principles of finance and their application to agriculture and agri–business, including the time value of money, net present value analysis, interest, credit, lending institutions, financial statements & financial ratios. (Contact hours–45) *Prerequisite: AGE 102*

AGE 210 AGRICULTURAL MARKETING 3 CR (3–0)
An applied study of the agricultural marketing system and methods of marketing crops and livestock. Emphasis will be placed on hedging with futures and options. (Contact hours–45) *Prerequisite: AGE 102*

AGE 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

PRODUCTION AGRICULTURE

AGP 100 PRACTICAL CROP PRODUCTION 4 CR (3–1.5)
Cultural practices and production management of selected field crops indigenous to the Great Plains region will be covered. Laboratories in basic crop principles, crop and weed seed and plant identification, crop improvement and grain quality and grades will be covered.
(Contact hours–68)

AGP 110 INTEGRATED PEST MANAGEMENT 3 CR (1-2)
Identification and control of economically important weeds, insects and diseases through systems approach management concepts including cultivation, chemical and biological control mechanisms.
(Contact hours–60)

AGP 145 BEEF CATTLE CALVING MANAGEMENT 2 CR (1–1.5)
Offered in cooperation with Colorado State University and will cover management of the cow and calf at calving. Topics to be covered include the process of parturition, dystocia, identifying approaching parturition, assisting with dystocia, and care of the newborn calf. Emphasis is on practical "hands–on" experience. Students will be responsible for transportation to the Eastern Colorado Resource Center (E.C.R.C.) south of Sterling. Students will assist with night and weekend calving at the E.C.R.C.
(Contact hours–38)

AGP 146 ARTIFICIAL INSEMINATION MANAGEMENT 2 CR (1–1.5)
Provides a study of applied fundamentals of anatomy and reproduction as they pertain to artificial insemination. Handling frozen semen, heat detection and nutritional management for A.I. are emphasized. Individualized training is given in developing and perfecting insemination techniques in live cattle. (Contact hours–38)

AGP 147 PRACTICAL CATTLE REPRODUCTION 2 CR (1–1.5)
Studies the fundamentals of cattle reproduction. Principles covered include: nutrition, breeding, system management, physiology of the reproductive tract, hormone function, fertilization, stages of pregnancy, and overall reproductive management of the cow herd. Emphasizes economic decision making and practical experience. Covers practical applications in reproductive management that may include: reproductive tract scoring, pelvic measuring, body condition scoring, artificial insemination and palpating cows. (Contact hours–38)

AGP 148 CATTLE REPRODUCTION LAB 1 CR (0-2)
Development of skills necessary for reproductive management of cattle in Beef/Dairy operations. Covers the practical application of reproductive management techniques and practices utilized in the cattle industry.
(Contact hours–22.5)

AGP 160 RANCH HORSEMANSHIP SKILLS 2 CR (0-2)
An introduction to the skills utilized in ranching operations where horses are involved in moving, sorting, and restraining cattle. Emphasis is placed on safety, proper techniques and in developing proficiency in equipment selection and care, basic horsemanship, riding, and roping.
(Contact hours–37.5)

AGP 180 PRODUCTION AG INTERNSHIP 0.25 - 8 CR
Student will be employed in a production agriculture setting. This work experience must cover a minimum of 320 hours with the student being involved in all facets of the operation. Guidance and supervision will be the responsibility of the supervising employer and Coordinator of Production Agriculture. Emphasis will be placed on records, managerial decisions, and production agriculture skills.
(Contact hours–10 - 320, 40 hours = 1 credit)

AGP 204 SOIL FERTILITY AND FERTILIZERS 4 CR (3–1.5)
Soil fertility and plant nutrition in crop production, soil–plant relations, diagnostic techniques and methods of evaluating soil fertility are emphasized. Also included are composition, manufacture, marketing and use of fertilizer materials and their reactions with soils and plants. (Contact hours–68) *Prerequisites: AGY 240, AGP 109 or approval of instructor.*

AGP 208 COMMERCIAL PESTICIDE LICENSE TRAINING 3 CR (3–0)
Study of the requirements for the qualified supervisor license as outlined in the training manuals published by the Colorado Department of Agriculture. Students may elect to take the certified operator tests if they do not meet the experience qualifications for the qualified supervisors license. Areas studied will be for the general, weeds, agricultural insect, plant disease, and industrial right–of–way tests administered by the Colorado Department of Agriculture. Students may elect to take any of the other tests available. (Contact hours–45)

AGP 215 ANIMAL HEALTH 3 CR (2–1.5)
Introduced to methods of prevention, recognition, and treatment of common livestock diseases. Emphasis is placed on understanding the conditions which are normal, what steps the layman should attempt independently, and when to seek professional help. (Contact hours–53) *Prerequisite: ASC 100 or approval of instructor.*

AGP 241 BEEF CATTLE MANAGEMENT I 3 CR (2–1.5)
Provides training in management pertaining to the economics of a commercial cow–calf operation. Topics included are reproduction, feeding, herd health, selection, record keeping, financial management, and marketing. (Contact hours–53) *Prerequisites: ASC 100 or approval of instructor.*

AGP 247 PRODUCTION CATTLE FEEDING 3 CR (2–1.5)
Continuation of ASC 212 with emphasis on production feeding in large and medium size operations. The mechanics and management of feeding operations in and near the Sterling area are observed and studied. (Contact hours–53) *Prerequisites: ASC 225*

AGP 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue exploration of special topics of interest.

AGP 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

AGP 289 PRODUCTION AGRICULTURE CAPSTONE 1 CR (1-0)
Issues concerning transition into the family agriculture operation will be discussed. As a part of the course a seminar will be open to both students and parents (or future business partners) concerning issues of transition of the agricultural operation to the next generation. Topics concerning completion of the AAS degree will also be addressed.

AGRICULTURE

AGR 100 FRESHMAN AG ORIENTATION 0.5 CR (0.5–0)
An introductory course required for all freshman agriculture majors. This course is designed to aid the student in adjusting to college and preparing for a successful college experience. Emphasis will be placed on introduction to campus facilities and computer labs, effective study skills, and the various careers available in agriculture to help the student define personal and career objectives. (Contact hours–7.5)

AGR 175 SPECIAL TOPICS 1-6 CR
Designed to instruct the student in various topics in agriculture. The student will experience different aspects of the agricultural industry. (Contact hours–15–90)

AGR 260 WORLD INTERDEPENDENCE - POPULATION & FOOD 3 CR (3–0)
Covers the study of world population and food production and distribution. Problems and opportunities concerning population and food are discussed in a global context. (Contact hours–45) State Guarantee Transfer Course.

AGR 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours–15–90)

AGRONOMY

AGY 100 GENERAL CROP PRODUCTION 4 CR (3–2)
Production and adaptation of cultivated crops, with emphasis on crops grown in the western region of the United States. Principles affecting growth, development, production and use will be covered. (Contact hours–75)

AGY 240 INTRODUCTORY SOIL SCIENCE 4 CR (3–2)
Formation, physical properties, chemical properties and management of soils emphasizing soil conditions that affect plant growth. (Contact hours–75) *Prerequisites: Any CHE Course*. State Guaranteed Transfer Course.

AGY 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours–15–90)

AGY 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

AGRICULTURE MECHANICS

AME 105 BASIC AGRICULTURAL MECHANIC SKILLS 2 CR (1–2)
Includes safety, proper tool use, tool reconditioning, A.C. electricity, D.C. electricity, domestic water supply and farm sanitation systems. (Contact hours–45)

AME 107 GENERAL POWER MECHANICS 2 CR (1–2)
Designed to teach the theory of operation and the maintenance of small engines and related power equipment used on the farm. (Contact hours–45)

AME 118 FARM CARPENTRY 3 CR (1–4)
Includes safety, hand and power tool use, farm building planning and site location, concrete, farm building design and construction and materials of construction. (Contact hours–75)

AME 125 AGRICULTURAL MACHINERY 3 CR (2–2)
The safe operation, construction, purpose, maintenance and adjustment of farm machinery are emphasized in this course. (Contact hours–60)

AME 151 FUNDAMENTALS OF WELDING 3 CR (1-4)
Designed to develop basic welding skills, principles, and practices in arc and oxy–acetylene welding. (Contact hours–75)

AME 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

AME 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

ANTHROPOLOGY

ANT 101 CULTURAL ANTHROPOLOGY 3 CR (3–0)
Studies the human cultural patterns and learned behavior. Includes inguistics, social and political organization, religion, culture and personality, culture change, and applied anthropology.
(Contact hours–45) State Guaranteed Transfer Course.

ANT 102 CULTURAL ANTHROPOLOGY LAB 1 CR (0-1.5)
Studies the art and science of ethnographic research methods. This course analyzes classic ethnographies, conducts field research projects, writes model ethnographies and ethnologies, and addresses ethical debates and controversies. (Contact hours–22.5) State Guaranteed Transfer Course.

ANT 103 ARCHAEOLOGY LAB 1 CR (0-1.5)
Studies analytical methods in archaeological research including those employed in the field and in the laboratory. This course utilizes practical exercises to illustrate theoretical principles of archaeology, including methods of archaeological survey, excavation, artifact analysis, collection strategies, mapping strategies, and field interpretation.
(Contact hours–22.5) State Guaranteed Transfer Course.

ANT 104 PHYSICAL ANTHROPOLOGY LAB 1 CR (0-1.5)
Investigates the principles of physical/biological anthropology. This course addresses genetic and evolutionary processes, comparative skeletal anatomy, primate morphology and behavior, human evolution, modern human variation, and forensics through laboratory and/or online practicum exercises and analytical discussions. (Contact hours–22.5) State Guaranteed Transfer Course.

ANT 107 INTRODUCTION TO ARCHEOLOGY 3 CR (3-0)
Introduces the science of recovering the human prehistoric and historic past through excavation, analysis, and interpretation of material remains. Includes a survey of the archaeology of different areas of the Old and New Worlds. Also includes the works of selected archaeologists and discussions of major archaeological theories.
(Contact hours–45) State Guaranteed Transfer Course.

ANT 111 PHYSICAL ANTHROPOLOGY 3 CR (3–0)
Studies human biology and its effects on behavior. Includes principles of genetics and evolution, vertebrates and primates, human origins, human variation, and ecology. (Contact hours–45) State Guaranteed Transfer Course.

ANT 201 INTRO TO FORENSIC ANTHROPOLOGY 3 CR (3–0)
Studies the basic principles of forensic anthropology, an applied field within the discipline of physical anthropology. Includes the study of the human skeleton, practical application of physical anthropology and archaeology, and judicial procedure, as they relate to the identificaiton of human remains within a medico-legal context. (Contact hours–45) State Guaranteed Transfer Course.

ANT 215 INDIANS OF NORTH AMERICA
Studies the 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. (Contact hours–45) State Guaranteed Transfer Course.

ANT 250 MEDICAL ANTHROPOLOGY 3 CR (3-0)
Studies the basic principles of medical anthropology, an applied field within the discipline of cultural anthropology including the cross-cultural study of practices and beliefs regarding illness, health, death, prevention and therapy, and the interaction of the medical systems between Western and other cultures. (Contact hours–45) State Guaranteed Transfer Course.

ANT 275 SPECIAL TOPICS 1-6 CR
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 a special topic may include that derived from physical anthropology, cultural anthropology, archaeology, or other anthropological discipline.

ART

ART 107 ART EDUCATION METHODS 3 CR (3–0)
Focuses on a multimedia approach to teaching art. Emphasizes strong creative presence, philosophy and techniques in drawing, painting, printmaking, and other media. ART or EDU credit available, but credit will be granted for only one option. (Contact hours–45)

ART 110 ART APPRECIATION 3 CR (3–0)
Introduces the cultural significance of the visual arts, including media, processes, techniques, traditions, and terminology. (Contact hours–45) State Guaranteed Transfer Course.

ART 111 ART HISTORY ANCIENT TO MEDIEVEL 3 CR (3–0)
Provides the knowledge base to understand the visual arts, especially as related to Western Culture. Surveys the visual arts from the Ancient through Medieval Periods. (Contact hours–45) State Guaranteed Tansfer Course.

ART 112 ART HISTORY RENAISS. TO MODERN 3 CR (3–0)
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. (Contact hours–45) State Guaranteed Transfer Course.

ART 115 STAINED GLASS I 3 CR (0-6)
Develops a basic understanding and approach to stained glass. Students gain an understanding of and appreciation for the properties of glass and the nature of finished stained glass construction. (Contact hours–90)

ART 116 STAINED GLASS II 3 CR (0–6)
A continuation of Stained Glass I, students advance to a clearer but still basic understanding and approach to stained glass. Students gain a greater understanding of and appreciation for the properties of glass and the nature of finished stained glass construction. (Contact hours–90)

ART 121 DRAWING I 3 CR (0–6)
Investigates the various approaches and media that students need to develop drawing skills and visual perception. (Contact hours–90)

ART 124 WATERCOLOR I 3 CR (0–6)
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. (Contact hours–90)

ART 129 PRINTMAKING I 3 CR (0–6)
Introduces the basic techniques and skills of printmaking as a fine art media. Instruction includes an understanding of visual concepts as they relate to prints. May include introduction to relief, intaglio, lithography and screen printing techniques. (Contact hours–90)

ART 131 VISUAL CONCEPTS 2-D DESIGN 3 CR (0–6)
Examines the basic elements of design, visual perception, and artistic form and composition as they relate to two-dimensional media.
(Contact hours–90)

ART 132 VISUAL CONCEPTS 3-D DESIGN 3 CR (0–6)
Focuses on learning to apply the elements and principles of design to three dimensional problems. (Contact hours–90)

ART 138 FILM PHOTOGRAPHY I **3 CR (2–2)**
Introduces black and white photography as a fine art medium and develops skills necessary for basic camera and lab operations. (Contact hours–60)

ART 139 DIGITAL PHOTOGRAPHY I **3 CR (2–2)**
Introduces the basic concepts of digital imaging as applied to photography. Using applicable technology and hands on experience, modern developments are presented leading to the present applications of digital imaging which combine traditional photographic ideas with electronic media. Enables the student 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. (Contact hours–60)

ART 151 PAINTING I **3 CR (0-6)**
Explores basic techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting to depict form and space on a two-dimensional surface. (Contact hours–90)

ART 161 CERAMICS I **3 CR (0–6)**
Introduces traditional and contemporary ceramic forms and processes including handbuilding and throwing on the potter's wheel. (Contact hours–90)

ART 165 SCULPTURE I **3 CR (0-6)**
Introduces the fundamentals of sculpture such as modeling, casting, carving, and the processes of assemblage. (Contact hours–90)

ART 175 SPECIAL TOPICS **1-6 CR**
Students in this class will be taught special, creative art form.

ART 185 INDEPENDENT STUDY **1-6 CR**
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

ART 207 ART HISTORY 1900 TO PRESENT **3 CR (3-0)**
Provides students with the knowledge base to understand the visual arts as related to Modern and Contemporary visual art. Surveys world art of the twentieth century, including Modernism to Post-Modernism. (Contact hours–45) State Guaranteed Transfer Course.

ART 221 DRAWING II **3 CR (0-6)**
Explores expressive drawing techniques with an emphasis on formal composition, color media and content or thematic development. (Contact hours–90)

ART 222 DRAWING III **3 CR (0-6)**
Offers a continued study of expressive drawing techniques and development of individual style, with an emphasis on composition and technique variation. (Contact hours–90)

ART 223 DRAWING IV **3 CR (0-6)**
Explores advanced drawing problems with an emphasis on conceptual development and portfolio and/or exhibition quality presentation. (Contact hours–90)

ART 231 ADVANCED VISUAL CONCEPTS 2-D DESIGN **3 CR (0-6)**
Provides continued study of the principles and elements of two-dimensional design with an emphasis on visual communication for further application in fine art, commercial art, and/or applied arts.

ART 232 ADVANCED VISUAL CONCEPTS 3-D DESIGN **3 CR (0-6)**
Provides continued study of the principles and elements of three-dimensional design with an emphasis on visual communication for further application in fine art, commercial art, and/or applied arts.

ART 251 PAINTING II **3 CR (0–6)**
This course further explores techniques, materials, and concepts used in opaque painting processes in oil or acryclic painting, with emphasis on composition and content development. (Contact hours–90)

ART 252 PAINTING III **3 CR (0–6)**
Provides continued exploration of techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development. (Contact hours–90)

ART 253 PAINTING IV **3 CR (0-6)**
Explores advanced techniques, materials, and concepts used in opaque painting processes, with emphasis on the development of themes and a cohesive body of work. (Contact hours–90)

ART 261 CERAMICS II **3 CR (0–6)**
Continuation of ART 161, this course emphasizes skill, technique and form. (Contact hours–90) *Prerequisites: ART 161 OR approval of instructor.*

ART 275 SPECIAL TOPICS **1-6 CR**
Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

ANIMAL SCIENCE

ASC 100 ANIMAL SCIENCES **3 CR (3–0)**
A study of the basic fundamentals of livestock production pertaining to principles of breeding, genetics, nutrition, health, anatomy and physiology of beef, sheep, swine, dairy and horses. Other areas to be emphasized will be selection, breed classifications and identification and the classification and marketing of meat animal products. (Contact hours–45) *Prerequisite: Reading Accuplacer score of 62 or higher OR successful completion of REA 60 OR concurrent enrollment in REA 60.*

ASC 102 INTRODUCTION TO EQUINE SCIENCE **4 CR (3–2)**
This course covers the basics of the equine industry, breeds, selection, form to function, care and management, soundness, health, reproduction, feeding, facilities, physiology, production systems and management systems. (Contact hours-75)

ASC 115 INTRO TO LIVESTOCK EVALUATION **1 CR (0–2)**
Designed to explore principles and economic value of traits considered in meat animal selection. In addition, emphasis will be placed on terminology used in describing meat animal conformation. It will provide experience to the student in correctly evaluating meat animal classes and defending their evaluation with oral reasons using industry acceptable terminology. (Contact hours–30) *Prerequisites: ASC 100, ASC 250, or approval of instructor.*

ASC 143 ELEMENTARY WESTERN EQUITATION **2 CR (0–4)**
Provides the student with an introduction to basic safe handling and riding of the western horse. (Contact hours– 60)

ASC 215 LIVESTOCK JUDGING **2 CR (0–4)**
Emphasizes comparative selection and grading and judging of market and breeding classes of livestock based on knowledge of phenotype, performance, information and/or carcass merit. (Contact hours– 60) *Prerequisites: ASC 100 or approval of instructor.*

ASC 225 FEEDS & FEEDING **4 CR (3–2)**
A study of the basic nutrients, common feeds and feed additives fed to livestock, anatomy of digestive systems, and basic feeding practices for beef, sheep, swine, horses and dairy. The lab portion of this class will be devoted to calculating and balancing rations to fulfill nutrient requirements for farm animals for growth, finishing, reproduction and lactation, and work. (Contact hours–75) *Prerequisites: ASC 100.*

ASC 230 FARM ANIMAL ANATOMY & PHYSIOLOGY 3 CR (3–0)
Introduces students to the basic concepts of farm animal anatomy and physiology with emphasis on concepts relating to nutrition, reproduction, Immunology, and growth of the basic farm species.
Anatomy and Physiology is taught in the context of applying basic principles to production practices in the industry including reproductive management, livestock nutrition management, and animal health practices. (Contact hours--45) *Prerequisites: BIO 111, ASC 100, or approval of instructor.*

ASC 243 INTERMEDIATE WESTERN EQUITATION 2 CR (2–0)
Provides the student basic to intermeidate horsemanship and maneuvers, improved body position, and advanced control. (Contact hours– 45) *Prerequisites: ASC 143 or approval of instructor.*

ASC 250 LIVE ANIMAL & CARCASS EVALUATION 3 CR (3–0)
Explores meat animal carcass evaluation and the related yield and quality grading system. Selection of breeding stock based on performance data will also be emphasized. (Contact hours–45) *Prerequisites: ASC 100*

ASC 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

ASC 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

ASC 288 LIVESTOCK PRACTICUM 2 CR (1-2)
Provides experiential learning with beef cattle, dairy cattle, swine and Sheep. (Contact hours–45)

AUTO SERVICE TECHNOLOGY

ASE 101 AUTO SHOP ORIENTATION 2 CR (2–0)
Provides students with safety instruction in the shop and on the automobile. Emphasis is placed on the proper use and care of test equipment, precision measuring and machining equipment, gaskets, adhesives, tubing, wiring, jacks, presses, and cleaning equipment and techniques. (Contact hours–30)

ASE 110 BRAKES I 3 CR (1–3)
Covers basic operation of automotive braking systems. Includes operation, diagnosis, and basic repair of disc brakes, drum brakes, and basic hydraulic systems. (Contact hours - 60) Prerequisites: ASE 101

ASE 120 BASIC AUTOMOTIVE ELECTRICITY 2 CR (1–1.5)
Introduces vehicle electricity and includes basic electrical theory, circuit designs, and wiring methods. Focuses on multi-meter usage and wiring diagrams. (Contact hours–37.5) Prerequisites: ASE 101

ASE 123 AUTOMOTIVE BATTERY, STARTING & CHARGING SYSTEMS 2 CR (1–1.5)
Covers the operation, testing, and servicing of the vehicle 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. (Contact hours–37.5) *Prerequisites: ASE 101 & ASE 120*

ASE 130 GENERAL ENGINE DIAGNOSIS 2 CR (1–1.5)
Focuses on lecture and related laboratory experiences in the diagnosis and necessary corrective actions of automotive engine performance factors. (Contact hours–37.5) Prerequisites: ASE 101

ASE 132 IGNITION SYSTEM DIAGNOSIS & REPAIR 2 CR (1–1.5)
Focuses on lecture and related laboratory experiences in the diagnosis, service, adjustments and repair of various automotive ignition systems. (Contact hours–37.5) *Prerequisites: ASE 101 & ASE 130*

ASE 134 AUTOMOTIVE EMISSIONS 2 CR (1–1.5)
Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive emission control systems. (Contact hours–37.5) *Prerequisites: ASE 101 & ASE 132*

ASE 140 SUSPENSION & STEERING I 3 CR (1.5–2.25)
Focuses on lecture and related experiences in the diagnosis and service of suspensions and steering systems and their components.
(Contact hours–56) *Prerequisites: ASE 101*

ASE 150 AUTOMOTIVE U-JOINT & AXLE SHAFT SERVICE 2 CR (1–1.5)
Studies the operating principles and repair procedures relating to axle-shaft and universal joints. (Contact hours–37.5) *Prerequisites: ASE 101*

ASE 160 AUTOMOTIVE ENGINE REMOVAL & INSTALLATION 1 CR (0–1.5)
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. (Contact hours–22.5) *Prerequisites: ASE 101*

ASE 161 ENGINE, DISASSEMBLY DIAGNOSIS & ASSEMBLY 5 CR (2–5)
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. (Contact hours–97.5) *Prerequisites: ASE 101*

ASE 165 AUTOMOTIVE MACHINING 2 CR (1–1.5)
Offers instruction in machining processes on the automotive engine using up-to-date machines to recondition connecting rods, bore engine blocks, machine heads for replaceable guides and seats. Brake drum and disc machining is also discussed. (Contact hours–37.5) *Prerequisites: ASE 101*

ASE 175 A/C Service and Repair 2 CR (2-0)
Emphasizes lecture and related laboratory experiences in the diagnosis and service of vehicle air conditioning systems and their components. (Contact hours-30)

ASE 201 AUTOMOTIVE PARTS MANAGEMENT 1 CR (1–0)
Covers instruction as to the proper methods in completing parts invoices, repair orders, sales receipts and tickets. Also included are handling and pricing procedures utilized in parts areas: warehouse distributor, jobber, retail and wholesale prices. (Contact hours–15) *Prerequisites: ASE 101*

ASE 202 AUTOMOTIVE SERVICE MANAGEMENT 2 CR (2–0)
Provides orientation in areas such as shop management, customer relations, marketing, salesmanship and work repair orders along with their application to service stations, independent repair shops, dealerships and all other automotive service centers. (Contact hours–30)
Prerequisites: ASE 101

ASE 210 BRAKES II 3 CR (1–3)
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 todays automobile. (Contact hours-60) *Prerequisites: ASE 110*

ASE 220 SPECIALIZED ELECTRONICS TRANING 2 CR (1–1.5)
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. (Contact hours–37.5) *Prerequisites: ASE 101 & ASE 120*

ASE 221 AUTO/DIESEL BODY ELECTRICAL 4 CR (1–4.5)
Provides a comprehensive study of the theory, operation, diagnosis, and repair of vehicle accessories. (Contact hours–82.5)
Prerequisites: ASE 101 & ASE 120

ASE 231 AUTO/DIESEL COMPUTERS 2 CR (1–1.5)
Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems.
(Contact hours–37.5) *Prerequisites: ASE 101, ASE 120, ASE 134, ASE 220*

ASE 233 FUEL INJECTION & EXHAUST SYSTEMS 4 CR (2–3)
Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems. (Contact hours–75) *Prerequisites: ASE 101, ASE 120, ASE 134, ASE 231*

ASE 235 DRIVEABILITY DIAGNOSIS 1 CR (0–1.5)
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. (Contact hours–22.5) *Prerequisites: ASE 101 & ASE 233*

ASE 240 SUSPENSION & STEERING II 3 CR (1.5–2.25)
Emphasizes lecture and related experiences in the diagnosis and service of electronic suspensions and steering systems and their components.
(Contact hours–56) *Prerequisites: ASE 101 & ASE 140*

ASE 250 AUTOMOTIVE TRANSMISSION/ TRANSAXLE SERVICES 1 CR (0–1.5)
Focuses on practical methods of maintaining, servicing, and performing minor adjustments on an automatic transmission and transaxle.
(Contact hours–22.5) *Prerequisites: ASE 101*

ASE 252 ADVANCED AUTOMATIC TRANSMISSIONS 2 CR (2-0)
Provides laboratory experiences with a variety of customer work in the areas that the student received training during previous automotive transmission classes. (Contact hours– 37.5) *Prerequisites: ASE 101*

ASE 253 ADVANCED MANUAL TRANSMISSIONS 2 CR (2-0)
Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive Manual Transmissions,Transaxles, Clutches and their related components on customer vehicles. (Contact hours– 37.5) *Prerequisites: ASE 101*

ASE 275 ADVANCED AUTOMATIC TRANS LAB 1 CR (0-1.5)
Additional lab hours to supplement ASE-252. (Contact hours - 22.5)

ASE 276 ADVANCED MANUAL TRANS LAB 1 CR (0-1.5)
Additional lab hours to supplement ASE-253. (Contact hours - 22.5)

ASTRONOMY

AST 101 ASTRONOMY I 4 CR (3–2)
Focuses on the history of astronomy, the tools of the astronomer and the contents of the solar system including the planets, moons, asteroids, comets, and meteoroids. Incorporates laboratory experience.
(Contact hours–75) *Prerequisites: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

AST 102 ASTRONOMY II 4 CR (3–2)
Emphsizes the structure and life cycle of the stars, the sun, galaxies, and the universe as a whole, including cosmology and relativity. Incorporates laboratory experience. (Contact hours–75) *Prerequisites: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

BIOLOGY

BIO 105 SCIENCE OF BIOLOGY 4 CR (3–2)
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—a process of gaining new knowledge—is explored as is the impact of biological science on society. This course includes laboratory experience. (Contact hours–75) State Guarantee Transfer Course. AA & AGS Degrees only.

BIO 106 BASIC ANATOMY & PHYSIOLOGY 4 CR (3–2)
Focuses on basic knowledge of body structures and function, and provides a foundation for understanding deviations from normal and disease conditions. This course is designed for individuals interested in health care and is directly applicable to the Practical Nursing Program.
(Contact hours–75)

BIO 111 GENERAL COLLEGE BIOLOGY I WITH LAB 5 CR (4–2)
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. (Contact hours–90) *Prerequisite: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

BIO 112 GENERAL COLLEGE BIOLOGY II WITH LAB 5 CR (4–2)
A continuation of General College Biology I. Includes ecology, evolution, classification, structure and function in plants and animals. This course includes laboratory experience. (Contact hours–90) *Prerequisites: BIO 111 or approval of instructor.* State Guarantee Transfer Course.

BIO 116 INTRODUCTION TO HUMAN DISEASE 3 CR (3-0)
Focused analysis of the causes and mechanics of human illness and death will be presented for each of the major human body systems. Selected diseases will be studied in greater detail including etiology, pathogenesis, epidemiology, sociology, and therapy. (Contact hours–45) *May be used as Natural and Physical Science requirement for AA & AGS Degrees, and as an elective for AS.* State Guarantee Transfer Course.

BIO 150 ANIMAL BIOLOGY 4 CR (3–2)
Focuses on the phylogenetic study of animals. Includes an introduction to the invertebrates and a concentrated study of the diverse vertebrate forms. Laboratory experiences paralell lecture topic. (Contact hours–75)

BIO 160 INTRODUCTION IN BIOTECHNOLOGY 3 CR (2–2)
Introduces the student to modern molecular biology technologies that include DNA, RNA, and proteins and prepares them for research and industry. Laboratory experience includes sterile technique, media preparation, bacterial culturing, DNA and protein technologies.
(Contact hours–60)

BIO 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours–0 to 90)

BIO 201 HUMAN ANATOMY AND PHYSIOLOGY I 4 CR (3–2)
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, and nervous systems. Includes a mandatory hands on laboratory experience covering experimentation, microscopy, observations, and dissection. This is the first semester of a two semester sequence. (Contact hours–75) *Prerequisite:BIO 111 or equivalent, or permission of instructor.* State Guarantee Transfer Course.

BIO 202 HUMAN ANATOMY AND PHYSIOLOGY II 4 CR (3–2)
Focuses on the integrated study of the human body and the histology, anatomy, and physiology of the following systems and topics: endocrine system, 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. (Contact hours–75) *Prerequisite:BIO 201 or equivalent, or permission of instructor.* State Guarantee Transfer Course.

BIO 204 MICROBIOLOGY 4 CR (3–4)
Designed for health science majors. Examines microorganisms with an emphasis on their structure, development, physiology, classification, and identification. The laboratory experience includes culturing, identifying, and controlling microorganisms with an emphasis on their role in infectious disease. (Contact hours–105) *Prerequisite:BIO 111 or equivalent, or permission of instructor.* State Guarantee Transfer Course.

BIO 208 GENERAL COLLEGE MICROBIOLOGY 5 CR (4–3)
Designed for biology and health science majors. Surveys microorganisms with an emphasis on their structure, development, physiology, classification, and identification. Includes microbial diversity, functional anatomy, biochemistry, genetics, ecology, and disease. Mandatory hands-on laboratory experience covers sterile technique, microscopy, culture procedures, and biochemical and genetic analysis.
(Contact hours - 105) *Prerequisite: BIO 111 or permission of instructor.* State Guarantee Transfer Course.

BIO 211 CELL BIOLOGY 4 CR (3–2)
Involves an intensive study of the cell and its organelles. Emphasis will be on the molecular mechanisms involved in cell communication, metabolism, motility, genetics, growth, and reproduction. Includes a laboratory experience. (Contact hours–75) *Prerequisite:BIO 111 or equivalent, or permission of instructor.*

BIO 216 PATHOPHYSIOLOGY 4 CR (3-2)
Focuses on the alterations in physiological, cellular, and biochemical processes, the associated homeostatic responses, and the manifestations of disease. Prior knowledge of cellular biology, anatomy, and physiology is essential for the study of pathophysiology. (Contact hours–75) (*Prerequisite BIO 201, 202 or instructor's consent.*

BIO 220 GENERAL ZOOLOGY 5 CR (4–2)
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.
(Contact hours–90) *Prerequisite: BIO 111 or equivalent, or permission of instructor.* State Guarantee Transfer Course.

BUSINESS TECHNOLOGY EDUCATION

BTE 100 COMPUTER KEYBOARDING 1 CR (1-0)
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.
(Contact hours - 30 lab hours)

BUSINESS

BUS 102 ENTREPRENEURIAL OPERATIONS 3 CR (3-0)
Covers the major aspects of small business management to enable the entrepreneur to successfully begin his own business. This course provides the basic concepts of marketing, principles of management and finance needed to manage a small business. Further it develops the business plan and suggests methods of obtaining the financing required to launch the business. (Contact hours - 30)

BUS 110 WORKING FOR YOURSELF 2 CR (2-0)
Introduces small business start-up and offers practical training designed to provide students with a fundamental understanding of the special concerns of self-employment. The course also provides an overview of the subjects needed to become an entrepreneur, including financing, law, insurance, government regulations, record keeping, and taxes. Guest speakers with expertise in the various topics add to the weekly discussion. (Contact hours - 30)

BUS 115 INTRODUCTION TO BUSINESS 3 CR (3-0)
Focuses on the operation of the American business system. Covers fundamentals of the economy, careers and opportunities, marketing, management, production, governmental regulations, tools of business and social responsibilities. (Contact hours - 45) *Prerequisites: Reading Accuplacer score of 62 or higher OR successful completion of REA 60 OR concurrent enrollment in REA 60.*

BUS 116 PERSONAL FINANCE 3 CR(3-0)
Surveys the basic personal financial needs of most individuals. Emphasizes the basics of budgeting and buying, saving and borrowing money, the intricacies of home ownership, income tax and investments, and the wise use of insurance, wills and trusts.
(Contact hours - 15)

BUS 120 INTRODUCTION TO E-COMMERCE 3 CR (3-0)
Provides an introduction to electronic commerce—the business trend of the future. Covers definition of e-commerce, technology and software requirements, security issues, electronic payment and marketing strategies. Focuses on what to expect when creating a dot com as well as the business-to-business use of e-commerce. (Contact hours —45)

BUS 175 SPECIAL TOPICS IN BUSINESS 1-6 CR (.25 to 7-0)
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. (Contact hours — 4 to 45)

BUS 185 INDEPENDENT STUDY 1-6 CR (0 to 0)
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

BUS 187 COOPERATIVE EDUCATION/INTERNSHIP 1-6 CR (0-0)
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 stations 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.

BUS 203 INTRO TO INTERNATIONAL BUSINESS 3 CR (3-0)
Provides 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 mechanisms 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 transcations; legal aspects of international business; and developing an effective international marketing strategy.
(Contact hours — 45)

BUS 216 LEGAL ENVIRONMENT OF BUSINESS 3 CR (3-0)
Emphasizes public law, regulation of business, ethical considerations, and various relationships existing within society, government, and business. Specific attention will be devoted to economic regulation, social regulation, regulation and laws impacting labor-management issues, and environmental concerns. Students will develop an understanding of the role of law in social, political, and economic change. (Contact hours — 45)

BUS 217 BUSINESS COMMUNICATION AND REPORT WRITING 3 CR (3-0)
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. (Contact hours — 45)

BUS 226 BUSINESS STATISTICS 3 CR (3-0)
Focuses on statistical study, descriptive statistics, probability, and the binominal distribution, index numbers, time series, decision theory, confidence intervals, linear regression, and correlation. Intended for the business major. (Contact hours — 45) *Prerequisites: MAT 99 or approval of instructor.*

BUS 275 SPECIAL TOPICS 1–6 CR
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.

BUS 281 INTERNSHIP 1–6 CR
Provides continued instruction and the opportunity for students 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.

BUS 285 INDEPENDENT STUDY 1–6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

BUS 287 COOPERATIVE EDUCATION 1–6 CR
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 stations 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.

BUS 288 PRACTICUM 0–6 CR
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.

CHEMISTRY

CHE 101 INTRODUCTION TO CHEMISTRY 5 CR (4–2)
Includes the study of measurements, atomic theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base, gas laws, and condensed states. Laboratory experiments demonstrate the above concepts qualitatively and quantitatively. Designed for non-science majors, students in occupational and health programs, or students with no chemistry background. (Contact hours–90) *Prerequisite: MAT 090;* State Guaranteed Transfer Course. AA & AGS Degrees only.

CHE 103 AGRICULTURAL CHEMISTRY 4 CR (3–1.5)
Introduces the basic concepts of chemistry to the students. Areas covered are designed to focus on chemical concepts that a student needs in taking agriculture related courses. Time will also be spent on basic organic compounds– their physical and chemical properties.
(Contact hours–68)

CHE 107 FUNDAMENTALS OF GENERAL CHEMISTRY 5 CR (4-2)
Focuses on the study of measurement, states of matter, atomic/molecular theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base chemistry, gas laws, condensed states of matter, oxidation-reduction reactions periodicity, and chemical equilibrium. Designed for students with no previous chemistry background and need one semester of general chemistry. Includes laboratory experiments.
(Contact hours — 90) *Prerequisites: MAT 090 Introductory Algebra*

CHE 111 GENERAL COLLEGE CHEMISTRY I W/LAB 5 CR (4-3)
For science and engineering majors. Focuses on basic chemistry and measurement, matter, chemical formulas, reactions and equations, stoichiometry and thermochemistry. This course covers the development of atomic theory culminating in the use of quantum numbers to determine electron configurations of atoms, and the relationship of electron configuration to chemical bond theory and molecular orbital theory. The course includes gases, liquids, and solids and problem-solving skills are emphasized through laboratory experiments. (Contact hours — 105) *Prerequisites: 1 yr. high school chemistry or equivalent. Corequisite: MAT 121 or consent of instructor.* State Guarantee Transfer Course.

CHE 112 GENERAL COLLEGE CHEMISTRY II W/LAB 5 CR (4-3)
Presents concepts in the areas of solution properties, chemical kinetics, chemical equilibrium, acid-base and ionic equilibrium, thermodynamics, electrochemistry, nuclear chemistry, and organic chemistry. This course emphasizes problem solving skills and descriptive contents for these topics. Laobratory experiments demonstrate qualitative and quantitative analytical techniques. (Contact hours — 105) *Prerequisite: CHE 111;* State Guarantee Transfer Course.

CHE 205 INTRODUCTORY ORGANIC CHEMISTRY 5 CR (4-3)
Focuses on compounds associated with the element carbon, their reactions, and synthesis. Includes structure, physical properties, reactivities, synthesis and reactions of aliphatic hydrocarbons and selected functional group families including alcohols, ethers, aromatics, adehydes, ketones, amines, amides, esters, and carboxylic acids. Covers nomenclature, stereochemistry, and reaction mechanisms. Includes reactions and reaction mechanisms of aromatic compounds. Designed for students needing one semester of organic chemistry.
(Contact hours — 105) *Prerequisites: CHE 107 or CHE 112*

CHE 208 INTRODUCTION TO ORGANIC AND BIOCHEMISTRY 5 CR (4-3)
Introduces some of the major topics in modern organic chemistry and biochemistry focusing on relating structure and behavior of molecules to their functions. The chemistry of organic molecules based on their functional groups, proteins, carbohydrates, and lipids is studied. The basic conceptual background is provided to allow the student to understand disease mechanisms, clinical lab tests and drug effects.
(Contact hours — 105) Prerequisite: CHE 107 OR CHE 111 & 112

CHE 211 ORGANIC CHEMISTRY I W/LAB 5 CR (4-3)
Designed for chemistry, premedical and preveterinary students.Focuses on compounds associated with the element carbon including structure and reactions of aliphatic hydrocarbons and selected functional group families. The course covers nomenclature of organic compounds, stereochemistry, reaction mechanism such as SN1, SN2, E1 and E2. Laboratory experiments demonstrate the above concepts plus the laboratory techniques associated with organic chemistry. (Contact hours — 105) *Prerequisite: CHE 112*

CHE 212 ORGANIC CHEMISTRY II W/LAB 5 CR (4-3)
Continuation of CHE 211. Continues the investigation into the chemistry of carbon-based compounds, their reactions and synthesis including the structure, physical properties, reactivities, and synthesis of organic functional groups not covered in the first semester. The course explores functional groups including alcohols, ethers, aromatics, aldehydes, ketones, amines, amides, esters, and carboxylic acids and the reactions and reaction mechanisms of aromatic compounds. An introduction to biochemical topics may be included if time permits. Laboratory experiences demonstrate the above concepts and the laboratory techniques associated with organic chemistry.
(Contact hours — 105) *Prerequisite: CHE 211.*

CHE 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CHE 285 INDEPENDENT STUDY 1-6 CR
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. Allows a student to complete a course in a semester when the course has not been offered or has been canceled. The option to make independent study available is at the discretion of qualified faculty and the department chair. The student is limited to the number of independent study courses taken per semester. *Prerequisite: Instructor permission.*

COMPUTER INFORMATION SYSTEMS

CIS 110 INTRODUCTION TO THE PC 1 CR (1-0)
Provides the beginning computer user with hands-on experience in the elementary use of the personal computer. This course introduces the basic feature of and the terminology associated with personal computers, including topics such as database, spreadsheet, and word processing. (Contact hours — 15)

CIS 115 INTRODUCTION TO COMPUTER INFORMATION SYSTEMS 3 CR (3-0)
Focuses on an overview of the needs for and roles of computer information systems. Emphasizes computer requirements in organizations, history, hardware functions, programming, systems development, and computer operations. Introduces computer applications. (Contact hours — 45) *Prerequisite: KEYBOARD PROFICIENCY OF 30 WPM*

CIS 117 INTRODUCTION TO TECHNICAL APPLICATIONS 2 CR (2-0)
Reviews standard software packages available to support a microcomputer-based workstation. Included are description of hands-on work with word processors, spreadsheets, electronic presentations, and other common application packages. (Contact hours — 30)

CIS 118 INTRO TO PC APPLICATIONS 3 CR (3 -0)
Introduces basic computer terminology, file management, and PC system components. Provides an overview of office application software including word processing, spreadsheets, databases, and presentation graphics. Includes the use of a web browser to access the Internet.
(Contact hours — 45)

CIS 136 MICROSOFT OFFICE SPECIALIST CERTIFICATION: WORD 1 CR (1-0)
Prepares students for the Microsoft Office Specialist certification examination for Word. Students use software to determine strengths and weaknesses and elect to review and prepare for either the Core or Expert level exam. (Contact hours — 15) *Prerequisite: CIS 135 or instructor permission based on prior experience.*

CIS 149 MICROSOFT OFFICE SPECIALIST CERTIFICATION: ACCESS 1 CR (1-0)
Prepares students for the Microsoft Office Specilist certification examination for Access. Students use software to determine strengths and weaknesses and elect to review and prepare for the Core level Certification exam. (Contact hours — 15) *Prerequisite: CIS 145 or instructor permission based on prior experience.*

CIS 159 MICROSOFT OFFICE SPECIALIST CERTIFICATION: EXCEL 1 CR (1-0)
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 MOS test is not included in this course. (Contact hours — 15) *Prerequisite: CIS 155 or instructor permission based on prior experience.*

CIS 169 MICROSOFT OFFICE SPECIALIST CERTIFICATION: POWERPOINT 1 CR (1-0)
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. (Contact hours — 15) *Prerequisite: CIS 165 or instructor permission based on prior experience.*

CIS 175 SPECIAL TOPICS .25 to 6 CR (.25 to 6-0)
Provides students with a vehicle to pursue in-depth exploration of special topics of interest. (Contact hours — 4 to 45)

CIS 234 MICROSOFT OFFICE SPECIALIST CERTIFICATION PREPARATION: EXPERT WORD 1 CR (1-0)
Covers the competencies required to pass the Microsoft Officer Specialist (MOS) Expert Word Exam. (Contact Hours - 15) *Prerequisite: CIS 118 or CIS 138 or Instructor Approval.*

CIS 259 MICROSOFT OFFICE SPECIALIST CERTIFICATION PREPARATION: EXPERT EXCEL 1 CR (1-0)
Covers the competencies required to pass the Microsoft User Specialist (MOS) Excel Expert Exam. (Contact Hours - 15) *Prerequisite: CIS 118 or CIS 159 or Instructor Approval.*

CIS 275 SPECIAL TOPICS 1-6 CR (1 to 6-0)
Provides students with a vehicle to pursue in-depth exploration of special topics of interest. (Contact hours — 4 to 45)

CIS 285 INDEPENDENT STUDY 1-6 CR
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.*

CIS 287 COOPERATIVE EDUCATION 1-6 CR
Provides students an opportunity to gain practical experience in applyng 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 ow rork site supervisor.

CIS 289 CAPSTONE 1-6 CR
Serves as the capstone course for CIS majors. Incorporates projects that allow students to develop advanced techniques and assemble information from different courses. Most projects will include the creation of interactive application programs for the non-computer user and require research beyond the classroom to prepare the student for entry level employment in a variety of situations. *Prerequisite: Sophomore standing.*

COMMUNICATION

COM 115 PUBLIC SPEAKING 3 CR (3-0)
Combines the basic theory of speech communication with public speech performance skills. Emphasizes is on speech delivery, preparation, organization, support, and audience analysis. (Contact hours — 45)

COM 125 INTERPERSONAL COMMUNICATION 3 CR (3-0)
Examines the communication involved in interpersonal relationships occurring in family, social and career situations. Relevant concepts include self-concept, perception, listening, nonverbal communication, and conflict. (Contact hours — 45)

COM 175 SPECIAL TOPICS 1-6 CR (0-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

COM 217 GROUP COMMUNICATION 3 CR (3-0)
Examines group communication theories with an emphasis on leadership and group behaviors. The course provides opportunities for group participation.

COM 219 GROUP DYNAMICS 3 CR (3-0)
Examines group communication theories with an emphasis on leadership and group behaviors. The course provides opportunities for group participation. (Contact hours - 45)

COM 220 INTERCULTURAL COMMUNICATIONS 3 CR (3-0)
Explores the link between culture and communication and will develop and/or enhance communication skills and the abilities appropriate to a multicultural society. Emphasis will be on understanding diversity within and across cultures. Relevant concepts include perception, worldview, context, ethics, language, and nonverbal communication.
(Contact hours - 45) State Guaranteed Transfer Course.

COSMETOLOGY

(All COS, EST and NAT courses are a part of the Cosmetology Program and cannot be taken as independent courses)

COS 103 SHAMPOOS, RINSES, & CONDITIONERS I 1 CR (1-0)
Introduces various types of scalp treatments and shampoos. Enables student to recognize and treat disorders of hair and scalp. Covers product knowledge and proper massage techniques to help control disorders and to cleanse the hair and scalp. Includes terminology dealing with hair structure, scalp, and hair disorders. Provides training in a lab or classroom setting. (Contact hours - 15)

COS 110 INTRODUCTION TO HAIR COLORING 2 CR (1-1.5)
Provides theory pertaining to the law of color, theory of color, chemistry of color, product knowledge, and analysis of hair and scalp. Covers basic techniques and procedures for the application of hair coloring.
(Contact hours — 37.5)

COS 111 INTERMEDIATE I: HAIR COLORING 2 CR (0-3)
Focuses on theory and practical application of color products, formulations of color, level and shades of color. Examines techniques in a specialized class or in a supervised salon setting. (Contact hours — 45) *Prerequisite: COS 110* .

COS 120 INTRODUCTION TO HAIR CUTTING 2 CR (1-1.5)
Introduction to the theory relevant to patron protection, angles, elevations, and the analysis of hair textures as related to hair cutting. Covers the proper use and care of hair cutting implements. Focuses on basic hair cutting techniques using all cutting implements. Disinfection, sanitation procedures as they relate to haircutting.
(Contact hours — 37.5)

COS 121 INTERMEDIATE I: HAIR CUTTING 2 CR (0-3)
Focuses on theory related to facial shapes and head and body forms determine the client's appropriate haircut. Incorporates practical applications of hair cutting techniques in specialized classes or in a supervised salon (clinical setting). (Contact hours — 45) *Prerequisites: COS 120* .

COS 130 INTRODUCTION TO HAIR STYLING 2 CR (1-1.5)
Combines theory with the practical application of roller placement, shaping, pincurls, finger waves, air forming iron curling, soft pressing and hard pressing. (Contact hours — 37.5)

COS 131 INTERMEDIATE I: HAIR STYLING 2 CR (0-3)
Focuses on the accepted methods of styling hair, air forming, roller sets, finger waves, pin curls, braiding and hair pressing. (Contact hours — 45) *Prerequisite: COS 130.*

COS 140 INTRODUCTION TO CHEMICAL TEXTURE 1 CR (1-0)
Introduces a combination of theory and practice focusing on the analysis of hair and scalp, proper equipment and product knowledge. Includes basic techniques in permanent waving and chemical relaxing. Provides training in a classroom or lab setting on mannequins or live models.
(Contact hours — 15)

COS 141 INTERMEDIATE I: CHEMICAL TEXTURE 1 CR (0-1.5)
Emphasizes theory and practical application of permanent waves and chemical relaxers in specialized classes or a supervised salon setting. Enables the student to practice different wrapping techniques required by trend styles. (Contact hours —22.5) *Prerequisites: COS 140.*

COS 150 LAWS, RULES & REGULATIONS 1 CR (1-0)
Provides instruction on the laws,rules and regulations and how they govern the cosmetology and barber industry. The affects these on the student, licensed individual, salons and school owners. (Contact hours — 15)

COS 160 INTRODUCTION TO DISINFECTION, SANITATION & SAFETY 2 CR (1-1.5)
Introduces the various methods of disinfection, sanitation, and safety as used in the cosmetology industry. Includes classroom study of bacteriology and the terminology dealing with cosmetology.
(Contact hours - 37.5)

COS 161 INTERMEDIATE I: DISINFECTION, SANITATION & SAFETY 1 CR (0-1.5)
Focuses on the theory and daily practice of proper methods of disinfection, sanitation and safety procedures as related to all phases of cosmetology. Covers terminology and training of disinfection, sanitation and safety procedures. Also includes customer service in a supervised salon (clinical) setting or specialized class. (Contact hours - 22.5) *Prerequisites: COS 160.*

COS 203 SHAMPOOS, RINSES & CONDITIONERS II 1 CR (0-1.5)
Provides theory and practical training in shampoos,rinses and conditioners. Examines advanced techniques to prepare the student for employement. Includes preparation for the State Board Licensing Examination in shampoos, rinses and conditioners. . (Contact hours - 22.5) *Prerequisites: COS 103.*

COS 210 INTERMEDIATE II: HAIR COLORING 2 CR (0-3)
Provides continued instruction in the theory and practical application of color products, formulations of color, level and shades of color. Enables students to practice techniques in a specialized class or in a supervised salon setting. (Contact hours — 45) *Prerequisites: COS 111.*

COS 211 ADVANCED HAIR COLORING 2 CR (0-3)
Provides continued instruction on advanced theory and practical tech niques in hair coloring. Focuses on the recognition of color problems and color correction procedures. Covers advanced techniques and product knowledge to prepare the student for employment. Prepares the student for the State Board Licensing Eamination pertaining to hair coloring.
(Contact hours — 45) *Prerequisites: COS 210.*

COS 220 INTERMEDIATE II: HAIR CUTTING 2 CR (0-3)
Provides continued instruction in the theory related to facial shapes, head and body forms to determine the client's appropriate haircut. Incorporates practical applications of hair cutting techniques. (Contact hours — 45) *Prerequisites: COS 121*

COS 221 ADVANCED HAIR CUTTING 2 CR (0-3)
Focuses on advanced cutting techniques using all the cutting tools. Emphasizes current fashion trends. Includes student preparation for the State Licensure examination. (Contact hours — 45) *Prerequisites: COS 220.*

COS 230 INTERMEDIATE II: HAIR STYLING 2 CR (0-3)
Provides continued instruction on accepted methods of styling hair, air forming, roll set, finger waves and hair pressing. Examines techniques in specialized classes or in a supervised salon setting. (Contact hours — 45) *Prerequisites: COS 131.*

COS 231 ADVANCED HAIR STYLING 1 CR (0-1.5)
Focuses on theory and advanced techniques in all phases of hair styling to prepare the student for employment. Training is a combination of supervised salon (clinical) work and specialized classes. Includes student preparation for the State Board Licensing Examination relating to hairstyling. (Contact hours — 22.5) *Prerequisites: COS 230*
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COS 240 INTERMEDIATE II: CHEMICAL TEXTURE 1 CR (0-1.5)
Provides continued instruction in the theory and practical application of permanent waves and chemical relaxers in specialized classes or a supervised salon setting. Enables students to practice different wrapping techniques required by trend styles. (Contact hours — 22.5) *Prerequisites: COS 141.*

COS 241 ADVANCED CHEMICAL TEXTURE 1 CR (0-1.5)
Focuses on advanced techniques to prepare the student for employment and the changes in current industry standards. Instruction is provided in specialized classes or supervised salon (clincial) setting. Includes student preparation for the State Board Licensing Examination pertaining to permanent waves and chemical relaxers. (Contact hours — 22.5) *Prerequisites: COS 240.*

COS 250 MANAGEMENT, ETHICS, INTERPERSONAL SKILLS & SALESMANSHIP 1 CR (1-0)
Emphasizes the importance of salon management and the knowledge and skills necessary to build a successful business. Focuses on the importance of interpersonal skills and basic techniques in salesmanship and customer services. Integrates job readiness skills and professionnel ethics. (Contact hours — 15)

COS 260 INTERMEDIATE II: DISINFECTION, SANITATION & SAFETY 1 CR (1-1)
Provides continued study of theory and practice of proper methods of sterilization, disinfection, sanitation and safety procedures as related to all phases of the industry. Covers terminology and training of disinfection, sanitation and safety procedures. The individual responsibility to provide a safe work enviroment is practiced. (Contact hours - 37.5) *Prerequisites: COS 161.*

COS 261 ADVANCED: DISINFECTION, SANITATION & SAFETY 1 CR (0-1.5)
Provides advanced training on decontamination and safety practices in a supervised salon and/or classroom setting. Examines advanced techniques that prepare the student for employment. Includes student preparation for the State Board Licensing Examination in decontamination and safety for all aspects of the industry. Study of OSHA requirements for schools and salon are done in a theory or practical setting. (Contact hours - 22.5) *Prerequisites: COS 260.*

COS 275 SPECIAL TOPICS 0.5-6 CR
Provides students with a vehicle to pursue in-depth exploration of special topics of interest. (Contact hours — 7.5-90)

COS 279 SEMINAR/WORKSHOP: 0.5-6 CR
This course provides students with an experiential learning opportunity. (Contact hours — 7.5 - 90)

COS 280 INTERNSHIP 0.5-6 CR
This course provides students with the opportunity to supplement coursework with practical work experience related to their educational programs. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instruction. (Contact hours -- 7.5 - 90)

COS 285 INDEPENDENT STUDY 0.5-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. (Contact hours — 7.5 - 90)

COS 288 PRACTICUM 0.5-10 CR
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. (Contact hours -- 7.5 - 150)

COS 289 CAPSTONE 1-3 CR
Provides advanced training in all course areas and prepares student for the State Board of Cosmetology Licensing Exam. Hours will be arranged. (Contact hours -- 15 - 45) *Prerequisites: Student must have acquired 1,000 hours or more.*

COS 290 PROFESSIONAL DEVELOPMENT/ CONTINUING EDUCATION 0.5-6 CR
Provides students with a vehicle to pursue in-depth exploration of special topics of interest. (Contact hours -- 7.5 - 90)

CRIMINAL JUSTICE

CRJ 110 INTRO TO CRIMINAL JUSTICE 3 CR (3-0)
Introduces a study of the agencies and processes involved in the criminal justice system: the legistature, the police, the prosecutor, the public defender, the courts, and corrections. Includes 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. (Contact hours — 45)

CRJ 125 LAW ENFORCEMENT OPERATIONS 3 CR (3-0)
Examines the complexity and multi-dimensional aspects of the law enforcement role and career; law enforcement discretion; law enforcement values and culture in modern America. Covers the role and functions of law enforcement in occupational, social, political and organizational context. (Contact hours - 45) *Prerequisites: CLEA110.*

CRJ 135 JUDICIAL FUNCTIONS 3 CR (3-0)
Examines the criminal process with an analysis of the major judicial decision-makers, i.e. prosecutors, defense attorneys, judges, and the discretionary aspects of adjudication. (Contact hours - 45)

CRJ 145 CORRECTIONAL PROCESS 3 CR (3-0)
Focuses on the post-conviction corrections process, the development of a correctional philosophy, theory, and practice, a description of institutional operation, programming and management, and community-based corrections, probation, and parole. (Contact hours — 45)

CRJ 146 COMMUNITY BASED CORRECTIONS 3 CR (3-0)
Introduces an analysis of community based correctional programs and procedures. Emphasizes the environment and the relationship to public safety, reintegration and punishment. (Contact hours — 45)

CRJ 147 INSTITUTIONAL-BASED CORRECTIONS 3 CR (3-0)
Focuses on a study of the Correctional Institution, including the role of correctional personnel relative to institutional programs. (Contact hours — 45) *Prerequisites: CRJ 110.*

CRJ 150 VICTIMS OF CRIME AND TRAUMA 3 CR (3-0)
Introduces the student to the role the crime victim plays in the Criminal Justice System. The traditional response that a crime victim receives from the system will be studied and the psychological, emotional and financial impact these responses have on victimization will be analyzed.
(Contact hours — 3)

CRJ 180 INTERNSHIP 1-6 CR
Provides placement in the criminal justice field to integrate theory with practice. (Contact hours — 15-90)

CRJ 185 INDEPENDENT STUDY 1-6 CR
This course meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.
(Contact hours — 15-90)

CRJ 205 PRINCIPLES OF CRIMINAL LAW 3 CR (3-0)
Focuses on common law and statutory law crimes, the Model Penal Code, elements defining crimes and penalties, defenses to criminal accusations, and definitions and distinctions between criminal and civil law.
(Contact hours - 45)

CRJ 235 DELINQUENT BEHAVIOR 3 CR (3-0)
Focuses on the adolescent who violates social and legal norms and the consequences for the individual and society. Emphasizes the social and psychological factors influencing individual delinquent patterns.
(Contact hours - 45)

CRJ 236 CRJ RESEARCH METHODS 3 CR (3-0)
Introduces and applies methods for criminal justice and criminology with an emphasis on the scientific method and the role of empirical inquiry into crimincal justice and criminology. This course will include the study of methodologies of data collection and analysis, the logic of research, the role of theory, measurement, sampling and research designs. Field research and the professional norms and ethics of criminal justice and criminology research will also be covered.

CRJ 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

CRJ 285 INDEPENDENT STUDY 1-6 CR
This course meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.
(Contact hours — 15-90)

COMPUTER WEB

CWB 110 COMPLETE WEB AUTHORING 3 CR (3-0)
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.
(Contact Hours – 45)

CWB 130 COMPLETE WEB EDITING TOOLS 3 CR (3-0)
Provides tools used for designing and building Web pages that are easy to use and have a pleasing look. The student will develop Web pages using a web page development program. Use of images, forms, frames, tables, templates and layers will be covered. (Contact Hours – 45)

CWB 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CWB 245 COMPLETE WEB ANIMATION: FLASH 3 CR (3-0)
This course is the combination of CWB 240, CWB 241 and CWB 242.

CWB 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CWB 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. *Permission of the instructor.*

COOPERATIVE WORK EXPERIENCE

CWE 187 COOPERATIVE WORK EXPERIENCE 2 to 8 CR (2 to 8-0)
Freshman student is provided an extension and application of classroom instruction through a supervised work experience that is related to the student's educational and career goals. Credit is awarded on the basis of time spent on the job and completion of additional requirements such as learning objectives, record of experiences, and final term report.
(Contact hours — 80-320)

CWE 287 COOPERATIVE WORK EXPERIENCE 2 to 8 CR (2 to 8-0)
Sophomore student is provided an extension and application of classroom instruction through a supervised work experience that is related to the student's educational and career goals. Credit is awarded on the basis of time spent on the job and completion of additional requirements such as learning objectives, record of experiences, and final term report.
(Contact hours — 80-320)

COLORADO YOUNG FARMERS

CYF 101 YOUNG FARMER LEADERSHIP 3 CR (3-0)
This course gives students the opportunity to build communication and leadership skills, upgrade agricultural production practices, and to improve their farm, ranch or agriculturally related businesses. (Contact hours — 60)

CYF 110 BUILDING LEADERSHIP SKILLS 3 CR (3-0)
Focuses on building communication and leadership skills while participating in Young Farmer chapter leadership roles. Enables the student to learn to assess the business and environmental costs and benefits of applying best management practices, and to develop business opportunities through new enterprises and alternative marketing.
(Contact hours — 60)

CYF 122 PROFESSIONAL DEVELOPMENT 3CR (3-0)
Class topics include advanced community development studies, using new technologies to increase production while lowering input costs, and developing the professional skill necessary for operating a successful farm, ranch or agribusiness operation. (Contact hours — 60)

CYF 175 SPECIAL TOPICS 3 CR (3-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CYF 176 SPECIAL TOPICS 3 CR (3-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CYF 177 SPECIAL TOPICS 3 CR (3-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CYF 185 INDEPENDENT STUDY 3 CR (3-0)
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.

CYF 275 SPECIAL TOPICS 3 CR (3-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CYF 276 SPECIAL TOPICS 3 CR (3-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CYF 277 SPECIAL TOPICS 3 CR (3-0)
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DANCE

DAN 106 HIP HOP DANCE II 1 CR (0-2)
Includes traditional jazz, ballet and street dancing techniques as well as. Warm-up exercises such as body toning and stretching. Students will learn diagonal and center step combinations leading to hip-hop dance routines.

DAN 115 COUNTRY SWING I 1 CR (0-2)
Includes many styles and various combinations of steps for Western dance music. Will also teach the students how to convert combinations of others dances of traditional and fad as they become popular.
(Contact hours -- 30)

DAN 116 COUNTRY SWING II 1 CR (0-2)
Teaches advanced steps and dancing skills which will enable to Student to enjoy the art of dancing for leisure time activity. (Contact Hours -- 30)

DAN 129 INTRODUCTION TO DANCE 1 CR (0-2)
Introduces the art of dance and movement expression from a variety of viewpoints: historical, cultural, aesthetic, critical and creative. Examines the art and craft of dance as an expression of culture and community while exploring personal expression, imagery, dance techniques and performance qualities. (Contact hours–30)

DAN 130 DANCE SAMPLER 1 CR (0-2)
Introduces the beginning dancer to popular dances through a social dance sampler in Salsa, Swing, and Country Western Dance technique, footwork, body posturing, rhythms, and dance floor etiquette. Examines a variety of dances such as Salsa`s Mambo, Cha-Cha, and Rumba; Swing`s Lindy Hop (jitterbug); and Country Western`s Two Step, Cowboy Waltz, Cotton-Eyed Joe and various Country Western line dances.
(Contact hours–30)

DAN 143 TAP I 1 CR (0-2)
Introduces basic tap dance movements and techniques. The shuffle, ball change, brush, flap heel drop, stomp, and stamp step are covered.
(Contact Hours-30)

DIESEL POWER MECHANICS

DPM 101 DIESEL SHOP ORIENTATION 2 CR (2-0)
Focuses on maintaining a safe and clean working heavy duty diesel shop. Emphasis is placed on the proper use and care for hand, electric, air and hydraulic tools safely. Covers how to clean equipment properly, to handle and dispose of hazardous materials correctly, and to apply mandated regulations. Emphasis is also placed on proper lifting equipment. (Contact hours --30)

DPM 103 DIESEL ENGINES I 4 CR (2-3)
Covers the theory and operation and repair of diesel engines with emphasis on cylinder heads and valve trains dignosis and repair. Also introduces the cooling system's importance with diagnosis and repair. Enables the student to diagnose, test, and repair cylinder heads and cooling systems on diesel engines. (Contact hours -- 75) *Prerequisite: DPM 101*

DPM 105 HEAVY DUTY POWERTRAINS I 3 CR (1-3)
Focuses on drive axles and universal joints of heavy duty trucks and equipment. Students will cover operations, tests, removal, inspections, and repair of heavy duty drivelines, axles, and differentials. (Contact hours -- 60) *Prerequisite: DPM 101*

DPM 106 DIESEL FUEL SYSTEMS 3 CR (1-3)
Covers the theory of operation and repair of fuel injection systems. Provides laboratory assignments that involve disassembly, assembly, and service procedures on fuel system components. (Contact hours – 60)
Prerequisite: DPM 101

DPM 111 PREVENTIVE MAINTENANCE I 3 CR (1-3)
Enables the student to perform preventive maintenance on heavy equipment and trucks, and complete appropriate maintenance records. Addresses the process of diagnostics and troubleshooting. Focuses on the importance of preventive maintenance. (Contact hours – 60)
Prerequisite: DPM 101

DPM 122 HYDRAULIC SYSTEMS II 3 CR (1-3)
Offers instruction on the repair, replacement, measuring, and subsequent adjustments of components. Identification and repairing pumps, control valves, and cylinders are stressed within this course. (Contact hours – 60)
Prerequisite: DPM 101

DPM 140 HEAVY DUTY STEERING & SUSPENSION I 3 CR (1.5-2.5)
Emphasizes lecture and related lab in the diagnosis and service of Heavy Duty mechanical and air suspension systems, wheels/tires and pressure management systems. (Contact hours – 60) *Prerequisite: DPM 101*

DPM 203 DIESEL ENGINES II 4 CR (2-3)
Covers the theory of operation and repair of diesel engines with emphasis on the cylinder block in big bore engines. Enables the student to disassemble, inspect, and reassemble engines. (Contact hours – 75)
Prerequisite: DPM 101

DPM 207 HEAVY DUTY BRAKES II 3 CR (1-3)
Teaches instruction in general service and maintenance procedures for the heavy-duty truck air brake system and its related pneumatic components. Operational checks, performance testing, and verifying system compliance with regulations (FMVSS No. 121) will be discussed. (Contact hours 60)
Prerequisite: DPM 101

DPM 211 PREVENTIVE MAINTENANCE II 3 CR (1-3)
Focuses on preventive maintenance on heavy duty equipment as well as recording critical information for customer. Enables students to grasp the importance of preventive maintenance while gaining an understanding of how components work. (Contact hours -- 60) *Prerequisite: DPM 101*

DPM 222 HEAVY DUTY LIGHTING & INSTRUMENTATION 4 CR (2-3)
Provides students with diagnosis and repair of lighting systems found on medium/heavy duty trucks and equipment. Emphasis on inspecting and testing of electrical circuits, switches and interfacing through data bus with on board computers. (Contact hours – 75) *Prerequisite: DPM 101*

DPM 240 HEAVY DUTY STEERING & SUSPENSION II 3 CR (1.5-2.5)
Emphasizes lecture and related lab in the diagnosis and service of Heavy Duty standard and air assisted steering along with chassis and frame alignment (Contact hours – 60) *Prerequisite: DPM 101*

DRIVING

DRV 130 PREPARING FOR CDL 2 CR (1–1.5)
Prepares students for the CDL written test with detailed study guides in conjunction with the Colorado CDL manual. Students will learn to conduct walk-around inspections and become familiar with the course layout and driving portion of the test. (Contact hours - 37.5)

EARLY CHILDHOOD EDUCATION

ECE 100 PRE-LICENSING TRAINING FOR FAMILY CHILD CARE PROVIDERS 1 CR (1-0)
Provides the educational training necessary to meet the hours and categories of training required by the Colorado Department of Human Services to open a licensed child care facility for children ages 2-12, with no more than two children under the age of two. Upon completion of 15 hours of training, in the areas listed below, the student will have met the academic training requirements of the Colorado Department of Human Services, needed to open a licensed child care facility for children ages 2-12, with no more than two children under the age of two. (Contact hours — 15)

ECE 101 INTRODUCTION TO EARLY CHILDHOOD PROFESSION 3 CR (3-0)
Provides an introduction to Early Childhood Education. Includes the eight key areas of professional knowledge: Child Growth and Development; Health, Nutrition and Safety; Developmentally Appropriate Practices; Guidance; Family and Community Relationships; Diversity; Professionalism; Administration and Supervision. Focuses on ages birth through age eight. (Contact hours — 45)

ECE 102 INTRODUCTION TO EARLY CHILDHOOD LAB TECHNIQUES 3 CR (1-4)
Focuses on a classroom seminar and 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. Addresses ages birth through age eight. (Contact hours — 75) *Prerequisite or Corequisite: ECE 101.*

ECE 103 GUIDANCE STRATEGIES FOR CHILDREN 3 CR (3-0)
Explores guidance theories, applications, goals, techniques and factors that influence expectations, classroom management issues, and prosocial skills. Addresses ages birth through age 8. (Contact hours — 45)

ECE 108 THE ASSESSMENT PROCESS IN EARLY CHILDHOOD EDUCATION 1 CR (0-2)
Focuses on exposing students to a wide variety of screening tools and evaluations appropriate for children birth to eight years of age. Enables students to gain beginning knowledge in the selection of developmental screening tools and evaluations important to the IFSP/IEP. (Contact hours —30)

ECE 111 INFANT AND TODDLER THEORY AND PRACTICE 3 CR (3-0)
Presents an overview of theories, applications (including observations) and issues pertinent to infant and toddler development in group and\or family settings. Includes state requirements for licensing, health, safety and nutrition issues. (Contact hours — 45)

ECE 112 INTRODUCTION TO INFANT/TODDLER LAB TECHNIQUES 3 CR (1-4)
Includes a classroom seminar and 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. Addresses ages prenatal through age 2. (Contact hours — 75) *Prerequisite or Corequisite: ECE 111.*

ECE 130 THE PROFESSIONAL NANNY 3 CR (3-0)
Explores the nanny's role and responsibilities when working with today's families. Includes professional relationships, ethics, commitment to children, the challenges and rewards of working in a private home, communications, taking care of one's own well-being as a nanny, social skills, travel, the process of seeking a nanny position, employer responsibilities, the nanny job description and written employment agreement, and starting and leaving a job. (Contact hours — 45)

ECE 131 NANNY METHODS AND TECHNIQUES 3 CR (3-0)
Explores the competencies required of a nanny to care for children in a private home setting. Includes creating a safe home environment, planning and implementing developmentally appropriate play/learning activities for children, traveling with children, children's clothing, children's equipment and play materials, sleep routines, personal care, feeding, and mealtimes. Incorporates a lab where students gain practical experience in providing in-home care for children.Explores current topics, issues and activities related to one or more aspects of the early childhood profession. (Contact hours — 45)

ECE 175 SPECIAL TOPICS 1-6 CR
Explores current topics, issues and activities related to one or more aspects of the early childhood profession. (Contact hours — 15-90)

ECE 178 WORKSHOP 1-6 CR
Provides students with an experiential learning opportunity. (Contact hours — 15-90)

ECE 179 SEMINAR 1-6 CR
Provides students with an opportunity to examine aspects of early childhood education in detail. (Contact hours — 15-90)

ECE 185 INDEPENDENT STUDY 1-3 CR
Focuses on structured, guided, and individualized research that is organized and tailored around the interests and needs of the individual student. (Contact hours — 15-90)

ECE 205 NUTRITION, HEALTH & SAFETY 3 CR (3-0)
Focuses on nutrition, health and safety as a key factor for optimal growth and development of young children. Includes nutrient knowledge, menu planning, food program participation, health practices, management and safety, appropriate activities and communication with families. Adresses ages from prenatal through age 8. (Contact hours — 45)

ECE 209 OBSERVING & UTILIZING YOUNG CHILDREN'S ASSESSMENT INSTRUMENTS 1 CR (1-0)
Examines the current research on the continuous practice of observing children. Incorporates practice with a variety of assessment instruments currently utilized in Colorado ECE programs. (Contact hours — 15)

ECE 220 CURRICULUM DEVELOPMENT: METHODS AND TECHNIQUES 3 CR (3-0)
Provides an overview of early childhood curriculum development. Includes processes for planning and implementing developmentally appropriate environments, materials and experiences, and quality in early childhood programs.(Contact hours — 45)

ECE 226 CREATIVITY AND THE YOUNG CHILD 3 CR (3-0)
Provides an emphasis on encouraging and supporting creative self expression and problem solving skills in children. Explores creative learning theories and research. Focuses on developmentally appropriate curriculum strategies in all developmental domains. Addresses ages birth through age 8. (Contact hours — 45)

ECE 228 LANGUAGE AND LITERACY 3 CR (3-0)
Presents strategies for optimum language development, literacy, social and emotional development. Supports children's language and literacy in home, classroom, and community settings. Provides appropriate teacher/child verbal interactions, classroom environments, and activities. Addresses ages birth through age 8. (Contact hours — 45)

ECE 238 CHILD GROWTH & DEVELOPMENT 3 CR (2-3)
Covers the growth and development of the child from conception through the elementary school years. Emphasizes physical, cognitive, language, social and emotional domains and the concept of the whole child and how adults can provide a supportive environment. Ages addressed: prenatal through age 12. This course has an early childhood laboratory component. (Contact hours — 45)

ECE 240 ADMINISTRATION OF EARLY CHILDHOOD CARE AND EDUCATION PROGRAMS 3 CR (3-0)
Examines Colorado's minimal licensing requirements, as well as optimal standards pertaining to the operation of programs for young children. Focuses on the director's administrative skills and role as a community advocate for young children. Addresses ages birth through age 12. (Contact hours — 45) *Prerequisites: ECE 101*

ECE 241 ADMINISTRATION: HUMAN RELATIONS FOR EARLY CHILDHOOD PROFESSIONS 3 CR (3-0)
Focuses on the human relations component of an early childhood professional's responsibilities. Includes director-staff relationships, staff development, leadership strategies, parent-professional partnerships, and community interaction. (Contact hours — 45)

ECE 256 WORKING WITH PARENTS, FAMILIES, & COMMUNITY SYSTEMS 3 CR (3-0)
Examines attitudes and family values systems and how they affect parent-professional partnerships. Addresses communication, problem-solving and conflict resolution strategies. Plans effective activites and programs for parent involvement. Addresses ages birth through 8. (Contact hours — 45)

ECE 260 EXCEPTIONAL CHILD 3 CR (3-0)
Presents an overview of typical and atypical developmental progression. Includes planning techniques, learning strategies, legal requirements and accommondations and adaptions that are necessary in order to create an intergrated classroom environment for a child with a wide range of exceptionalities. Focuses on ages birth through age 8. (Contact hours — 45) *Prerequisites: ECE 238*

ECE 265 FIRST START: INCLUDING CHILDREN WITH DISABILITIES 3 CR (3-0)
Covers services for infants, toddlers, and young children with disabilities and chronic conditions. Focuses on strategies, activities, and adaptations that assist with the inclusion of children in childcare and public school programs. Addresses ages birth through age 8. (Contact hours — 45)

ECE 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. (Contact hours — 15-90)

ECE 288 PRACTICUM: EARLY CHILDHOOD EDUCATION 1-7 CR
Provides students with advanced field experience opportunities in early childhood education programs. (Contact hours — 15-105) *Prerequisite or Corequisite: ECE 108 and ECE 209.*

ECONOMICS

ECO 101 ECONOMICS OF SOCIAL ISSUES 3 CR (3-0)
Examines the major socio-economic issues of the past century. Covers poverty and growth, education, health care, pollution and discrimination. (Contact hours --- 45) State Guarantee Transfer Course.

ECO 105 INTRODUCTION TO MACROECONOMICS 3 CR (3-0)
This course is a survey of economics. It is designed as a beginning economics class. The course covers economics theories, supply and demand, national income accounting, money and banking, market structures and contemporary economic issues. (Contact hours — 45)

ECO 201 PRINCIPLES OF MACROECONOMICS 3 CR (3-0)
Focuses on the study of the American economy, stressing the interrelationships among 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. (Contact hours — 45) State Guarantee Transfer Course.

ECO 202 PRINCIPLES OF MICROECONOMICS 3 CR (3-0)
Studies the firm, 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. (Contact hours — 45) State Guarantee Transfer Course.

EDUCATION

EDU 101 CRLA TUTOR CERTIFICATION-REGULAR 1 CR (1-0)
Introduces tutors to effective tutoring strategies. Topics include guidelines for tutoring; how to plan, conduct, and evaluate a productive tutoring session; recognizing needs of students; and developing effective learning strategies with students. (Contact hours — 15) *Prerequisites: Permission of instructor.*

EDU 175 SPECIAL TOPICS .25-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Clock hours — 3.75 to 90) *Prerequisites: Permission of instructor.*

EDU 185 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. (Contact hours — 15 to 90) *Prerequisites: Permission of instructor.*

EDU 221 INTRODUCTION TO EDUCATION 3 CR (3-0)
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. Special interest will be paid to the topic of diversity in the K-12 school system. (Contact hours — 45) *Prerequisites: College level reading and writing as demonstrated on college level placement scores.*

EDU 222 EFFECTIVE TEACHING 1 CR (1-0)
Focuses on strategies for becoming an effective teacher. Topics included are: course goals and objectives, the first day, planning a lesson, higher levels of thought, test design and grading, assessment, and teaching and learning styles. (Contact hours — 15)

EDU 250 CTE IN COLORADO 1 CR (1-0)
Explores common elements of American community college philosophy and current practices. It details the philosophy of Career and Technical Education (CTE), the federal Carl D. Perkins legislation and related guidelines for CTE, national and state regulatory agencies, the CCCS program approval process, enrollment management and advising strategies, relevant local and national issues, and quality assurance principles. (Contact hours — 15)

EDU 251 SECONDARY CTE CAPSTONE 3 CR (3-0)
This capstone course in the secondary CTE credentialing sequence offers an in-depth analysis of secondary career and technical student organizations and competitions, the Colorado Technical Act, working with exceptional students, creating and effectively deploying program advisory committees, and an overview of educational and political systems in Colorado. The final project is an analysis of the efficiency with which one's employing school district funds, operates and assesses CTE programs. (Contact hours — 30)

EDU 260 ADULT LEARNING & TEACHING 3 CR (3-0)
Examines the philosophy of community colleges and the roles and responsibilities of the faculty member within the college community. Introduces basic instructional theories and applications, with particular emphasis on adult learners. Includes syllabus development, learning goals and outcomes, and lesson plans. Emphasizes teaching to a diverse student body, classroom management, assessment and instructional technology. (Contact hours — 45)

EDU 261 TEACHING, LEARNING & TECHNOLOGY 3 CR (3-0)
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.
(Contact hours - 45) *Prerequisite: EDU 221 or Permission of instructor.*

EDU 266 ADV. COLLEGE TEACHING METHODS 1 CR (1-0)
Explores current adult learning theory, and relates this theory to the practice of teaching. It also covers a variety of factors that influence teaching and learning, including social and individual psychological aspects of adult learning, patterns of participation and motivation, the role of instructional technology, handling challenging classroom behaviors, and assessment and evaluation strategies. The main point raised and discussed throughout the course is that effective teaching requires that instructors utilize a range of teaching and assessment approaches and methods in order to enhance learning. (Contact hours — 15)

EDU 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 3.75 to 90)

EDU 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.
(Contact hours — 3.75 to 90)

ENGINEERING

EGG 271 THEORETICAL MECHANICS-STATICS 3 CR (3-0)
Emphasizes vectors, resolution and composition of forces in two and three dimensions, free body diagrams, equilibrium conditions, moments, couples, centroids, and moments of inertia. (Contact hours — 45) *Prerequisites: PHY 212*

EGG 272 THEORETICAL MECHANICS—DYNAMICS 3 CR (3-0)
Focuses on a study of kinematics and kinetics of particles and rigid bodies. Addresses the concepts of work-energy and impulse-momentum using vector notation. (Contact hours — 45) *Prerequisites: EGG 271*

EGG 275 SPECIAL TOPICS 1-6 CR
Focuses on a study of kinematics and kinetics of particles and rigid bodies. Addresses the concepts of work-energy and impulse-momentum using vector notation. (Contact hours — 15-90)

ELECTRICITY INDUSTRIAL/ COMMERCIAL

EIC 101 JOB TRAINING AND SAFETY 3 CR (2-1.5)
Studies first aid, CDL, basic use and care of personal protective equipment, use and care of climbing equipment, daily inspection and basic use of motorized equipment. (Contact hours - 52.5)

ELECTRONICS

ELT 106 FUNDAMENTALS OF AC/DC 3 CR (1-2)
Introduces the basic skills needed for many careers in electronics and related fields. Covers the operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes. Emphasizes the use of common test instruments in troubleshooting. (Contact hours - 60) *Prerequisites: EIC 101*

ELT 107 FUNDAMENTALS OF INDUSTRIAL ELECTONICS 3 CR (1-2)
Provides a basic knowledge of generators , motors, and the solid state devices and digital techniques used for industrial control applications.
(Contact hours - 60) *Prerequisites: EIC 101*

ELT 252 MOTORS AND CONTROLS 3 CR (1-2)
Enables the student to study, construct, test, and evaluate basic industrial control systems, including AC/DC motors, stepper motors, power sources, generators, tachometers, line diagrams and logic functions. Covers safety standards and preventive maintenance.
(Contact hours - 60) *Prerequisites: EIC 101*

ELT 258 PROGRAMMABLE LOGIC CONTROLLERS 3 CR (1-2)
Covers the fundamentals of programmable logic controllers (PLCs) as they are applied in robotics and automation. Includes history, terminology, typical applications, hardware, and software. Incorporates lab and project activities that address operating, monitoring, programming, troubleshooting, and repairing PLC controlled lab trainers as well as actual industrial equipment. (Contact hours - 60) *Prerequisites: EIC 101*

EMERGENCY MEDICAL SERVICES

(Also see Health Professional for additional courses.)

EMS 115 FIRST RESPONDER 3 CR (2-1.5)
Provides the student with core knowledge and skills to function in the capacity of a first responder arriving at the scene of an emergency, providing supportive care until advanced EMS help arrives.
(Contact hours — 52.5)

EMS 116 FIRST RESPONDER REFRESHER 2 CR (1-1.5)
Provides the First Responder student with needed updates and review materials to renew and maintain the First Responder certificate.
(Contact hours — 37.5) *Prerequisite: Current First Responder Certification, and CPR card.*

EMS 121 EMT FUNDAMENTALS 3 CR (3-0)
Introduces the Emergency Medical Technician (EMT) student to prehospital emergency care. The topics included in this course are Emergency Medical Services (EMS) systems, well-being of the EMT, communications, documentation, anatomy, airway management, and patient assessment.
(Contact hours — 45) *Corequisite: HPR 102, EMS 122, EMS 123 and EMS 170*

EMS 122 EMT MEDICAL EMERGENCIES 4 CR (2-2.5)
Provides the Emergency Medical Technician (EMT) student with the knowledge and skills to effectively provide emergency care and transportation to a patient experiencing a medical emergency. This course focuses on the integration of the physical exam, medical history, and pathophysiology when assessing and treating the medical patient.
(Contact hours — 75) *Corequisite: EMS 121, EMS 123 and EMS 170*

EMS 123 EMT TRAUMA EMERGENCIES 2 CR (1-1.5)
Provides the Emergency Medical Technician (EMT) student with the knowledge and skills to provide appropriate emergency care and transportation of a patient who has suffered a traumatic injury. The concepts of kinematics and the biomechanics of trauma, along with pathphysiology and injury pattens will provide the student with the ability to assess and manage the trauma patient. (Contact hours — 37.5) *Corequisite: EMS 121, EMS 122 and EMS 170.*

EMS 126 EMT BASIC REFRESHER 2 CR (1-1.5)
Provides the student with a refresher course designed to meet the recertification requirements for the State of Colorado and/or a portion of the recertification for National Registry . (Contact hours - 37.5) *Prerequisite: Current CPR card, Current or less than 36 months expired EMT Basic certification.*

EMS 130 EMT INTRAVENOUS THERAPY 2 CR (2-0)
Focuses on cognitive and skill practice as required by Colorado Prehospital Care program for EMT Basic level IV approval. Examines criteria, procedures and techniques for ICV therapy, discusses fluid and electrolyte balance and principles and treatment for shock. (Contact hours — 30) *Prerequisite: Current EMT Basic certification, or proper licensure.*

EMS 134 THE GERIATRIC PATIENT 1 CR (1-0)
Focuses on working with the elderly population and is designed for healthcare providers (EMTs, paramedics, nurses). Utilizes various readings, assignments, papers, experiences and meetings with elderly people and patients to discover new ways of viewing the elderly and communicating and working with the geriatric patient. Covers the process of assessment of the elderly patient. (Contact hours - 15) *Prerequisite: Anyone who may interact with elderly patients in their work environment.*

EMS 150 PEDIATRIC EDUCATION FOR PREHOSPITAL PROFESSIONALS 1 CR (1-0)
Provides the student with core knowledge and skills necessary to provide emergency care to the pediatric patient. (Contact hours — 15) *Prerequisite: EMT-Basic or approval from Program Coordinator.*

EMS 153 ADVANCED PATIENT ASSESSMENT & HISTORY TAKING 2 CR (2-0)
Teaches the pre-hospital health care provider techniques in assessing the patient – both medical and trauma. Covers history taking, documentation, communication and assessment techniques for the special patient. (Contact hours — 30) *Prerequisite: EMS 125 or approval from the Program Coordinator.*

EMS 170 EMT BASIC CLINICAL 1 CR (0-1)
Provides the EMT student with the clinical experience required of initial and some renewal processes. (Contact hours — 30) *Prerequisite: HPR 102, Corequisite: EMS 125.*

EMS 175 SPECIAL TOPICS .5 -10 CR (.5 TO 10-0)
Provides the student with Continuing Medical Education at the First Responder or EMT Basic Level. Courses may be combined in an entire program to meet Prehospital Care Program requirements for renewal of certificates. (Contact hours 7.5 to 150) *Prerequisite: Current certification-EMT Basic or First Responder.*

EMS 190 EMT PROFESSIONAL DEVELOPMENT .5 - 12 CR
Provides the student with the 36 hours of continuing medical education hours required for the State of Colorado Recertification at an EMT Basic level. Provide professional development continuin medical education hours for EMT basics wishing to recertify at the state or national leve. *Prerequisite: Current Colorado EMT-Basic certification.*

EMS 203 EMT INTERMEDIATE I 6 CR (3-3.5)
Course provides preparatory information and is the first part of the EMT Intermediate program. (Contact hours — 112.5) *Prerequisite: Valid EMT-Basic, HEP B vac, Current CPR cads, high school grad or GED, CPT 80, Math.*

EMS 205 EMT INTERMEDIATE II 6 CR (3-3.5)
Serves as the second course for EMT Intermediate certification. (Contact hours - 112.5) *Prerequisite: EMS 203.*

EMS 213 PRE HOSPITAL TAUMA LIFE SUPPORT 1 CR (1-0)
Provides basic and/or advanced trauma life support information and skill practice. (Contact hours - 15) *Prerequisite: EMT Basic or higher.*

EMS 214 BASIC TRAUMA LIFE SUPPORT 1 CR (1-0)
Provides students with information and skill practice to treat trauma patients in the prehospital environment. (Contact hours - 16) *Prerequisites: EMT Basic or higher.*

EMS 270 CLINICAL: EMS INTERMEDIATE 3 CR (0-3)
Provides the EMT-I student with the required field experiences as required by the Colorado Department of Health. (Contact hours - 90) *Prerequisites: EMS 203-205.*

EMS 275 SPECIAL TOPICS .5 - 10 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours - 7.5-150)

ENGLISH

ENG 30 BASIC WRITING SKILLS 2 CR (2-0)
Focuses on sentence and basic paragraph structure and development. Enables the student to 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. (Contact hours — 30) *Prerequisite: Sentence Skill Accuplacer score of 25 or higher.*

ENG 60 WRITING FUNDAMENTALS 3 CR (3-0)
Focuses on paragraph structure and development and introduces the formal essay. Enables the student to 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. (Contact hours — 45) *Prerequisite: Successful completion of ENG 30 or equivalent (grade C or higher) or Sentence Skill Accuplacer score of 50 or higher.*

ENG 90 BASIC COMPOSITION 3 CR (3-0)
Emphasizes critical thinking as students explore writing for specific purposes and audiences. Enables the student to develop skills required for college-level writing while reviewing paragraph structure and focusing on essay development. (Contact hours — 45) *Prerequisite: Completion of ENG 60 or equivalent (grade C or higher) or Sentence Skill Accuplacer score of 70 or higher.*

ENG 115 TECHNICAL ENGLISH & COMMUNICATION 3 CR (3-0)
Focuses on the written and oral communication needs of students in vocational and technical fields. Enables the student to practice written, oral, reading, reasoning, and interpersonal communication skills in order to become successful (or to remain successful) in the workplace. (Contact hours - 45) Prerequieistes: *Successful completion of ENG 30 OR Sentence Skill Accuplacer score of 50 or higher. Successful completion of REA 30 OR Reading Accuplacer score of 40 or higher.*

ENG 121 ENGLISH COMPOSITION I 3 CR (3-0)
Emphasizes the planning, writing, and revising of compositions, including the development of critical and logical thinking skills. This course includes a minimum of five compositions that stress analytical, evaluative, and persuasive/argumentative writing. (Contact hours — 45) *Prerequisite: Completion of ENG 90 or equivalent (grade C or better) or assessment. Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

ENG 122 ENGLISH COMPOSITION II 3 CR (3-0)
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. (Contact hours — 45) *Prerequisite: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

ENG 131 TECHNICAL WRITING 3 CR (3-0)
Develops skills one can apply to a variety of technical documents. Focuses on principles for organizing, writing, and revising clear, readable documents for industry, business, and government. (Contact hours — 45) *Successful completion of ENG 30 OR Sentence Skill Accuplacer score of 50 or higher. Successful completion of REA 30 OR Reading Accuplacer score of 40 or higher.*

ENG 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

ENG 201 ENGLISH COMPOSITION III 3 CR (3-0)
Provides students with skills necessary to enter into higher-level undergraduate academic discourse or professional workplace writing. ENG 201 extends students rhetorical knowledge and develops critical reading, thinking, and writing strategies in multiple specialized areas of discourse beyond what they encounter in ENG 122. In ENG 201, students deepen their rhetorical and writing skills by learning to analyze, synthesize, summarize, complex texts and incorporate this information into specific writing conventions for a defined discipline. As a more advanced composition course, ENG 201 provides interested students with the opportunity to continue their exploration of expository writing with the added benefit of learning to write for distinct audiences (format, language, level of specificity, length, and documentation style). Students will also learn effective editing and revising techniques, discipline-specific writing strategies, and how to extend their mastery of rhetorical strategies. While ENG 201 may be taught with the focus in a variety of disciplines (science writing, gender studies, literary criticism, writing in the humanities, business writing, political geography, philosophy, and so on), every discipline will allow students the opportunity to learn how to communicate with specialized audiences and adapt content to the needs of varying rhetorical situations. (Contact hours — 45) State Guaranteed Transfer Course.

ENG 221 CREATIVE WRITING I 3 CR (3-0)
Teaches techniques for creative writing. Explores imaginative uses of language through creative genres (fiction, poetry, literary nonfiction) with emphasis on the student's own unique style, subject matter and needs. (Contact hours — 45) *Prerequisites: Eng 121 or instructor's permission.*

ENG 222 CREATIVE WRITING II 3 CR (3-0)
Provides continued development of written expression in such forms as poetry, fiction, and/or nonfiction writing.(Contact hours — 45) *Prerequisites: Eng 221*

ENVIRONMENTAL SCIENCE

ENV 101 INTRO TO ENVIRONMENTAL SCIENCE 4 CR (3-2)
Provides an introduction to the basic concepts of ecology and the relationship between environmental problems and biological systems. Includes interdisciplinary discussions on biology, chemistry, geology, energy, natural resources, pollution, and environmental protection. Using a holistic approach, students will study how the foundations of natural sciences interconnect with the environment. This course includes laboratory experience. (Contact hours — 60) State Guarantee Transfer Course

EQUINE MANAGEMENT

(All EQM and EQT courses are a part of the Equine Management Program and cannot be taken as independent courses)

EQM 101 STABLE OPERATIONS I 1 CR (0-10)
Focuses on the routine daily care, grooming, feeding, stable sanitation, daily health, and feed records of horses. (Contact hours — 150) *Prerequisites: EQM.*

EQM 102 STABLE OPERATIONS II 1 CR (0-10)
Builds on EQM 101 and continues focus on the routine daily care, grooming, feeding, stable sanitation, daily health, and feed records of horses. (Contact hours — 150) *Prerequisites: EQM .*

EQM 158 EQUINE REPRODUCTION 2 CR (2-0)
Introduces horse reproduction and the various breeding and management practices found on breeding farms. Covers physiology of the mare and stallion reproductive systems, care of the stallion and the mare, mare heat detection, breeding, care of pregnant mares, foaling, problems in the foal, and care of the foal and yearling. (Contact hours — 30) *Prerequisites: ASC 102*

EQM 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

EQM 201 STABLE OPERATIONS III 1 CR (0-10)
Familiarizes the student with the routine daily care, grooming, feeding, stable sanitation, daily health, and feed records of horses. (Contact hours — 150) *Prerequisites: EQM.*

EQM 202 STABLE OPERATIONS IV 1 CR (0-10)
Familiarizes the student with the routine daily care, grooming, feeding, stable sanitation, daily health, and feed records of horses. (Contact hours — 150)

EQM 210 EQUINE HEALTH 2 CR (2-0)
Assists students in planning annual equine health programs. Introduces Students methods of prevention, recognition, and treatment of common equine diseases. (Contact hours — 30) *Prerequisites: ASC 102.*

EQM 211 EQUINE HEALTH LAB 1 CR (0-2)
Application of practical skills, methods, and techniques used to prevent and treat equine diseases and health problems. (Contact hours — 30)

EQM 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

EQM 280 EQUINE INTERNSHIP 8 CR
Students are employed or work at home on an equine operation. The work experience must cover a minimum of 320 hours with the student involved in all facets of this operation. (Contact hours — 320) *Prerequisites: EQM major.*

EQM 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. (Contact hours — 15-90) *Prerequisites: Permission from instructor.*

EQM 289 EQUINE MANAGEMENT CAPSTONE .5 CR (.5-0)
Covers information necessary for employment and job search skills. Students will receive instruction in resume writing and interviewing. (Contact hours — 8) *Prerequisites: Sophomore Equine Students*

EQUINE TRAINING

EQT 101 INTRODUCTION TO HORSE TRAINING 5 CR (1-9)
Introduces handling and care of horses. Basics of grooming, hoof care, showing at halter, equitation, and horsemanship will be covered.
(Contact hours — 105) *Prerequisite: EQM Major.*

EQT 102 BEGINNING COLT TRAINING 6 CR (0-10)
Covers an advanced level of horsemanship involving lead changes, turn arounds, and roll backs will be covered. Students that meet minimum skills requirements may continue into specialized areas of riding.
(Contact hours — 135) *Prerequisites: EQT 101.*

EQT 140 RANCH HORSE VERSATILITY 3 CR (1-3)
This is a riding intensive course designed to train the horse in the ranch horse versatility competitive events. Students will develop skills in the working cow horse, reining, ranch cutting,ranch trail,conformation, and ranch pleasure events. (Contact hours -- 60)

EQT 201 INTERMEDIATE COLT TRAINING 6 CR (0-10)
Covers halter breaking weanlings. Students will also receive instruction in longing, driving, saddling, and riding the two year old.
(Contact hours — 135) *Prerequisites: EQT 102.*

EQT 202 ADVANCED COLT TRAINING 6 CR (0-10)
Gives the student their final experience at starting and management of a young horse to meet the industry standards for which they are entering.
(Contact hours — 135) *Prerequisites: EQT 201.*

EQT 240 RANCH HORSE VERSATILITY II 3 CR (1-3)
Ranch Horse Versatility II is a continuation of Ranch Horse Versatility I. This is a riding intensive course designed to train the horse in the ranch horse versatility competitive events. Students will develop skills in the working cow horse, reining, ranch cutting,ranch trail,conformation, and ranch pleasure events. As a part of the course students will have the opportunity to travel and compete in industry competitve events. A focus of the course is to improve the level of individual skills and to gain experience in the show ring atmosphere. (Contact hours — 60) *Prerequisites: EQT 140.*

ENGLISH AS A SECOND LANGUAGE

ESL 009 LOW BEGINNING ESL 2-4 CR (2 to 4-0)
Focuses on writing, reading, listening, and speaking skills as tools for life skills in English. Incorporates practice for various work and living situations using basic English. (Contact hours – 30 to 60) *Prerequisites: Appropriate score on entrance test.*

ESL 010 HIGH BEGINNING ESL 2-4 CR (2 to 4-0)
Builds on writing, reading, listening, and speaking skills learned in the Low Beginning class. Enables students to practice various work and life skills situations using basic English. (Contact hours - 30 to 60) *Prerequisites: Appropriate score on entrance test.*

ESL 010 ENGLISH AS A SECOND LANGUAGE (OFF-CAMPUS) 1-12 CR (1 to 12-0)
Serves as an open-entry, open-exit course of study from basic to intermediate to advanced (5 levels) in speaking, listening, reading, and writing English.(Contact hours - 15 to 180) *Prerequisites: Must be 17 years old or will reach his/her 17th birthday before end of semester in class*

ESTHETICIAN

(All COS, EST and NAT courses are a part of the Cosmetology Program and cannot be taken as independent courses)

EST 110 INTRODUCTION TO FACIALS & SKIN CARE 3 CR (1-3)
Provides a basic understanding of massage manipulations when providing facials and the study of skin in both theory and practical applications. Benefints derived from proper facial and good skin care routines. Training is conducted in a classroom or lab setting using mannequins or models.
(Contact hours -- 60) *Prerequisites: COS 150.*

EST 111 INTERMEDIATE FACIALS & SKIN CARE 2 CR (0-3)
Covers theory and practical application pertaining to anatomy, skin disorders, skin types and facial shapes. Students help patrons to select the proper skin care treatment. Practical and theory application can be done in specialized classes or supervised salon (clinical) setting using models or customer service. (Contact hours -- 45) *Prerequisite: EST 110.*

EST 210 ADVANCED MASSAGE & SKIN CARE 2 CR (0-3)
Provides the student with advanced techniques in massage, skin care, and lash/brow tinting. Theory and practical procedures ready the student for employment. Instruction is provided in specialized classes or in a supervised salon (clinical) setting. Student preparation for State Board Licensing Examinatation *Prerequisite: EST 111.*

EST 211 FACIAL MAKEUP 1 CR (0-1.5)
Provides instruction on cosmetics and their functions. The importance of color theory, facial types and skin tones as they relate to facial makeup. Instruction from the basic makeup application to the corrective makeup procedure is taught. Disinfection and sanitation is taught as it pertains to all aspects of makeup. (Contact hours -- 22.5) *Prerequisite: EST 110.*

EST 212 HAIR REMOVAL 3 CR (1-3)
Provides in-depth study and practice of hair removal and the practice of patron protection and safety. Training for general waxing and body waxing procedures are provided. Demonstration of disinfection and sanitation as it pertain to Colorado rules and regulations will be practiced.
(Contact hours -- 60) *Prerequisite: EST 111.*

ETHNIC STUDIES

ETH 200 INTRODUCTION TO ETHNIC STUDIES 3 CR (3-0)
Introduces students to the issues of race and ethnicity. Emphasizes ethnic relations in the United States as it pertains to four major groups: Americans of African, Asian, Latino and Native descent. Explores issues of racial and ethnic identity, racism and discrimination, stereotyping, prejudice, segregation, colonialism, integration and acculturation.
(Contact hours -- 60) State Guarantee Transfer Course.

FRENCH

FRE 111 FRENCH LANGUAGE I 5 CR (5-0)
Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the French language.
(Contact hours— 75).

FRE 112 FRENCH LANGUAGE II 5 CR (5-0)
Continues French I in the development of functional proficiency in listening, speaking, reading and writing the French language. (Contact hours — 75) *Prerequisites: FRE 111*

FIRE SCIENCE TECHNOLOGY

FST 100 FIREFIGHTER I 9 CR (6-4.5)
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 is a lecture and lab course for meeting the NFPA 1001, level I, standard using IFSTA Essentials. (Contact hours — 157.5)

FST 101 FIREFIGHTER II 6 CR (6-0)
Addresses the requirements necessary to perform at the second level of progression as identified in National Fie Protection Association (NFPA) 1001, Fire Fighter Professional Qualifications. This is a lecture and lab course for meeting the NFPA 1001, level II, standard. (Contact hours — 90)

FST 102 PRINCIPLES/EMERGENCY SERVICES 3 CR (3-0)
Provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics. (Contact hours — 45)

FST 103 OCCUPATIONAL SAFETY & HEALTH FOR FIRE 3 CR (3-0)
Introduces the basic concepts of occupational health and safety as it relates to emergency service organizations. Topics include risk evaluation and control procedures for fire stations, training sites, emergency vehicles, and emergency situations involving fire, EMS, hazardous materials, and technical rescue. Upon completion of this course, students should be able to establish and manage a safety program in an emergency service organization. (Contact hours — 45)

FST 104 FIRE PROTECTION SYSTEMS 3 CR (3-0)
Provides information relating to the features of design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppressions systems, water supply for fire protection and portable fire extinguishers. (Contact hours — 45)

FST 105 BUILDING CONSTRUCTION FOR FIRE PROFESSIONALS 3 CR (3-0)
Provides the components of building construction that relate to fire and life safety. The focus of this course is on firefighter safety. The elements of consideration and design of structures are shown to be key factors when inspecting buldings, preplanning fire operations, and operating at emergencies. (Contact hours — 45)

FST 106 FIRE PREVENTION 3 CR (3-0)
Provides fundamental information regarding the history and philosophy fo fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection sytems, fire investigation, and fire and life-safety education. (Contact hours — 45)

FST 107 HAZMAT OPERATIONS (LEVEL I) 3 CR (3-0)
Introduces hazardous materials incidents, recognizing and identifying hazadous materials, planning response, implementing response procedures, decision making, and continued evaluation at the awareness and operation level. (Contact hours — 45)

FST 175 SPECIAL TOPICS 1-12 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

FST 201 INSTRUCTIONAL METHODOLOGY 3 CR (3-0)
Covers the role and responsibility of the fire service instructor. Includes oral communication skills, concepts of learning, planning and development of lesson plans, instructional materials and delivery methods, testing and evaluations, records and reports, and demonstration of instructional abilities. Fire Instructor I State Certificate is available. (Contact hours — 45)
Prerequisite: FST 100, FST 102, or permission of instructor.

FST 202 STRATEGY & TACTICS 3 CR (3-0)
Provides an in-depth analysis of the principles of fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground. (Contact hours — 45)
Prerequisite: FST 102, FST 104, FST 107 or permission of instructor.

FST 204 PRINCIPLES OF CODE ENFORCEMENT 3 CR (3-0)
To provide the students with the fundamental knowledge of the role of code enforcement in a comprehensive fire prevention program. (Contact hours — 45) *Prerequisite: FST 102, FST 104, FST 105 or permission of instructor.*

FST 205 FIRE INVESTIGATION I 3 CR (3-0)
Provides the student with the fundamentals and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firesetter, and types of fire causes. (Contact hours — 45)

FST 206 FIRE CO SUPERVISION & LEADERSHIP 3 CR (3-0)
Covers fire department organization, management philosophies, leadership traits, time management, group dynamics, communications, motivation counseling, conflict resolution, and employee discipline. Meets components of Fire Officer I State Certificate. (Contact hours — 45)
Prerequisites: ENG 121, FST 102, FST 202 or permission from instructor.

FST 259 WILDLAND FIREFIGHTING TACTICS 3 CR (3-0)
Focuses on management of uncontrolled fire burning, urban/wildland interface, strategy and tactics used in controlling wild land fires, prevention methods, and incident command practices. (Contact hours — 45)

FST 275 SPECIAL TOPICS 1-12 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-60)

FIRE SCIENCE WILDLAND

FSW 100 S-190 INTRODUCTION TO WILDLAND FIRE BEHAVIOR 1 CR
Provides instruction in the primary environmental factors that affect the start and spread of wildfire and recognition of potentially hazardous situations. This course can be taught in conjunction with or prior to Firefighting Training S-130.

FSW 101 S-130 FIREFIGHTING TRAINING 2 CR
Provide entry-level firefighters skills. A version of the L-180, Human Factors on the Fireline, has been included as part of the course. Credit should be issued for both S-130 and L-180 upon completion of this course.

FSW 102 S-131 FIREFIGHTER TYPE I .5 CR
Designed to meet the training needs of the Firefighter Type 1. It contains several tactical decision modules designed to facilitate learning the objectives and class discussion. This course is designed to be interactive in nature. Topics include fireline reference materials, communications, and tactical decision making.

FSW 104 I-100 INTRODUCTION TO ICS .25 CR
Address the ICS organization basic terminology, and common responsibilities. It provides a foundation upon which to enable entry-level personnel to function appropriately in the performance of incident-related duties. For students continuing through more complex ICS modules, this course may be used as pre-course work.

FSW 105 L-180 HUMAN FACTORS ON THE FIRELINE .25 CR
Designed for unit-level supervisors to use when delivering orientation training to new crewmembers. Presentation of the course involves a few short lecture segments, but the primary content is delivered by video and is supported with small group exercises. Topics include: situation awareness, basic communication responsibilities, attitude and stress barriers, decision-making processes, and teamwork principles.

FSW 143 S-212 WILDFIRE CHAIN SAWS 2 CR
Provides introduction to the function, maintenance and use of internal combustion, engine-powered chain saws and their tactical wildland fire application. Modules support entry-level training for firefighters with little or no previous experience in operating a chain saw and provides hands-on cutting in surroundings similar to fireline situations. firefighter safety in the interface.

FSW 145 S-230 CREW BOSS 1.5 CR
Designed to produce student proficiency in the performance of duties associated with the single-resource boss position from initial dispatch through demobilization to the home unit. Topics include operational leadership, preparation and mobilization, assignment preparation, risk management, entrapment avoidance, safety and tactics, offline duties, demobilization and post-incident responsibilities.

FSW 146 S-231 ENGINE BOSS (SINGLE RESOURCE) 1 CR
Designed to produce student proficiency in the performance of the duties associated with engine boss, single resource (ENGB). Topics include engine and crew capabilities and limitations, information sources, fire size up considerations, tactics and wildland/urban interface.

FSW 147 S-234 IGNITION OPERATIONS 2 CR
Provides training in the functional roles and responsibilities connected with firing operations. The course covers planning, ignition procedures and techniques, and equipment applicable to wildland and prescribed fire. This course also addresses the role of the ignition specialist or firing boss as the organization manages escalation from a non-complex to a complex situation.

FSW 154 F1-210 WILDLAND FIRE ORIGIN AND CAUSE DETERMINATION 2.5 CR
Provide a consistent knowledge and skill base for the Wildland Fire Origin and Cause Determination Investigator (INVF). The concepts taught in this course will help an INVF perform at an acceptable level on a national basis without regard to geographic boundaries. The course is presented by lecture, electronic presentations, field exercises, and class discussion.

FSW 155 I-200, IS-200, Q-436 BASIC ICS FOR SINGLE RESOURCES AND INITIAL ACTION INCIDENTS 1.5 CR
Introduce students to the principles of the Incident Command System (ICS) associated with incident-related performance. Topics include leadership and management, delegation of authority and management by objectives, functional areas and positions, briefings, organizational flexibility, transitions and transfers. This course was developed in conjunction with the US Fire Administration (Q-463) and the Emergency Management Institute (IS-200). These courses are built on the same lesson objectives and content as the NWCG I-200 course and are interchangeable; they are all National Incident Management System (NIMS) compliant.

FSW 206 I-300 INTERMEDIATE ICS FOR SUPERVISORS & EXPANDING INCIDENTS 1.5 CR
Provides a greater description and detail of the Incident Command System (ICS) organization and operations, including application of essential principles and description of air operations. This course comprises five of the 17 instructional modules making up the ICS curriculum. These include Organization and Staffing (Module 7), Organizing for Incidents or Events (Module 8), Incident Resources Management (Module 9), Air Operations (Module 10), and Incident and Event Planning (Module 11).

GEOGRAPHY

GEO 105 WORLD REGIONAL GEOGRAPHY 3 CR (3-0)
Facilitates an understanding of spatial relationships between and among the geographic regions of the world. Includes demographic and cultural (political, economic, and historic) forces related to the physical environments of selected regions. Focuses on analysis of interrelationships between developed and developing regions, and the interactions between human societies and natural environments. (Contact hours — 45) State Guarantee Transfer Course.

GEO 106 HUMAN GEOGRAPHY 3 CR (3-0)
Introduces geographic perspectives and methods with applications to the study of human activities. Emphasizes the distribution of humans, adjustments to the natural environment, and land use practices. (Contact hours — 45) State Guarantee Transfer Course.

GEO 111 PHYSICAL GEOGRAPHY 4 CR (4-0)
Introduces the principles of landforms as a major aspect of our natural environment. (Contact hours — 60) State Guarantee Transfer Course.

GEO 112 PHYSICAL GEOGRAPHY: WEATHER & CLIMATE WITH LAB 4 CR ()
Introduces the principles of meteorology, climatology, world vegetation patterns, and world regional climate classification. The course includes investigating the geographic factors which influence climate such as topography, location, elevation, winds, and latitude. (Contact hours — 60) State Guarantee Transfer Course.

GEO 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

GEOLOGY

GEY 111 PHYSICAL GEOLOGY 4 CR (3-3)
Studies the materials of the earth, its structure, surface features and the geologic processes involved in its development. This course includes laboratory experience. (Contact hours — 90) State Guarantee Transfer Course.

GEY 121 HISTORICAL GEOLOGY 4 CR (3-3)
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 environment, fossil life forms, and physical events, all within the framework of shifting crustal plates. Course includes a laboratory experience. (Contact Hours — 90) *Prerequisites: GEY 111 OR APPROVAL OF INSTRUCTOR.* State Guarantee Transfer Course.

GEY 175 SPECIAL TOPICS .25-3 CR
Presents an overview of the special topic including one aspect of the earth and it's history as recorded in rocks and rock formations. May 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. (Contact Hours — 3.75-45)

HISTORY

HIS 101 WESTERN CIVILIZATION: ANTIQUITY TO 1650 3 CR (3-0)
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. (Contact hours — 45) State Guarantee Transfer Course.

HIS 102 WESTERN CIVILIZATION: 1650 TO PRESENT 3 CR (3-0)
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. (Contact hours — 45) State Guarantee Transfer Course.

HIS 111 THE WORLD: ANTIQUITY - 1500 3 CR (3-0)
Enables the student to view history up to 1500 CE in a broad global sense. Focuses on the common denominators among all people. This approach goes beyond political borders, to provide a better appreciation for different cultures. (Contact hours — 45) State Guarantee Transfer Course.

HIS 112 THE WORLD: 1500 - PRESENT 3 CR (3-0)
Enables students to view history post 1500 CE in a broad global sense. Focuses on the common denominators among all people. This approach goes beyond political borders to provide a better appreciation for different cultures. (Contact hours — 45) State Guarantee Transfer Course.

HIS 175 SPECIAL TOPICS 1-5 CR
Focuses on the exploration of current topics, issues and activities related to one or more aspects of history. (Contact hours 15 - 75)

HIS 201 U.S. HISTORY TO RECONSTRUCTION 3 CR (3-0)
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. (Contact hours — 45) State Guarantee Transfer Course.

HIS 202 U.S. HISTORY SINCE THE CIVIL WAR 3 CR (3-0)
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. (Contact hours — 45) State Guarantee Transfer Course.

HIS 207 AMERICAN ENVIRONMENT HISTORY 3 CR (3-0)
Traces and analyzes the relationships between Americans and their natural environments throughout the history of the United States. Environmental history interprets the changing ways diverse people have used and viewed their environments over time. Examines the development of conservation movements and environmental policies in modern America. (Contact hours — 45) State Guarantee Transfer Course.

HIS 208 AMERICAN INDIAN HISTORY 3 CR (3-0)
Analyzes historical and socio-cultural change for Native Americans from pre-colonial America to the present, emphasizing those processes and relations with non-Native Americans which have contributed to the current conditions. (Contact hours — 45) State Guarantee Transfer Course.

HIS 215 WOMEN IN U.S. HISTORY 3 CR (3-0)
Examines women's changing roles in American history from the pre-colonial native population to the present. Emphasizes the nature of women's work and the participation of women in the family, political, religious, and cultural activities and in social reform movements. (Contact hours — 45) State Guarantee Transfer Course.

HIS 225 COLORADO HISTORY 3 CR (3-0)
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. (Contact hours — 45) State Guarantee Transfer Course.

HIS 236 U.S. HISTORY SINCE 1945 3 CR (3-0)
Focuses on the major political, economic, social, and cultural developments that have shaped modern America from 1945 to the present. (Contact hours — 45) State Guarantee Transfer Course.

HIS 243 HISTORY OF MODERN CHINA 3 CR (3-0)
This course traces the political, ideological, economic, religious, social, and cultural developments of modern China from the Qing dynasty through the political and economic revolutions of the 20th century. (Contact hours — 45) State Guarantee Transfer Course.

HIS 244 HISTORY OF LATIN AMERICA 3 CR (3-0)
Focuses on the major political, economic, social, and cultural influences that have shaped Latin America from pre-European conquest to the present. Emphasizes the early history of Latin America but connects it to the present. (Contact hours — 45) State Guarantee Transfer Course.

HIS 245 U.S. IN THE WORLD 3 CR (3-0)
Focuses on major themes of United States history in the context of worldwide historical phenomena, including global contacts and exchange, colonial frontiers and international trade, America's influence on the age of revolutions, industrialization and movement of populations, urbanization and rural change, and expansion of state power and rise of social movements. Through readings and discussions on problems in political, social, public and personal history, students will gain an understanding of historical processes and methodology and will learn how to use critical historical analysis in order to achieve a greater perspective on the US's role in world history. (Contact hours — 45) State Guarantee Transfer Course.

HIS 247 20TH CENTURY WORLD HISTORY 3 CR (3-0)
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. (Contact hours — 45) State Guarantee Transfer Course.

HIS 260 U.S. FOREIGN RELATIONS HISTORY 3 CR (3-0)
Provides an overview of the history of United States foreign relations from the colonial era to the present and includes the pertinent political, military, economic, diplomatic, social, religious, ideological and cultural topics. At various points, issues such as race, class, gender, immigration, expansion, and the environment will be covered. This course also focuses on developing, practicing and strengthening the skills historians use while constructing knowledge in the discipline. (Contact hours — 45) State Guarantee Transfer Course.

HIS 275 SPECIAL TOPICS 1-5 CR
Focuses on the exploration of current topics, issues and activities related to one or more aspects of history. (Contact hours — 15-75)

HEALTH PROFESSIONAL

HPR 100 INTRODUCTION TO HEALTH 3 CR (3-0)
Provides an exploratory course for students interested in a health career. Basic health skills such as vital signs and CPR will be included.

HPR 101 CUSTOMER SERVICE IN HEALTH CARE 2 CR (2-0)
Introduces students to customer service theory and techniques specifically in the healthcare arena. This course will discuss therapeutic communication, conflict resolution and negotiation, as well as employee/employer relations. Exploration of diverse populations and cultural sensitivity will be addressed.

HPR 102 CPR FOR PROFESSIONALS .5 CR (.5-0)
Meets the requirement for American Red Cross Professional Rescuer CPR or American Heart Association Basic Life Support for those who work in Emergency Services, Health Care and other professional areas. Material presented in the course is basic patient assessment, basic airway management, rescue breathing, and CPR for infant, children and adult patients. (Contact hours — 7.5)

HPR 103 CPR FOR PROFESSIONALS-RENEWAL .25 CR (.25-0)
Provides opportunity for currently certified CPR providers to renew certificates. (Contact hours — 4) *Prerequisites: Current healthcare provider CPR card.*

HPR 104 HEALTH CAREER OPTIONS AND READINESS 1 CR (1-0)
Discusses current market trends in the medical profession, professional opportunities, continuing education, and professional affiliations. Discussions regarding resumes, portfolios, letters of inquiry, and interviewing techniques, as well as job search information is provided. This course is primarily informational and provides information to the student about aspect of career choices.

HPR 106 LAW AND ETHICS FOR HEALTH PROFESSIONS 2 CR (2-0)
Introduces student to the study and application medico-legal concepts in medical careers. This course seeks to establish a foundation for ethical behavior and decision making in health professions.

HPR 108 DIETARY NUTRITION 1 CR (1-0)
Studies the basic principles in clinical practice involved in the assistance of health care. The course will cover factors which influence the nutritional status of individuals, methods of nutritional assessment and support, and diet modification for specific disease states.
(Contact hours — 15)

HPR 120 ACLS 1 CR (1-0)
Presents the required material for ACLS completion. It will cover arrhythmias, medications, therapeutic modalities for life threatening arrhythmias, airway management, and other treatment modalities used in cardiac and respiratory arrest. (Contact hours — 15) *Prerequisites: Current basic life support health care provider C certification.*

HPR 121 ACLS RECERTIFICATION .5 CR (.5-0)
Presents the required material for ACLS recertification. It will cover rhythm recognition, cardiac drugs, cardiac monitors, and case based scenarios. (Contact hours — 7.5) *Prerequisites: ACLS completion with current card.*

HPR 130 PEDIATRIC ADVANCED LIFE SUPPORT 1 CR (1-0)
Provides students the needed information and skills as required be health care agencies for pediatric emergencies. (Contact hours — 15) *Prerequisites: Current CPR card –must include child and infant CPR.*

HPR 175 SPECIAL TOPICS .25 to 6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 3.75 to 90)

HPR 178 MEDICAL TERMINOLOGY 2 CR (2-0)
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. (Contact hours — 30)

HPR 190 BASIC EKG INTERPRETATION 2 CR (2-0)
Provides instruction for interpretation of EKG strips, anatomy and physiology of the heart, using three-lead monitoring as a guide. Twelve-lead EKG may be discussed. (Contact hours - 30)

HPR 217 KINESIOLOGY 4 CR (3-2)
Focuses on mechanical principles of kinematics, kinetics, muscle physiology, and neurophysiology and the interaction to produce function. Joint and muscle structure and function with application is a main focus. (Contact hours — 75)

HUMANITIES

HUM 115 WORLD MYTHOLOGY 3 CR (3-0)
Introduces students to the mythologies of various cultures. Common themes are illustrated and an interdisciplinary approach is used incorporating some of the following: religion, philosophy, art history, theater, literature, music, cultural studies, and history.
(Contact hours — 45) State Guarantee Transfer Course.

HUM 121 HUMANITIES: EARLY CIVILIZATIONS 3 CR (3-0)
Introduces students to the history of ideas that have defined cultures through a study of the visual arts, literature, drama, music, and philosophy. It emphasizes connections among the arts, values, and diverse cultures, including European and non-European, from the Ancient world to 1000 C.E. (Contact hours — 45) State Guarantee Transfer Course.

HUM 122 HUMANITIES: FROM MEDIEVAL TO MODERN 3 CR (3-0)
Examines written texts, visual arts and musical compositions to analyze and reflect the evoloytionand confluence of cultures in Europe, Asia and the Americas from 800 C.E. to 1750 C.E. (Contact hours — 45) State Guarantee Transfer Course.

HUM 123 HUMANITIES: THE MODERN WORLD 3 CR (3-0)
Examines the cultures of the 17th through the 20th centuries by focusing on the interrelationships of the arts, ideas, and history. Considers the influences of industrialism, scientific development and non-European peoples. (Contact hours — 45) State Guarantee Transfer Course.

HUM 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

HUM 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

HEALTH & WELLNESS

HWE 100 HUMAN NUTRITION 3 CR (3-0)
Introduces basic principles of nutrition with emphasis on personal nutrition. Satisfies nutrition requirement of students entering health care professions. (Contact hours — 45)

HWE 101 CARDIO-PULMONARY RESUSCITATION (CPR) 1 CR (1-0)
Teaches emergency procedures for respiratory, obstructed airway and cardiac arrest victims of all ages. It meets certification requirements of the American Red Cross and the American Heart Association.
(Contact hours — 15)

HWE 102 CARDIO-PULMONARY RESUSCITATION (CPR) RECERTIFICATION .25 CR (.25-0)
Reviews CPR for those whose CPR card is due but not expired. Student must provide a copy of current CPR certification. Recertification can be done for Professional Rescuer, Community, Adult, Child and Infant CPR.
(Contact Hours - 4)

HWE 103 COMMUNITY FIRST AID & CPR 1 CR (1-0)
Uses demonstration videos, instructor led practice and workbook/ textbook study to prepare for certification in Adult/Child/Infant CPR and Community First Aid. (Contact hours — 15)

HWE 106 INFANT & CHILD CPR/FIRST AID .5 CR (.5-0)
Provides Day Care Providers and new parents with important lifesaving skills for infants and children. (Contact hours — 7.5)

HWE 111 HEALTH & FITNESS 3 CR (3-0)
Studies health and fitness in the U.S. today. The course will look at personal health issues, managing stress, nutrition and healthy lifestyles.
(Contact hours — 45)

HWE 113 STANDARD FIRST AID .5 CR (.5-0)
Teaches the recognition and care for breathing and cardiac emergencies for victims 8 years old and up; identify and care for life-threatening bleeding, sudden illness and injuries. American Red Cross certification in Adult CPR and Standard First Aid is available for students meeting those requirements. (Contact hours — 7.5)

HWE 117 MENTAL HEALTH FIRST AID 1 CR (1-0)
Educates First Responders and the general public on the most common mental disorders, and mental health crises. It also provides training and basic action steps to assist with a mental health issue. This course is not for the trained Mental Health professional. (Contact hours - 15)

HWE 122 RESPONDING TO EMERGENCIES 3 CR (3-0)
Provides standard first aid and CPR, with a more in depth look at sudden illness, specific disease, and emergencies. (Contact hours — 30)

HWE 124 FITNESS & WELLNESS 2 CR (2-0)
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.
(Contact hours — 30)

HWE 175 SPECIAL TOPICS .25-6 CR
Provides students with a vehicle to pursue in-depth exploration of special topics of interest.

HWE 237 EXERCISE, NUTRITION & BODY COMPOSITION 3 CR (3-0)
Discusses the concepts of improved performance in all fitness areas. Emphasis is placed upon updated information associated with nutrition and human performance. Measurement of body composition is used as it correlates to training and diet/exercise programs. (Contact hours — 45)

INDUSTRIAL MAINTENANCE

IMA 100 INTRO TO INDUSTRIAL MAINTENANCE 3 CR (1-2)
Provides an overall perspective and foundation for the person entering the industrial maintenance field. The fundamentals of machine operations commonly utilized in the process and energy industry will be presented. Maintenance personnel duties and responsibilities, general maintenance procedures, basic maintenance tools and equipment, basic fastening and securing and machine operating specifications will be covered. Emphasis will be placed upon the understanding of machine documentation. The student will be introduced to the logical process utilized in the diagnosis machinery and control system troubleshooting. Workplace safety will be stressed throughout the course. (Contact hours - 60) *Prerequisites: EIC 101*

IMA 160 BASIC FLUID POWER 3 CR (1-2)
Provide an understanding of the fundamentals of fluid power, hydraulic transmission of force and energy, operation at the suction side of the pump, petroleum based hydraulic fluids, fire resistant hydraulic fluids, flow rates and velocity, properties of hydraulic fluids, and the function and construction of basic elements of a hydraulic or fluid power system. The course will cover hydraulic symbols and prints used in industry.
(Contact hours - 60) *Prerequisites: EIC 101*

JOURNALISM

JOU 105 INTRODUCTION TO MASS MEDIA 3 CR (3-0)
Places the mass media in an historical and cultural perspective, considering the validity, integrity and influence of the media in a democracy.
(Contact hours — 45) State Guarantee Transfer Course.

JOU 106 FUNDAMENTALS OF REPORTING 3 CR (3-0)
Introduces newswriting, reporting and interviewing with an emphasis on clarity, accuracy, completeness, timeliness and fairness.
(Contact hours — 45)

JOU 111 PRINCIPLES OF ADVERTISING 3 CR (3-0)
Employs design concepts, principles and practices for advertising management for the mass media. (Contact hours - 45)

JOU 121 PHOTOJOURNALISM 3 CR (3-0)
Provides an introductory, hands-on course in black-and-white photography, with an emphasis on photojournalistic techniques, processing and printing. This course includes an investigation of word/ pictures relationships in creating photo essays for publications.
(Contact hours - 45)

JOU 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

JOU 180 INTERNSHIP 3-5 CR
Provides a structured and guided, individualized research that is organized and tailored around the interests and needs of the individual student who may use journalism skills and experiences acquired during previous coursework. (Contact hours — 40) *Prerequisites: Permission of instructor.*

JOU 185 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.
(Contact hours — 15-90) *Prerequisites: Permission of instructor.*

JOU 206 INTERMEDIATE NEWSWRITING AND EDITING **3 CR (3-0)**
Presents how to gather information as an investigative reporter through research of local, state and federal government publications, how to cover police beat and city hall, how our courts and regulatory agencies function, and how to cover other challenges as the environment, religion, science, medical, public safety and business. (Contact hours — 45)

JOU 221 NEWSPAPER DESIGN I **3 CR (3-0)**
Provides students with experience in newswriting, editing, design, layout and advertising for newspaper production. Students may be required to work on the college newspaper or other news-oriented publications. (Contact hours — 45) *Prerequisite: Level placement scores ENG 121.*

JOU 222 NEWSPAPER DESIGN II **3 CR (3-0)**
Allows students to build their newspaper production experience through work on the college newspaper or other approved news-oriented publications. (Contact hours — 45)

JOU 275 SPECIAL TOPICS **1-6 CR**
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-90)

JOU 280 INTERNSHIP **3-5 CR (0-3 to 5)**
Provides a structured and guided, individualized research that is organized and tailored around the interests and needs of the individual student who may use journalism skills and experiences acquired during previous coursework. (Contact hours — 40) *Prerequisites: Permission of instructor.*

JOU 285 INDEPENDENT STUDY **1-6 CR (0-0)**
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. (Contact hours — 15-90) *Prerequisites: Permission of instructor.*

LITERATURE

LIT 115 INTRODUCTION TO LITERATURE I **3 CR (3-0)**
Introduces students to fiction, poetry, and drama. Emphasizes active and responsive reading. (Contact hours — 45) State Guarantee Transfer Course.

LIT 175 SPECIAL TOPICS **1-3 CR**
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-45)

LIT 201 MASTERPIECES OF LITERATURE I **3 CR (3-0)**
Examines significant writings in world literature from the ancients through the Renaissance. Emphasizes careful readings and understanding of the works and their cultural backgrounds. (Contact hours — 45) State Guarantee Transfer Course.

LIT 202 MASTERPIECES OF LITERATURE II **3 CR (3-0)**
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. (Contact hours — 45) State Guarantee Transfer Course.

LIT 205 ETHNIC LITERATURE **3 CR (3-0)**
Focuses on significant texts by ethnic Americans including African-American, Native American, Latino/a, and Asian Americans. Emphasizes careful reading and understanding of the cultural and literary elements of the works. (Contact hours — 45) State Guarantee Transfer Course.

LIT 211 SURVEY OF AMERICAN LITERATURE I **3 CR (3-0)**
Provides an overview of American literature from the Native American through the nineteenth century Romantics. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers. (Contact hours — 45) State Guarantee Transfer Course.

LIT 212 SURVEY OF AMERICAN LITERATURE II **3 CR (3-0)**
Provides 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. (Contact hours — 45) State Guarantee Transfer Course.

LIT 221 SURVEY OF BRITISH LITERATURE I **3 CR (3-0)**
Provides an overview of British literature from the Anglo-Saxon period through the 17th century. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers. (Contact hours — 45) State Guarantee Transfer Course.

LIT 222 SURVEY OF BRITISH LITERATURE II **3 CR (3-0)**
Provides is an overview of British literature from the 18th century to the present. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers. (Contact hours — 45) State Guarantee Transfer Course.

LIT 225 INTRODUCTION TO SHAKESPEARE **3 CR (3-0)**
Provides is an overview of British literature from the 18th century to 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. (Contact hours — 45) State Guarantee Transfer Course.

LIT 235 SCIENCE FICTION **3 CR (3-0)**
Examines the techniques and issues of science fiction through a close reading a variety of writers in the genre. (Contact hours - 45) Prequisites: ENG 121

LIT 255 CHILDREN'S LITERATURE **3 CR (3-0)**
Evaluates the criteria for selecting appropriate literature for children through exploration of genres, age levels, values taught through literature, and the literary and artistic quality of various texts. (Contact hours — 45)

LIT 259 SURVEY OF AFRICAN AMERICAN LITERATURE **3 CR (3-0)**
Examines African American literature from 1750 to the present, exploring ideas, historical and social contexts, themes, and literary characteristics of works in various genres by major writers. (Contact hours — 45) State Guaranteed Transfer Course.

LIT 268 CELTIC LITERATURE **3 CR (3-0)**
Exposes the student to Irish literature. The course examines significant writings in Irish literature from the ancients through to the Twenty first century. The course emphasizes the careful reading and understanding of the works of poetry, fiction, and drama, as well as their cultural backgrounds. (Contact hours — 45) State Guaranteed Transfer Course.

LIT 275 SPECIAL TOPICS **1-3 CR**
Provides students with a vehicle to pursue in depth exploration of special topics of interest. (Contact hours — 15-45)

MANAGEMENT

MAN 116 PRINCIPLES OF SUPERVISION **3 CR (3-0)**
Studies the principles and techniques of supervising and motivating personnel. This course is designed for students who are interested in supervising others or for those currently in supervision. Course content focuses on the human interaction in supervision. (Contact hours — 45)

MAN 117 TIME MANAGEMENT **1 CR (1-0)**
Provides students with the conceptual knowledge and tools to make better use of their time in the management function. (Contact hours – 15)

MAN 125 TEAM BUILDING **1 CR (1-0)**
Introduces the concept of working as a team member. Activities and assignments will emphasize the ability to negotiate, work together, build consensus, and make quality decisions. (Contact hours — 15)

MAN 128 HUMAN RELATIONS IN ORGANIZATIONS **3 CR (3-0)**
(Core Course for AGS or AAS:)
Explores the importance of effective communication in our personal lives as well as in the world of business. Practical business applications such as employee motivation, handling customer complaints, and effectively resolving conflict in the workplace will be a major part of the curriculum. (Contact hours — 45)

MAN 175 SPECIAL TOPICS **1-6 CR**
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. (Contact hours — 15-90)

MAN 200 HUMAN RESOURCE MANAGEMENT I **3 CR (3-0)**
Provides the student with a broad overview of the contemporary issues, theories and principles used to effectively manage human resources. Topics include recruiting, hiring, compensation and benefits, training and development, employee relations and legal issues. (Contact hours — 45)

MAN 205 EVENT PLANNING **3 CR (3-0)**
Presents the components of meeting planning; organization, personnel, finances, site selection, transportation, program design, promotion, arranging exhibits, and evaluation. (Contact hours - 45)

MAN 215 ORGANIZATIONAL BEHAVIOR **3 CR (3-0)**
Examines the behaviors of 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. (Contact hours - 45)

MAN 216 SMALL BUSINESS MANAGEMENT **3 CR (3-0)**
Examines the elements necessary for the successful formation of a new small business. It 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. (Contact hours — 45) This is for the AAS and AGS courses.

MAN 223 EVENT MANAGEMENT **3 CR(3-0)**
Give students a comprehensive foundation to build a career in the vast spectrum of the events industry, including real world analysis and frequent speakers from prominent event professionals.
(Contact hours - 45)

MAN 224 LEADERSHIP **3 CR (3-0)**
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. (Contact hours - 45)

MAN 226 PRINCIPLES OF MANAGEMENT **3 CR (3-0)**
Presents a survey of the principles of management. Emphasis is on the primary functions of planning, organizing, leading and controlling with a balance between the behavioral and operational approach.
(Contact hours - 45)

MAN 241 PROJECT MANAGEMENT IN ORGANIZATIONS **3 CR (3-0)**
Introduces 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. (Contact hours - 45)

MAN 275 SPECIAL TOPICS **1-6 CR**
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.

MANICURING TECHNICIAN

(See Nail Technician)

MARKETING

MAR 111 PRINCIPLES OF SALES **3 CR (3-0)**
Enables the student to understand and develop proper sales techniques. The course covers the role of selling in the marketing process consumer behavioral consideration in the buying-selling process, and sales techniques. (Contact hours — 45) *Prerequisites: BUS 115*

MAR 160 CUSTOMER SERVICE **3 CR (3-0)**
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.
(Contact hours — 45)

MAR 187 COOPERATIVE EDUCATION/INTERNSHIP **1-6 CR**
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 stations which 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.
(Contact hours —45)

MAR 216 PRINCIPLES OF MARKETING **3 CR (3-0)**
Presents the analysis of theoretical marketing processes and the strategies of product development, pricing, promotion and distribution, and their applications to businesses and the individual consumer.
(Contact hours — 45)

MAR 220 PRINCIPLES OF ADVERTISING **3 CR (3-0)**
Examines the principles and practices of advertising and its relationship to business in order to promote a business or organization. Areas of major emphasis include advertising principles, strategies, media, copy and layout, and ethical considerations. (Contact hours —45)

MAR 275 SPECIAL TOPICS **1-6 CR**
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.

MAR 278 SEMINAR **1-6 CR**
Provides students with an experiential learning opportunity.
(Contact hours — 160 per enrollment)

MATHEMATICS

MAT 30 FUNDAMENTALS OF MATHEMATICS **2 CR (2-0)**
Includes the vocabulary, operations and applications of whole numbers, decimals and basic fractions and mixed numbers. (Contact hours — 30)
Prerequisite: Arithmetic Accuplacer score of 24 or higher.

MAT 45 COMPRESSED PRE-ALGEBRA WITH BASIC MATHEMATICS 4 CR (4-0)
Explores the vocabulary, operations and applications of whole numbers, decimals, basic fractions and mixed numbers. It further investigates topics including fractions, mixed numbers, ratios, proportions, percentages, measurements, integers, introduction to algebraic expressions and the solution of basic first degree equations. (Contact hours - 60) *Designed for students with an Elementary Algebra score of less than 45 and an Arithmetic ACCUPLACER score of 24-120. This course is a combination of MAT 30 and 60.*

MAT 60 PRE-ALGEBRA 3 CR (3-0)
Furthers the study of fractions and mixed numbers. Also included are vocabulary, operations and applications of ratio, proportion, percent, area, perimeter, US and metric measures, integers, and an introduction to algebraic expressions and the solution of basic first-degree equations. (Contact hours — 45) *Prerequisite: Successful completion of MAT 30 or equivalent (grade of C or higher) or Arithmetic Accuplacer score of 57 or higher and 44 or below elementary algebra.*

MAT 90 INTRODUCTORY ALGEBRA 4 CR (4-0)
Includes first-degree equations, inequalities, formulas, polynomials, factoring polynomials, solving quadratic equations by factoring, coordinate geometry, graphing linear equations and applications. Algebraic fractions and systems of linear equations may be included. (Contact hours - 60) *Prerequisite: Successful completion of MAT 60 or equivalent (Grade of C or better) or Elementary Algebra Accuplacer score of 45-60.*

MAT 96 COMBINED INTRODUCTORY AND INTERMEDIATE ALGEBRA 6 CR (6-0)
Includes first-degree equations, inequalities, formulas, polynomials, factoring polynomials, solving quadratic equations by factoring, coordinate geometry, graphing linear equations and applications. Algebraic fractions and systems of linear equations may be included. Emphasizes problem solving with further study of equations, slope, inequalities, systems of equations, polynomials, quadratic equations, rational expressions, rational exponents, radical expressions, graphing and applications. A graphing calculator or equivalent software may be utilized. (Contact hours - 90) *For students with an Accuplacer score of 61-84.*

MAT 99 INTERMEDIATE ALGEBRA 4 CR (4-0)
Emphasizes problem solving with further study of equations, slope, inequalities, systems of equations, polynomials, quadratic equations, rational expressions, rational exponents, radical expressions, graphing and applications. A graphing calculator or equivalent software may be utilized. (Contact hours – 60) *Prerequisite: Successful completion of MAT 90 or equivalent (Grade of C or better) or Elementary Algebra Accuplacer score of 61-84.*

MAT 103 MATH FOR CLINICAL CALCULATIONS 3 CR (3-0)
Provides a review of general mathematics, introductory algebra and an opportunity to learn systems of measurement and methods of solving problems related to drug dosage and intravenous fluid administration. It is designed for students in the health disciplines. Topics may include algebra, graphs, measurement and conversion between various systems of measurement. (Contact hours – 45) *Prerequisite: Successful completion of MAT 90 or equivalent (Grade C or better) or Accuplacer score of 61 or higher or ACT 23.*

MAT 107 CAREER MATH 3 CR (3-0)
Covers material designed for career technical or general studies students who need to study particular mathematical topics. Topics may include measurement, algebra, geometry, trigonometry, graphs, and/or finance. These are presented on an introductory level and the emphasis is on applications. (Contact hours-45) *Prerequisite: Successful completion of MAT 30 or equivalent (grade of C or better) or assessment.*

MAT 112 FINANCIAL MATHEMATICS 3 CR (3-0)
Covers topics including pricing, taxes, insurance, interest, annuities, amortization, investments using financial calculators and spreadsheets. (Contact hours — 45) *Prerequisite: MAT 60 or equivalent.*

MAT 120 MATHEMATICS FOR THE LIBERAL ARTS 4 CR (4-0)
Develops 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, probability and statistical methods, and consumer mathematics. Additional content will include one topic in geometry, numeration systems, decision theory, or management science. (Contact hours — 60) *Prerequisite: Successful completion of MAT 99 or equivalent (grade C or better) assessment or ACT 23.* State Guarantee Transfer Course. AA & AGS Degrees only.

MAT 121 COLLEGE ALGEBRA 4 CR (4-0)
Includes a brief review of intermediate algebra, equations, and inequalities, functions and their graphs, exponential and logarithmic functions, linear and non-linear 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. (Contact hours — 60) *Prerequisite: Successful completion of MAT 99 or equivalent (grade C or higher) assessment or ACT 23.* State Guarantee Transfer Course.

MAT 122 COLLEGE TRIGONOMETRY 3 CR (3-0)
Covers topics including trigonometric functions (with graphs and inverse functions), identities and equations, solutions of triangles, complex numbers, and other topics as time permits. This is a traditional prerequisite course to the calculus sequence. (Contact hours — 45) *Prerequisites: MAT 121 or equivalent or ACT 24.* State Guarantee Transfer Course.

MAT 123 FINITE MATHEMATICS 4 CR (4-0)
Covers topics including functions, matrix algebra, linear programming, and an introduction to probability and counting techniques. Emphasis is on applications. This course may include other topics such as statistics when time permits. This course is primarily intended for business, life science, or social science majors. (Contact hours — 45) *Prerequisites: MAT 99 or equivalent or ACT 23.* State Guarantee Transfer Course. AA & AGS Degrees only.

MAT 125 SURVEY OF CALCULUS 4 CR (4-0)
Includes derivatives, integrals, and their applications, with attention restricted to algebraic, exponential, and logarithmic functions for business, life science and/or social science majors. (Contact hours — 60) *Prerequisites: College Algebra or Finite Mathematics, ACT 25 or permission of the instructor.* State Guarantee Transfer Course. AA & AGS Degrees only.

MAT 135 INTRODUCTION TO STATISTICS 3 CR (3-0)
Includes data presentation and summarization, introduction to probability concepts and distributions, statistical inference --estimation, hypothesis testing, comparison of populations, correlation and regression. (Contact hours — 45) *Prerequisite: Successful completion of MAT 99 or equivalent (grade C or higher) assessment or ACT 21.* State Guarantee Transfer Course. AA & AGS Degrees only.

MAT 155 INTEGRATED MATH I 3 CR (3-0)
Engages students in the concepts of school mathematics, the course will include the recognition of numerical and geometric patterns and their application to a variety of mathematical situations; mathematical problem-solving, reasoning, critical thinking, and communication; algebraic thinking, representation, analysis, manipulation, generalizations and extensions. (Contact hours — 45) *Prerequisite: Elementary Algebra Accuplacer score of 85, ACT score of 23 or MAT 99 with a "C" or higher.*

MAT 156 INTEGRATED MATH II 3 CR (3-0)
Furthers MAT 155 concepts, the course will include fundamentals of probability, statistics, and Euclidean geometry. Mathematical problem-solving, reasoning, critical thinking and communication will continue to be an integral part of this sequence. (Contact hours — 45) *Prerequisites: Accuplacer score of 85, ACT score of 23 or MAT 155.*

MAT 166 PRE-CALCULUS 5 CR (5-0)
Reviews college algebra and college trigonometry intended for those planning to take calculus. Topics include algebraic manipulations, properties of algebraic and trigonometric functions and their graphs, trig identities and equations, conic sections, polar coordinates and parametric equations. (Contact hours — 75) *Prerequisites: Successful completion of MAT 121 or equivalent (grade of C or better.) ACT 25 or approval of instructor.*

MAT 175 SPECIAL TOPICS 1-3 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

MAT 201 CALCULUS I 5 CR (5-0)
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. (Contact hours — 75) *Prerequisites: College Algebra AND Trigonometry or equivalent or ACT 28.* State Guarantee Transfer Course.

MAT 202 CALCULUS II 5 CR (5-0)
Continuation of single variable calculus which will include techniques of integration, polar coordinates, analytic geometry, improper integrals, and infinite series. (Contact hours — 75) *Prerequisites: MAT 201 or permission of instructor.* State Guarantee Transfer Course.

MAT 203 CALCULUS III 4 CR (4-0)
Completes the traditional subject matter of the Calculus. Topics include vectors, vector-valued functions, and multivariable calculus including partial derivatives, multiple integrals, line integrals and application. (Contact hours — 60) *Prerequisites: MAT 202 or equivalent.* State Guarantee Transfer Course.

MAT 261 DIFFERENTIAL EQUATIONS WITH ENGINEERING APPLICATION:MA1 4 CR (4-0)
Introduces ordinary differential equations. The content of this course includes all the topics of MAT 265 Differential Equations with an additional emphasis on applications and problem solving. A graphing calculator is required for this course. (Contact hours – 60) *Prerequisites: MAT 203 or equivalent.* State Guarantee Transfer Course.

MAT 266 DIFFERENTIAL EQUATIONS WITH LINEAR ALGEBRA 4 CR (4-0)
Covers first and second order differential equations, series solutions, Laplace transforms, linear algebra, eigenvalues, first order systems of equations, and numerical techniques are covered. (Contact hours — 60) *Prerequisite: MAT 202 Corequisite: MAT 203*

MAT 275 SPECIAL TOPICS 1-12 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

MAT 285 INDEPENDENT STUDY 1-3 CR
Provides an opportunity for the highly-motivated student to engage in intensive study and research on a specified topic under direction of a faculty member. *Prerequisites: Permission of instructor.*

MUTLIMEDIA GRAPHIC DESIGN

MGD 111 ADOBE PHOTOSHOP I 3 CR (3-0)
Concentrates on the high-end capabilities of a raster photo-editing software as an illustration, design and photo retouching tool. Students explore a wide range of selection and manipulation techniques that can be applied to photos, graphics and videos. (Contact hours — 45)

MGD 112 ADOBE ILLUSTRATOR I 3 CR (3-0)
Acquaints students with the processes of a vector drawing program on the computer. Students learn how to use the tools to create digital artwork that can be used in web design, print media and digital screen design. (Contact hours — 45)

MGD 114 ADOBE INDESIGN 3 CR (3-0)
Introduces students to InDesign, a page layout program which integrates seamlessly with other Adobe design programs. InDesign delivers creative freedom and productivity to DTP. Class discussions and independent projects supplement hands-on classroom work. (Contact hours — 45)

MGD 116 TYPOGRAPHY I 3 CR (3-0)
Introduces the history and concepts of typography as applied to graphic communications. Explores appropriate use of typography in a variety of design applications, emphasizing the basic design principles of typographic compositions and typesetting. Covers type recognition and typographic terms. (Contact hours — 45)

MGD 133 GRAPHIC DESIGN I 3 CR (3-0)
Focuses upon the study of design layout and conceptual elements concerning graphic design projects such as posters, advertisements, logos, and brochures. (Contact hours — 45)

MUSIC

MUS 100 FUNDAMENTALS OF MUSIC THEORY 3 CR (3-0)
Designed to help the beginning music student, or those students with a limited background in music theory, study the basic elements of music, including notation, rhythm, scales, key signatures, intervals and chords. (Contact hours — 45)

MUS 110 MUSIC THEORY I 3 CR (3-0)
Presents music fundamentals, diatonic four-part harmony, analysis, ear training, and keyboard harmony. For music majors transferring to a 4-year program.(Contact hours — 45) *Prerequisite: MUS 100 or permission of the instructor.*

MUS 111 MUSIC THEORY II 3 CR (3-0)
Presents chromatic four-part harmony, analysis, ear training, and keyboard harmony. (Contact hours — 75) *Prerequisite: MUS 110 & MUS 112*

MUS 112 EAR TRAINING/SIGHT-SIGNING I LAB 1 CR (1-0)
Presents exercises in sight-singing with melodic and rhythmic dictation. (Contact hours — 15) *Prerequisite:permission of instructor. Corequisite: MUS 110*

MUS 113 EAR TRAINING/SIGHT-SIGNING II LAB 1 CR (1-0)
Presents exercises in sight-singing with melodic and rhythmic dictation. (Contact hours — 15) *Prerequisite: MUS 112. Corequisite: MUS 111*

MUS 120 MUSIC APPRECIATION 3 CR (3-0)
Covers the basic materials of music, musical forms, media, genres and musical periods. Emphasizes the development of tools for intelligent listening and appreciation. (Contact hours — 45) State Guarantee Transfer Course.

MUS 121 MUSIC HISTORY: MEDIEVAL TO CLASSICAL 3 CR (0-6)
Studies the various periods of music history with regard to the composers, esthetics, forms, and genres of each period. Considers music from the Middle Ages through the Classical period. (Contact hours — 45) State Guarantee Transfer Course.

MUS 122 MUSIC HISTORY: ROMANTIC TO PRESENT 3 CR (0-6)
Studies the various periods of music history with regard to the composers, aesthetics, forms, and genres of each period. Considers music from the early Romantic period to the present. (Contact hours — 45) State Guarantee Transfer Course.

MUS 123 STUDY OF WORLD MUSIC 3 CR (3-0)
Provides an overview of non-Western music from around the world; provides basic listening skills and the historical/cultural context for a variety of world music styles to enable an understanding and appreciation of non-Western musical expression. (Contact hours — 45) State Guarantee Transfer Course.

MUS 125 HISTORY OF JAZZ 3 CR (0-6)
Provides a survey of the basic materials of music and the forms, media, genres, historical, and cultural style periods of jazz. It emphasizes the development of tools for intelligent listening and appreciation. (Contact hours — 45) State Guarantee Transfer Course.

MUS 131 MUSIC CLASS I: PIANO 2 CR (0-4)
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. (Contact hours — 30)

MUS 141 PRIVATE INSTRUCTION I 1-2 CR (0-4)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4 year school. 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 for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. First year, first term. (Contact hours — 7.5 - 15) *Prerequisites: permission of the instructor.*

MUS 142 PRIVATE INSTRUCTION II 1-2 CR (0-4)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4 year school. 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 for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. First year, second term. (Contact hours — 7.5 - 15) *Prerequisites: permission of the instructor.*

MUS 143 PRIVATE INSTRUCTION III 1-2 CR (0-4)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4 year school. 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 for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. First year, third term. (Contact hours — 7.5 - 15) *Prerequisites: permission of the instructor.*

MUS 144 PRIVATE INSTRUCTION IV 1-2 CR (0-4)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4 year school. 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 for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. First year, fourth term. May be repeated for credit more than once per individual institution policy. (Contact hours — 7.5 - 15) *Prerequisites: permission of the instructor.*

MUS 151 ENSEMBLE I 1 CR (0-2)
First year, first term. Rehearses and performs various types of musical literature. (Contact hours — 30) *Prerequisites:Permission of instructor.*

MUS 152 ENSEMBLE II 1 CR (0-2)
Rehearses and performs various types of musical literature. First year, second term. (Contact hours — 30) *Prerequisites: Permission of the instructor.*

MUS 153 ENSEMBLE III 1 CR (0-2)
Rehearses and performs various types of musical literature. First year, third term. (Contact hours — 30) *Prerequisites: Permission of the instructor.*

MUS 154 ENSEMBLE IV 1 CR (0-2)
Rehearses and performs various types of musical literature. First year, fourth term. (Contact hours — 30) *Prerequisites:Permission of instructor.*

MUS 161 MUSIC TECHNOLOGY I 3 CR (3-0)
Considers in-depth music engraving applications through course projects designed to demonstrate engraving skills in a variety of score styles, arranging, part extraction, arranging, and scanning techniques. Project-oriented course covers current music notation/engraving software. (Contact hours — 45)

MUS 163 MUSIC AUDIO PRODUCTION I 3 CR (3-0)
Designed to give music majors and students with a strong interest in music a basic understanding of the Music Production process. This includes the basic knowledge of audio/music production, the fundamentals of sound and microphone, digital and analog technology, recording, and mixing. (Contact hours — 45)

MUS 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest. *Prerequisites: Permission of the instructor.*

MUS 185 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. *Prerequisites: Permission of the instructor.*

MUS 241 PRIVATE INSTRUCTION I 2 CR (0-4)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4 year school. 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 for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. Second year, first term. (Contact Hours - 37.5) *Prerequisites: Class instruction or permission of the instructor.*

MUS 242 PRIVATE INSTRUCTION II 2 CR (0-4)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4 year school. 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 for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. Second year, second term. (Contact Hours - 7.5) *Prerequisites: Class instruction or permission of the instructor.*

MUS 243 PRIVATE INSTRUCTION III 2 CR (0-4)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4 year school. 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 for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. Second year, third term. (Contact Hours - 7.5) *Prerequisites: Class instruction or permission of the instructor.*

MUS 244 PRIVATE INSTRUCTION IV 2 CR (0-4)
1 credit primarily for non-music majors. 2 credits for music majors planning to transfer to 4 year school. 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 for 1 credit. Regular attendance at and participation in student performances is required for 2 credits. Second year, fourth term. May be repeated for credit more than once per individual institution policy. (Contact Hours - 7.5) *Prerequisites: Class instruction or permission of the instructor.*

MUS 251 ENSEMBLE I 1 CR (0-2)
Rehearses and performs various types of musical literature. Second year, first term. (Contact Hours - 30) *Prerequisites: Permission of the instructor.*

MUS 252 ENSEMBLE II 1 CR (0-2)
Rehearses and performs various types of musical literature. Second year, second term. (Contact Hours - 30) *Prerequisites: Permission of the instructor.*

MUS 253 ENSEMBLE III 1 CR (0-2)
Rehearses and performs various types of musical literature. Second year, third term. (Contact Hours - 30) *Prerequisites: Permission of the instructor.*

MUS 254 ENSEMBLE IV 1 CR (0-2)
Rehearses and performs various types of musical literature. Second year, fourth term. (Contact Hours - 30) *Prerequisites: Permission of the instructor.*

MUS 275 SPECIAL TOPICS 1-6 CR
Covers specific topics in music. This course is offered as needed for credit appropriate to the topic and each offering includes a description of the topic(s). *Prerequisites: Permission of the instructor.*

MUS 285 INDEPENDENT STUDIES 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. *Prerequisites: Permission of the instructor.*

NAIL TECHNICIAN

(All COS, EST and NAT courses are a part of the Cosmetology Program and cannot be taken as independent courses.)

NAT 110 INTRO. TO MANICURES & PEDICURES 3 CR (1-3)
Provides a basic introduction in the proper use of implements used in manicures and pedicures. Theory and practical application of proper set-up, safety, sanitation, nail shapes, anatomy, product knowledge and terminology dealing with manicures and pedicures is covered. Training is done in a classroom or lab setting using models or other techniques. (Contact hours -- 60) *Prerequisite: COS 150.*

NAT 111 INTERMEDIATE MANICURES & PEDICURES 2 CR (0-3)
Presents theory and practical application dealing with different types of manicures, pedicures, nail art and massage techniques. Theory and practical application of procedures, products, nail shapes and maintenance of natural nails is covered. Students learn to recognize different nail disorders and their proper treatment. Training is done in a specialized class or in supervised salon (clinical) setting, using models or customer service. Proper sanitation and sterilization as it pertains to all aspect of manicures, pedicures and nail art is taught. (Contact hours -- 45) *Prerequisite: NAT 110.*

NAT 210 ADVANCED MANICURES & PEDICURES 2 CR (0-3)
Presents theory and practical application dealing with different types of manicures, pedicures, massage techniques and nail art. Theory and practical application of procedures, products, nail shapes and maintenance of natural nails is covered. Students learn to recognize different nail disorders and their proper treatment. Training is done in a specialized class or in supervised salon (clinical) setting, using models or customer service. (Contact hours -- 45) *Prerequisite: NAT 111.*

NAT 211 APPLICATION OF ARTIFICIAL NAILS 5 CR (1-6)
Provides advanced theory and practical application of nail wraps, tip overlays, acrylics and product knowledge to ready the student for employment. Theory and practical application of removal techniques for artificial nails is covered. Instruction is provided in specialized classes or in supervised salon (clinical) setting using models or customer service. Student preparation for state board licensing examination pertaining to artificial nails is covered. (Contact hours -- 105) *Prerequisite: COS 160.*

NAT 290 ADVANCED NAIL TECHNICIAN STUDIES 1 CR (7.5-11.5)
Provides students with a vehicle to pursue indepth exploration of special topics of interest. (Contact Hours - 19)

NURSING ASSISTANT

NUA 101 CERTIFIED NURSING AIDE HEALTH CARE SKILLS 4 CR (4-0)
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. (Contact hours — 64)

NUA 170 NURSE ASSISTANT CLINICAL EXPERIENCE 1 CR (0-2)
Applies knowledge gained from NUA 101 in a clinical setting. (Contact hours — 32) *Prerequisite: successful completion of NUA 101.*

NURSING - PRACTICAL

NUR 101 PHARMACOLOGY CALCULATIONS 1 CR (1-0)
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. (Contact hours — 15) *Prerequisite: Acceptance into Practical Nursing program*

NUR 102 ALTERATIONS IN ADULT HEALTH I 4 CR (4-0)
Introduces the Practical Nurse to basic concepts necessary for assessing and meeting nursing care needs of the adult and older individual. The course focuses on the concepts of acute and chronic illness, pain management, fluid and electrolyte balance, perioperative care, oncology, death and dying, infection and inflammation, and shock syndromes. Common disorders of the musculoskeletal, integumentary, respiratory and reproductive systems are presented. Relevant psychosocial and ethno cultural concepts and legal and ethical implications are integrated throughout. (Contact hours — 60) *Prerequisite: Acceptance into Practical Nursing program*

NUR 103 ASSESSMENT FOR THE PRACTICAL NURSE 1 CR (.5-.5)
Provides a foundation in assessment and related therapeutic communication and teaching skills within the legal role of the Practical Nurse. Information is presented to assist the learner in obtaining a health history and in performing a basic assessment on adults and older adults with predictable outcomes. Health maintenance and health promotion concepts are incorporated throughout the course. Relevant mental health, psychosocial and ethno cultural concepts are integrated. Learning theory regarding teaching and learning concepts are presented. (Theory: 0.5/7.5 contact hours; Lab: 0.5/15 contact hours) *Prerequisite: Acceptance into Practical Nursing program*

NUR 104 ALTERATIONS IN ADULT HEALTH II 5 CR (5-0)
Continues the concepts introduced in Alterations in Adult Health I. It introduces the learner to basic concepts necessary for assessing and meeting nursing care needs of the adult and older individual. The course focuses on the common disorders of the neurological, cardiovascular, blood, lymphatic, immune, endocrine, gastrointestinal, renal and urinary systems and the special senses. Relevant psychosocial and ethno cultural concepts are integrated throughout. (Contact hours — 75) *Prerequisites:Successful completion of preceding required program course work or permission of program director.*

NUR 105 PRACTICAL NURSING ARTS & SKILLS 6.5 CR (5-1.5)
Introduces the Practical Nursing learner to the principles of basic procedures necessary in caring for clients across the lifespan with stable and predictable outcomes in selected health care settings. Emphasis is placed on use of the nursing process in providing care. Opportunities are provided in the classroom and laboratory to develop competence in the performance of nursing skills. Relevant psychosocial and ethno cultural concepts are integrated throughout. Content regarding multidisciplinary relationships, historical perspectives, and health care delivery systems is presented. (1 or more credits may be given for students completing a Community College of Colorado approved CNA program.)
(Theory: 5 cr./75 contact hours; Lab: 1.5 cr./45 contact hours) *Prerequisite: Acceptance into Practical Nursing program*

NUR 110 PHARMACOLOGY PRACTICAL NURSING 3 CR (3-0)
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. (Contact hours -45)

NUR 111 SOCIALIZATION PRACTICAL NURSING 1 CR (1-0)
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.
(Contact hours — 15) *Prerequisites:Successful completion of preceding required program course work.*

NUR 113 BASIC CONCEPTS OF OB NURSING 2 CR (2-0)
Introduces the study of families experiencing childbirth. The focus is on normal pregnancy and the physiological and psychological changes during this time including the care of the normal newborn. Selected common complications are discussed. Relevant psychosocial and ethno cultural concepts are integrated throughout. The nursing process is used as a framework to assist the learner in understanding basic maternal/ newborn needs and nursing care within the role of the Practical Nurse.
(Contact hours — 30) *Prerequisite: Acceptance into Practical Nursing program*

NUR 114 BASIC CONCEPTS OF NURSING CHILDREN 2 CR (2-0)
Provides the learner with a basic understanding of the care of both the well and sick child within the role of the Practical Nurse. Emphasis is placed on the normal growth and development from infancy to adolescence. Nursing care of common childhood conditions is discussed. Theory is related to the nursing care of the well child, the sick child in various settings, the child with special needs, and the impact of pediatric care on the family. Relevant psychosocial, ethno cultural and family concepts are integrated throughout. (Contact hours — 30)

NUR 115 MENTAL HEALTH 1 CR (1-0)
Introduces the learner to basic concepts of mental health and illness. The course focuses on clients throughout the lifespan. Emphasis is placed on mental health concepts, selected common psychiatric disorders, treatment modalities and related nursing care. This course is designed to assist the Practical Nurse in caring for clients with varied psychosocial and ethno cultural backgrounds. (Contact hours — 15) *Prerequisites: Successful completion of preceding required program course work.*

NUR 116 INTRODUCTION TO GERONTOLOGY 1 CR (1-0)
Introduces the learner to basic knowledge of normal aging, disorders related to aging and nursing care of the older individual within the role of the Practical Nurse. Concepts regarding legal and ethical factors affecting the older individual are presented. Relevant psychosocial and ethno cultural concepts are integrated throughout.(Contact hours — 15) *Prerequisites: Successful completion of preceding required program course work.*

NUR 131 CLINICAL I - APPLICATION OF ARTS AND SKILLS 4.5 CR (0-4.5)
Offers the clinical practicum to apply the related nursing theory.
Prerequisites: Completion or co enrollment in corresponding didatic nursing course. (Contact hours — 135)

NUR 132 CLINICAL II - APPLICATION ADULT HEALTH 3 CR (0-3)
Offers the clinical practicum to apply the related nursing theory.
Prerequisites: Completion or co enrollment in corresponding didatic nursing course. (Contact hours — 90)

NUR 133 CLINICAL III - OB/PEDS 1.5 CR (0-1.5)
Offers the clinical practicum to apply the related nursing theory.
Prerequisites: Completion or co enrollment in corresponding didatic nursing course. (Contact hours — 45)

NUR 134 CLINICAL IV - ADVANCED APPLICATION OF ADULT HEALTH 4.5 CR (0-4.5)
Offers the clinical practicum to apply the related nursing theory.
Prerequisites: Completion or co enrollment in corresponding didatic nursing course. (Contact hours — 135)

NURSING - ASSOCIATE DEGREE

NUR 189 TRANSITION FROM LPN TO ADN 4 CR (2-1-1)
Focuses on assisting the LPN to transition into a new role as an Associate Degree Nursing Student. Emphasis will be placed on roles and responsibilities of the ADN, nursing process, critical thinking, legal and ethical issues and nursing practice issues related to specialized skills and the care of special populations. The clinical focus will be care of the pediatric and obstetric client. *Prerequisite: Acceptance into the LPN to ADN program.* (Theory: 2 cr/30 contact hrs; Lab: 1 cr/30 contact hrs.; Clinical: 1 cr/30 contact hours.) The clinical focus will be the care of the pediatric and obstretiric client. (Under revision by CCCS Nursing Curriculum Committee)

NUR 206 ADVANCED CONCEPTS OF MEDICAL-SURGICAL NURSING I 8 CR (3-.5-4.5)
NUR 206 builds on NUR106 focusing on advanced concepts of nursing applied to care of patients with high acuity medical/surgical conditions. Builds on medical/surgical nursing theory, mental health concepts, communication, collaboration, caring, and critical thinking/ clinical reasoning necessary for safe, patient-centered nursing care to developmentally and culturally diverse adult patients. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the professional nurse as applied in a variety of healthcare settings. Application of knowledge and skills occurs in the nursing skills laboratory and in a variety of clinical settings.
Prerequisite: Acceptance into LPN to ADN program.
(Theory: 3 cr/45 contact hrs; Lab: .5 cr/15 contact hrs; Clinical: 4.5 cr/135 contact hrs.)

NUR 211 PSYCHIATRIC-MENTAL HEALTH NURSING 4 CR (1-1-2)
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 psychiatric clinical conditions/disorders. *Prerequisite: Successful completion of preceding required program course work or permission of program director.*
(Theory: 1 cr/15 contact hrs; Lab: 1 cr/30 contact hrs; Clinical: 2 cr/60 contact hrs.)

NUR 212 PHARMACOLOGY II 2 CR (2-0)
Builds on previously introduced pharmacological concepts and applies that learning to pharmacologic therapy to provide safe, quality, evidence-based nursing care to patients with complex healthcare needs. Focuses on safety and quality improvement factors in the administration of medications within a variety of healthcare systems. Advanced dosage calculations included. *Prerequisite: Acceptance into LPN to ADN program.* (Theory 2 cr/30 contact hours.)

NUR 216 ADVANCED CONCEPTS MEDICAL-SURGICAL NURSING II 6 CR (2-4)
NUR 216 is a continuation of NUR 206, focusing on complex medical/surgical conditions of the high acuity patient. Builds on medical/surgical nursing theory, mental health concepts, communication, collaboration, caring, and critical thinking/clinical reasoning necessary for safe, patient-centered nursing care to developmentally and culturally diverse adult patients experiencing high acuity medical/surgical conditions. Incorporates evidence-based practice, quality improvement, professional standards, and legal and ethical responsibilities of the professional nurse as applied in the acute care and high acuity settings. Application of knowledge and skills occurs in a variety of clinical settings. *Prerequisite: Successful completion of preceding required program course work or permission of program director.*
(Theory: 2 cr/30 contact hrs; Clinical: 4 cr/120 contact hrs.)

NUR 230 TRANSITION TO PROFESSIONAL NURSING PRACTICE 5 CR (1.5-3.5)
NUR 230 is a seminar and practice capstone course that provides an integrative experience applying all dimensions of the professional nurse in the care of diverse patient populations across a variety of healthcare settings. All major concepts of the nursing program are addressed. Leadership and the management of multiple patients are emphasized. Application of knowledge and skills occurs in the clinical setting to facilitate an effective transition from student to registered professional nurse *Prerequisite: Successful completion of preceding required program course work or permission of program director.* (Theory: 1.5 cr/22.5 contact hrs; Clinical: 3.5 cr/105 contact hrs.)

PHYSICAL EDUCATION

PED 100 BEGINNING GOLF 1 CR (0-2)
Introduces 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. Includes driving range, putting green, and on-course play. (Contact hours - 30)

PED 101 BASEBALL 1 CR (0-2)
Assesses the student's skill level in baseball. Emphasizes skill testing and game participation. (Contact hours - 30)

PED 102 VOLLEYBALL 1 CR (0-2)
Introduces and improves student skill level in volleyball. The primary emphasis is on teaching the student the elements of volleyball including rules, offensive and defensive play, passing, serving, setting, attacking, team play and game strategies. (Contact hours - 30)

PED 103 SOFTBALL 1 CR (0-2)
Introduces and improves skill level in softball. Emphasizes the elements of softball including rules of play, variations of play, equipment, skill technique, and offensive and defensive play and strategies.
(Contact hours - 30)

PED 104 RACQUETBALL 1 CR (0-2)
Introduces and improves the skill level in racquetball. Emphasizes teaching the student the elements of racquetball including rules, stroke technique, scoring, serving, the various shots, and offensive and defensive strategies. (Contact hours - 30)

PED 105 BASKETBALL 1 CR (0-2)
Introduces basketball and focuses on improving student skill level. Emphasizes teaching the student the elements of basketball rules, offensive and defensive footwork, shooting, passing, dribbling, rebounding, team play, and game strategies. (Contact hours - 30)

PED 106 TENNIS 1 CR (0-2)
Introduces tennis and focuses on improving the skill level of the student. Emphasizes the elements of tennis including the rules of the game, groundstrokes, serving, the various shots, singles and doubles play and strategies. (Contact hours - 30)

PED 107 SOCCER 1 CR (0-2)
Gives the student the opportunity to gain knowledge and skills in the subject of soccer, including history, governing organizations, laws of the game, skills techniques, offensive and defensive tactics and conditioning.
(Contact hours - 30)

PED 110 FITNESS CENTER ACTIVITY I 1 CR (0-2)
Focuses on improving total fitness via an aerobic circuit training program. Includes an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. Covers the basic components of fitness including flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition. Weight machines, stationary bicycles, and computerized cardiovascular equipment are incorporated to elicit improvements in fitness. (Contact hours - 30)

PED 112 CONDITIONING LAB 1 CR (0-2)
Offers an independent self-paced format of conditioning exercises to meet individual needs. Emphasizes the value of lifetime fitness and its contribution to achieving personal health and wellness. Students utilize cardiorespiratory, muscluar strength and endurance exercises to promote positive changes in health-related fitness components. (Contact hours - 30)

PED 114 WALKING & JOGGING 1 CR (0-2)
Enables the student to understand the values in walking and jogging. Safety precautions and emphasis on personal programs are emphasized.
(Contact hours - 30)

PED 115 BODY TONING & SCULPTING 1 CR (0-2)
Introduces exercise techniques to improve overall physical fitness. Emphasizes the interaction between cardiovascular conditioning, muscular strength and endurance, flexibility and program design integrated into an aerobic format. Focuses on blending together different combinations and sequences of exercises while conditioning the entire body. Students exercise using various types of resistance equipment. (Contact hours - 30)

PED 116 WEIGHT TRAINING 1 CR (0-2)
Offers basic instruction and practice in weight training. Students utilize weight training equipment in accordance to their abilities and goals. Emphasizes weight training equipment orientation, correct lifting techniques, and basic program design for men and women. (Contact hours - 30)

PED 117 CROSS TRAINING 1 CR (0-2)
Introduces basic cross-training techniques designed to improve physical work capacity of an individual. Enables the student to gain an understanding of the basic principles of cross training, the effects cross training has upon the body`s energy systems and muscles, program design and terminology.
(Contact hours - 30)

PED 118 INDOOR STATIONARY GROUP CYCLING 1 CR (0-2)
Focuses on improving cardiovascular fitness, burning calories and enhancing 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. (Contact hours - 30)

PED 120 SWIM FITNESS 1 CR (0-2)
Enables the student to perfect stroke mechanics to swim with more ease, efficiency, power, and smoothness over greater distances. This course may utilize the competitive strokes, starts, and turns, and provide the `whys` as well as the `hows` of swim fitness so students can plan training programs to meet their changing needs. (Contact hours - 30)

PED 121 STEP AEROBICS **1 CR (0-2)**
Introduces basic step aerobics and exercise techniques to improve physical fitness. Emphasizes the basic principles of step aerobics including the effects upon the cardio-respiratory system and skeletal muscles, various step patterns and choreography. (Contact hours - 30)

PED 125 BOWLING **1 CR (0-2)**
Introduces bowling fundamentals to improve the student`s skill level. The primary emphasis is on teaching the student the elements of bowling, rules and regulations, footwork, courtesies, delivery, selection of ball, scoring, and team and individual competition.(Contact hours- 30)

PED 126 WATER AEROBICS **1 CR (0-2)**
Offers water exercise to develop physical fitness. Includes instruction in a variety of water exercises and vigerous activities to develop cardiovascular and muscular endurance, flexibility and the promotion of body composition management. (Contact Hours 30)

PED 130 CYCLING **1 CR (0-2)**
Introduces cycling and encourages the student to participate in a lifetime activity. Emphasizes the basics of bicycling safety and rules of the road, proper attire, physical conditiong, individual and family adventures. (Contact hours 30)

PED 136 ADVANCED WEIGHT TRAINING **2 CR (0-2)**
Offers guided instruction and independent practice in weight training for men and women. Students practice various weight training techniques in accordance with their abilities. Emphasizes physiological considerations, equipment orientation, correct lifting techniques, program design, and nutrition. (Contact hours 30)

PED 137 VARSITY SPORTS **1 CR (0-5)**
GOLF
VOLLEYBALL
BASKETBALL - MEN
BASKETBALL - WOMEN
BASEBALL
SOCCER - MEN
SOFTBALL

Allows the student-athletes an opportunity to participate in a competitive varsity sports program. (Contact hours — 75)

PED 145 PILATES MATWORK I **1 CR (0-2)**
Focuses on Pilates matwork to increase core strength, overall muscle tone and flexibility with focused and precise floor work techniques. A physical education class built upon the philosophies and exercises of Josef Pilates.

PED 147 YOGA **1 CR (0-2)**
Offers a guided instruction in yoga. Students practice yoga according to their individual fitness levels and abilities. Emphasizes enhancing general health and well-being through the performance of yoga strength, flexibility, balance and relaxation techniques and exercises.

PED 168 CARDIO KICKBOXING AEROBIC I **1 CR (0-2)**
Introduces aerobic kickboxing as an innovative new interval training aerobics workout that burns fat and increases cardio respiratory endurance. This high intensity course will focus on basic kickboxing moves and technique through hi-low aerobics choreography and target striking. The course will also include floor work to focus on toning and flexibility. (Contact hours — 30)

PED 200 ADVANCED GOLF **1 CR (0-2)**
Covers skills designed for individuals with an advanced level of golfing skills who are interested in improving their game. Driving range, putting green and on course instruction and play will be included. Use of woods, irons, wedges and putting will be stressed. All instruction will be by certified golf instructors. (Contact hours - 30) *Prerequisites: PED 100 or instructor approval.*

PED 204 POWER VOLLEYBALL **1 CR (0-2)**
Introduces and improves student's advanced skills in volleyball. The primary emphasis is on teaching students quick offensives and advanced defensive systems in order to play volleyball at a competitive level. (Contact hours — 30)

PED 213 FIRE ACADEMY FITNESS **2.5 CR (1-1.5)**
Focuses on Basic Fire Academy students who are interested in improving total fitness. Includes an individual fitness evaluation, computerized analysis of results and a prescribed exercise program. Emphasizes improving cardiovascular fitness, muscular strength, muscular endurance and addressing any fitness deficiencies revealed in the initial testing. (Contact hours - 75)

PED 233 ZUMBA **1 CR (0-2)**
Zumba is a compilation of high energy, motivating music with unique moves and choreography combinations. Zumba fuses Latin and International music and dance themes to create a dynamic, exciting, effective fitness system. The routines feature aerobic/fitness interval training with a combinaiton of fast and slow rhythms that tone and sculpt the body. Zumba utilizes the principles of fitness interval training and resistance training to maximize caloric output, fat burning and total body toning. It is a mixture of body sculpting movements with easy to follow dance steps. (Contact hours - 30)

PHYSICAL EDUCATION & RECREATION

PER 113 INTRODUCTION TO PHYSICAL EDUCATION & SPORT **2 CR (2-0)**
Focuses on the field of physical education and sport. Includes trends, precedents and their effects in the health and total wellness of those involved. (Contact hours — 30)

PER 121 DRUG AWARENESS IN SPORTS **2 CR (2-0)**
Provides students with an awareness of many so-called performance-enhancing drugs. Focuses on a closer look at the use and abuse of drugs in athletics and their short and long term effects. (Contact hours - 30)

PER 126 INTRODUCTION TO COACHING **2 CR (2-0)**
Acquaints the learner with the knowledge, requirements and responsibilities of coaching, including sport philosophy, sport medicine, and sport management. Fulfills requirements for ASEP Leader Level I. (Contact hours — 30)

PER 127 INTRODUCTION TO SPORTS MEDICINE **2 CR (2-0)**
Introduces the field of sports medicine, career options, and presents issues within the field. Emphasizes athletic training. (Contact hours — 30)

PER 128 INTRODUCTION TO RECREATION **2 CR (2-0)**
Studies the history, principles, philosophy, and contemporary problems and trends of recreation and their influence upon today`s American society. (Contact hours — 30)

PER 129 INTRO TO SPORTS MANAGEMENT **3 CR (3-0)**
Provides the student with knowledge of management in the areas of facilities, professional organizations, educational institutions, promotions, as well as the different managerial styles that can be applied. This course will also provide the student with individual topics such as quality control, leadership, strategic planning, information systems, and sport research. (Contact hours - 45)

PER 175 SPECIAL TOPICS **1-6 CR**
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PER 188 ATHLETIC TRAINING PRACTICUM I 1-3 CR (0-6)
Provides the opportunity for students to observe and gain experience in the techniques used in an athletic training room. (Contact hours — 15-45)

PER 220 PERSPECTIVES IN PE & SPORT 3 CR (3-0)
This course discusses the breadth, scope, and nature of the profession. It is an orientation to the history and philosophy of human performance and the factors that influence its evolution. Special consideration is giving to the history of sport from antiquity to the present, particularly the Olympic Games. (Contact hours -- 45)

PER 232 CARE & PREVENTION OF ATHLETIC INJURIES 3 CR (3-0)
Focuses on techniques in prevention, care and basic rehabilitation of athletic injury. (Contact hours — 45)

PER 242 ANALYSIS & TEACHING OF BASEBALL 2 CR (2-0)
Focuses on a study of the techniques and strategies of coaching competitive baseball to obtain background and understanding of rules and positions of umpiring baseball. (Contact hours — 30)

PER 244 ANALYSIS & TEACHING OF VOLLEYBALL 2 CR (2-0)
Provides the student with an understanding of teaching and analyzing the correct techniques, skills and basic knowledge to instruct the game of volleyball. (Contact hours — 30)

PER 245 ANALYSIS & TEACHING OF INDIVIDUAL/ DUAL SPORTS 3 CR (3-0)
Develops knowledge, skills, analysis of techniques and teaching competencies in the activities of golf, bowling, racquet sports, and billiards. (Contact hours - 45)

PER 249 ANALYSIS & TEACHING OF BASKETBALL 2 CR (2-0)
Provides students with an understanding of teaching and analyzing the correct techniques, skills, and basic knowledge to instruct the game of basketball. (Contact hours - 30)

PER 250 SOCIAL RECREATION & LEADERSHIP 3 CR (3-0)
Enables the student to study effective leadership methods and techniques used in social recreation programming. Students experience actual settings of appropriate activities in community organizations with different age groups. (Contact hours — 45)

PER 251 RECREATION SKILLS 3 CR (3-0)
Focuses on skills necessary to organize effectively and conduct various recreation activities for the recreation major. Covers sports and games, community centers, fine arts, and playground skills. (Contact hours — 45)

PER 252 PRINCIPLES OF OUTDOOR RECREATION 3 CR (3-0)
Includes lecture and practical outdoor experience relating to problems and trends in outdoor recreation. (Contact hours — 45)

PER 260 SPORTS OFFICIATING 2 CR (2-0)
Provides knowledge on basic fundamentals for all officials - how to deal with crowds and knowing the state organizations and their purposes. (Contact hours — 30)

PER 262 SPORTS LAW 2 CR (2-0)
Explains a coach`s legal responsibilities in easy to understand terms and gives practical advice for recognizing and improving standards of care and safety for athletes. Ideas and examples of report forms for specific areas are shared. (Contact hours — 30)

PER 267 COACHING & OFFICIATING BASEBALL 2 CR (2-0)
Studies the techniques and strategies of coaching competitive baseball to obtain background and understanding of the rules and positions of umpiring baseball. (Contact hours — 30)

PER 268 COACHING & OFFICIATING VOLLEYBALL 2 CR (2-0)
Includes both the techniques and strategies of coaching competitive volleyball, and the techniques and rules of officiating volleyball. (Contact hours — 30)

PER 269 COACHING & OFFICIATING BASKETBALL 2 CR (2-0)
Presents the techniques and strategies of coaching competitive basketball. Students obtain background and understanding of rules and techniques of officiating basketball. (Contact hours — 30)

PER 288 ATHLETIC TRAINING PRACTICUM II 2-3 CR (2 to 3-0)
Provides the opportunity for students to gain advanced experience in the techniques used in an athletic training room. (Contact hours — 30-45)

PHILOSOPHY

PHI 111 INTRODUCTION TO PHILOSOPHY 3 CR (3-0)
Introduces significant human questions and emphasizes understanding the meaning and methods of philosophy. Includes human condition, knowledge, freedom, history, ethics, the future, and religion. (Contact hours — 45) *Prerequisite: College level reading and writing skills.* State Guarantee Transfer Course.

PHI 112 ETHICS 3 CR (3-0)
Examines human life, experience, and thought in order to discover and develop the principles and values for pursuing a more fulfilled existence. Theories designed to justify ethical judgments are applied to a selection of contemporary personal and social issues. (Contact hours — 45) *Prerequisite: College level reading and writing skills.* State Guarantee Transfer Course.

PHI 113 LOGIC 3 CR (3-0)
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. (Contact hours — 45) *Prerequisite: College level reading and writing skills.* State Guarantee Transfer Course.

PHI 114 COMPARATIVE RELIGION 3 CR (3-0)
Introduces students to the similarities and differences among concepts predominant in the major world religions, comparing sociological, philosophical, and phenomenological similarities between major world faiths. It is designed to transfer to any four-year college philosophy, religious studies or humanities department. (Contact hours — 45) *Prerequisite: College level reading and writing skills.* State Guarantee Transfer Course.

PHI 115 WORLD RELIGIONS – WEST 3 CR (3-0)
Introduces the student to the common and different concepts predominant in the major world religions. Includes sociological, political, psychological, and philosophical aspects of a variety of belief systems. Focuses on the concept of religion as a cultural system, and a way that people make sense of a complex world. Particular emphasis is placed on how myths, legends, and folk tales reveal religious concerns. (Contact hours — 45) *Prerequisite: College level reading and writing skills*

PHI 116 WORLD RELIGIONS – EAST 3 CR (3-0)
Emphasizes the diversity and richness of Eastern Religions within a cross-cultural context. Concepts such as fate, reincarnation, enlightenment and morality are analyzed. (Contact hours — 45)

PHI 175 SPECIAL TOPICS 1-6 CR (0-0)
Consists of specially offered courses as a response to interest or need. (Contact hours — 45) *Prerequisite: Instructor's permission.*

PHI 214 PHILOSOPHY OF RELIGION 3 CR (3-0)
Focuses on the critical examination of the fundamental concepts, ideas, and implications of religion. Includes 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. (Contact hours -- 45) State Guarantee Transfer Course.

PHI 218 ENVIRONMENTAL ETHICS 3 CR (3-0)
Critically analyzes theories of value of the natural world. Topics include the relation between scientific and moral principles; theories of the moral worth of persons, animals, plants and other natural objects; historical, religious and cultural influences on conceptions of nature; alternative accounts of human relationships and responsibilities to nature, including deep ecology and eco-feminism; and the connection between moral and political values and economic policies. (Contact hours-45) State Guarantee Transfer Course.

PHI 220 PHILOSOPHY OF DEATH & DYING 3 CR (3-0)
Explores the major philosophical questions surrounding death and dying: the metaphysical arguments for and against the existence of a soul and life after bodily death, the epistemological assessment of arguments for the soul and life after death, the ethical justifications taken on positions such as rational suicide and physician assisted suicide, as well as a focus on philosophy's existentialist contribution to questions about the meaning of life and the meaning of death. (Contact hours — 45) State Guaranteed Transfer Course.

PHYSICS

PHY 105 CONCEPTUAL PHYSICS 4 CR (3-2)
Focuses on mechanics, heat, properties of matter, electricity and magnetism, light and modern physics. Incorporates laboratory experience.
(Contact hours — 75) *Prerequisites: MAT 99.* State Guarantee Transfer Course. AA & AGS Degrees only.

PHY 111 PHYSICS: ALGEBRA-BASED I WITH LAB 5 CR (4-2)
Enables the student to explore the truth about physical reality through reasoning, mathematics and experimentation. Examines kinematics, force, circular motion, energy, momentum, torque, rotational dynamics, simple harmonic motion, temperature, heat and thermodynamics. The concepts and theories presented are explored through demonstrations and hands-on experiments. It is a general physics course that is recommended for all of the health sciences and all other interested students. Students entering engineering or one of the advance sciences should register for PHY 211. (Contact hours — 90) *Pre-requisite: MAT 121, or MAT 122 or MAT 166 recommended.* State Guarantee Transfer Course.

PHY 112 PHYSICS ALGEBRA-BASED II WITH LAB 5 CR (4-2)
Expands upon PHY 111 and covers sound waves, electric fields, electric circuits, magnetic fields, optics, and modern physics. Explores the concepts and theories presented in class through demonstrations and hands-on experiments. (Contact hours — 90) *Prerequisite: PHY 111.*
State Guarantee Transfer Course.

PHY 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PHY 211 PHYSICS: CALCULUS-BASED I WITH LAB 5 CR (4-2)
Enables the student to examine the truth about physical reality through reasoning, mathematics and experimentation. Covers kinematics, force, gravity, energy, momentum, torque, rotational dynamics, fluids and waves. The concepts and theories presented in class are explored through demonstrations and hands-on experiments. This first semester calculus-based physics course is recommended for students entering engineering or one of the advance sciences. (Contact hours — 90) *Prerequisites: MAT 122 AND Corequisite: MAT 201.* State Guarantee Transfer Course.

PHY 212 PHYSICS: CALCULUS-BASED II WITH LAB 5 CR (4-2)
Expands upon PHY 211 and examines thermodynamics, electric fields, electric circuits, magnetic fields, light and optics, and modern physics. The concepts and theories presented in class are explored through demonstrations and hands-on experiments (Contact hours — 90) *Prerequisites: PHY 211.* State Guarantee Transfer Course.

PHY 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

POLITICAL SCIENCE

POS 105 INTRODUCTION TO POLITICAL SCIENCE 3 CR (3-0)
Focuses on a survey of the discipline of political science, including political philosophy and ideology, democratic and non-democratic governments, and processes, and international relations.
(Contact hours — 45) State Guarantee Transfer Course.

POS 111 AMERICAN GOVERNMENT 3 CR (3-0)
Includes the background of the U.S. Constitution, the philosophy of American government, general principles of the Constitution, federalism, and civil liberties. Examines public opinion and citizen participation, political parties, interest groups, and the electoral process, and the structure and functions of the national government. (Contact hours — 45) State Guarantee Transfer Course.

POS 125 AMERICAN STATE/LOCAL GOVERNMENT 3 CR (3-0)
Emphasizes the structure and function of state, county, and municipal governments including their relations with each other and with national government. Includes a study of Colorado government and politics.
(Contact hours — 45) State Guarantee Transfer Course.

POS 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

POS 205 INTERNATIONAL RELATIONS 3 CR (3-0)
Examines relationships among modern nation states. Topics include diplomacy, nationalism, ideologies, power and influence, conflict and cooperation, the role of nonstate actors, the international economy and theoretical attempts to understand international behavior.
(Contact hours - 45) State Guarantee Transfer Course.

POS 225 COMPARATIVE GOVERNMENT 3 CR (3-0)
Focuses on a comparison of the basic features of selected developed and developing countries. Topics include ideologies, political parties, interest groups, and governmental institutions. (Contact hours - 45) State Guarantee Transfer Course.

PRACTICAL NURSING

(See Nursing-Practical)

PRODUCTION AGRICULTURE

(See Agriculture-Production)

PSYCHOLOGY

PSY 101 GENERAL PSYCHOLOGY I 3 CR (3-0)
Focuses on the scientific study of behavior including motivation, emotion, physiological psychology, stress and coping, research methods, consciousness, sensaition, perception, learning and memory.
(Contact hours — 45) *Prerequisite: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

PSY 102 GENERAL PSYCHOLOGY II 3 CR (3-0)
Focuses on the scientific study of behavior including cognition, language, intelligence, psychological assessment, personality, abnormal psychology, therapy, life span development, and social psychology. (Contact hours — 45) *Prerequisite: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.*
State Guarantee Transfer Course.

PSY 175 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PSY 205 PSYCHOLOGY OF GENDER 3 CR (3-0)
Examines gender comparisons in work, courtship, family life, and sexual behavior throughout the life span. (Contact hours -- 45) State Guarantee Transfer Course.

PSY 207 INTRODUCTION TO FORENSIC PSYCHOLOGY 3 CR (3-0)
Introduction to Forensic Psychology is course is an overview of forensic psychology. As such it explores both current research and practice in five areas. These areas are police psychology, criminal psychology, victimology, correctional psychology and the interface of psychology and the courts. The course facilitates an understanding of the numerous careers related to forensic psychology, how to prepare for them and current research and practice in each of the five broad areas of forensic psychology.
(Contact hours -- 45)

PSY 217 HUMAN SEXUALITY 3 CR (3-0)
Surveys physiological, psychological, and psychosocial aspects of human sexuality. Topics include relationships, sexual identity, and sexual health. (Contact hours — 45) State Guarantee Transfer Course.

PSY 226 SOCIAL PSYCHOLOGY 3 CR (3-0)
Focuses on the behavior of humans in social settings including attitudes, aggression, conformity, cooperation and competition, prejudice, and interpersonal attraction.(Contact hours — 45) *Prerequisites: 3 hrs General PSY, 3 hrs General SOC or permission of instructor.* State Guarantee Transfer Course.

PSY 227 PSYCHOLOGY OF DEATH AND DYING 3 CR (3-0)
Examines the philosophies of life and death, emphasizing dying, death, mourning, and the consideration of one`s own death.
(Contact hours --45) State Guarantee Transfer Course.

PSY 235 HUMAN GROWTH & DEVELOPMENT 3 CR (3-0)
Examines human development from conception through death emphasizing physical, cognitive, emotional and psychosocial factors. (Contact hours — 45) *Prerequisite: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

PSY 237 CHILD & ADOLESCENT PSYCHOLOGY 3 CR (3-0)
Explores human development from conception through adolescence, emphasizing physical cognitive, emotional, and psychosocial factors. (Contact hours — 45)

PSY 238 CHILD DEVELOPMENT 3 CR (3-0)
Focuses on growth and development of the individual from conception through childhood, emphasizing physical, cognitive, emotional, and psychosocial factors. (Contact hours — 45) State Guarantee Transfer Course.

PSY 240 HEALTH PSYCHOLOGY 3 CR (3-0)
Focuses on growth and development of the individual from conception through childhood, emphasizing physical, cognitive, emotional, and psychosocial factors. (Contact hours — 45) *Prerequisites: BIO 105,BIO 111, PSY 101, PSY 102 or PSY 235* State Guarantee Transfer Course.

PSY 245 EDUCATIONAL PSYCHOLOGY 3 CR (3-0)
Focuses on the relationships between theory, research, and practice in the areas of learning, child development, motivation, and educational assessment. (Contact hours — 45)

PSY 249 ABNORMAL PSYCHOLOGY 3 CR (3-0)
Examines abnormal behavior and its classification, causes, treatment, and prevention. (Contact hours — 45) State Guarantee Transfer Course.

PSY 265 PSYCHOLOGY OF PERSONALITY 3 CR (3-0)
Examines the structure, function, and development of personality. Investigates the major contemporary theories of personality. Covers psychodynamic, behavioral, cognitive-social learning, humanistic, trait, and, optionally, neurobiological, existential, and/or Eastern, perspectives. The underlying assumptions and research support for these theories are appraised. Enables the student to gain an appreciation of the value of alternative theoretical approaches to this subfield of psychology.
(Contact Hours - 45)

PSY 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PSY 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. *Prerequisites: Permission of the instructor.*

RANGE MANAGEMENT

RAM 205 PRINCIPLES OF RANGE MANAGEMENT 3 CR (2-2)
Presents the historical and current status of the range livestock industry. Management principles for private and public rangelands, range plant identification and range plant communities are covered.
(Contact hours — 60)

READING

REA 30 BASIC READING SKILLS 2 CR (2-0)
Focuses on strategies for word attack, vocabulary development, stages of reading and basic reading comprehension. (Contact hours — 30)
Prerequisite: Reading Comprehension Accuplacer score of 25 or higher.

REA 60 FOUNDATIONS OF READING 3 CR (3-0)
Focuses on strategies for vocabulary development, improved reading comprehension, and enrichment. (Contact hours— 45) *Prerequisite: Successful completion of REA 30, or equivalent (grade C or better), or Readng Comprehension Accuplacer score of 40 or higher.*

REA 90 COLLEGE PREPARATORY READING 3 CR (3-0)
Enables the student to apply strategies for improving comprehension, developing vocabulary, and increasing rate for reading college textbooks. (Contact hours — 45) *Prerequisite: Successful completion of REA 60 or equivalent (grade C or better) or Reading Comprehension Accuplacer score of 62 or higher.*

REA 112 SPEED READING 2 CR (2-0)
This course is designed to improve reading comprehension and speed of reading for students who want to enhance skills for success in college or career environments.(Contact hours — 30) *Prerequisite: Successful completion of REA 90 or equivalent (grade "C" or better) OR Reading Comprehension Accuplacer score of 80 or higher.*

REA 130 APPLIED AND TECHNICAL READING 2 CR (2-0)
(Core Course for AGS or AAS)
Focuses on the appropriate reading strategies to understand technical, vocational and academic texts, manuals, professional journals and pleasure materials; to complete a task in the workplace; and to comprehend a new process. (Contact hours — 30) *Prerequisite: Successful completion of REA 90 or equivalent (grade C or better) or Reading Comprehension Accuplacer score of 80 or higher.*

SCIENCE

SCI 155 INTEGRATED SCIENCE I 4 CR (3-2)
Examines the nature of energy and matter, their interactions and changes, and the application of fundamental concepts to the study of our natural world. *Prerequisites: MAT 99.* (Contact Hours 75) State Guarantee Transfer Course.

SCI 156 INTEGRATED SCIENCE II 4 CR (3-2)
Examines earth and biological systems, living and non-living environments, through the applications and refinement of fundamental energy and matter concepts. *Prerequisites: MAT 99.* (Contact hours 75) State Guarantee Transfer Course.

SOCIOLOGY

SOC 101 INTRODUCTION TO SOCIOLOGY I 3 CR (3-0)
Examines the basic concepts, theories, and principles of sociology as well as human culture, social groups, and the social issues of age, gender, class, and race. (Contact hours — 45) *Prerequisite: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

SOC 102 INTRODUCTION TO SOCIOLOGY II 3 CR (3-0)
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. (Contact hours — 45) *Prerequisite: Reading Accuplacer score of 80 or higher OR successful completion of REA 90 OR concurrent enrollment in REA 90.* State Guarantee Transfer Course.

SOC 105 SOCIO-HISTORY US RACE/ETHNICITY 3 CR (3-0)
Explores the Socio-Historical context by which the US developed its diverse racial and ethnic make-up. Theories of Integration and Seration will be explored across the eras. Changing US immigration, naturalization, prejudice and discrimination across the centuries will be addressed. (Contact hours — 45)

SOC 175 SPECIAL TOPICS 0-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

SOC 205 SOCIOLOGY OF FAMILY DYNAMICS 3 CR (3-0)
Develops 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. (Contact hours — 45) State Guarantee Transfer Course.

SOC 207 ENVIRONMENTAL SOCIOLOGY 3 CR (3-0)
Examination of humans and the environment from an ecological perspective. Focuses on industrial and economic growth versus sustainability, natural resources development and management, environmental values and social movements, and comparative perspectives on people's relationship to the environment. Review of the "Green" movement and other environmental movements and their impacts upon social dynamics, the environment, and the evolution of social movements. (Contact hours - 45) State Guarantee Transfer Course.

SOC 215 CONTEMPORARY SOCIAL PROBLEMS 3 CR (3-0)
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. (Contact hours -- 45) State Guarantee Transfer Course.

SOC 216 SOCIOLOGY OF GENDER 3 CR(3-0)
Gives students the theoretical and factual background necessary to understand the phenomenon of gender stratification in American and other cultures. Students will be exposed to a history of gender stratification in human societies, theoretical explanations for this and insights into the consequences of gender differentiation in our world today. (Contact hours -- 45) State Guarantee Transfer Course.

SOC 218 SOCIOLOGY OF DIVERSITY 3 CR (3-0)
Explores the variety of intergroup relations regardng race, nationality, ethnicity, gender, sexual orientation, and other diversity issues. Patterns of prejudice, discrimination and possible solutions to these issues will be addressed. (Contact hours — 45) State Guarantee Transfer Course.

SOC 220 SOCIOLOGY OF RELIGION 3 CR (3-0)
Provides an introduction to the sociology of religion, including a comparative and critical examination of world religions, by focusing on sociological interpretation and explanation of the role of religion in human culture. The interaction between society and religion is thus examined as are a wide variety of religious beliefs and practices. (Contact hours — 45) State Guarantee Transfer Course.

SOC 231 SOCIOLOGY OF DEVIANT BEHAVIOR 3 CR (3-0)
Examines the nature, identification, and explanation of deviant categories. Theories, and philosophies as well as methods of treatment related to deviancy will also be considered. The course will study society`s attempts to control, change, and institutionalize those acts, individuals or groups that a population may deem unacceptable. (Contact hours -- 45) State Guarantee Transfer Course.

SOC 237 SOCIOLOGY OF DEATH & DYING 3 CR (3-0)
Provides an opportunity to familiarize students and professionals with the needs and issues surrounding dying and death. This course will provide sociological, psychological, religious, historical and anthropological perspectives for interpreting contemporary American customs dealing with dying, death and bereavement. We will examine the professions associated with death and dying, such as hospice, funeral and crematory institutions, and medical care. (Contact hours -- 45) State Guarantee Transfer Course.

SOC 275 SPECIAL TOPICS 0-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

SPANISH

SPA 101 CONVERSATIONAL SPANISH I 3 CR (0-6)
Offers beginning students the skills necessary to understand and speak Spanish. The material includes basic vocabulary, grammar, and expressions that are used in daily situations and in travel. (Contact hours — 45)

SPA 102 CONVERSATIONAL SPANISH II 3 CR (0-6)
Offers students the skills necessary to understand and speak Spanish. The material continues to cover basic conversations patterns, expressions, and grammar. (Contact hours — 45) *Prerequisites: SPA 101 or permission of instructor.*

SPA 111 SPANISH LANGUAGE I 5 CR (5-0)
Deals with the development of functional proficiency in listening, speaking, reading and writing the Spanish language. Note: The order of the topics and methodology will vary according to individual texts and instructors. (Contact hours — 75)

SPA 112 SPANISH II 5 CR (5-0)
Continues Spanish Language I in the development of functional proficiency in listening, speaking, reading and writing the Spanish language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. (Contact hours — 75) *Prerequisites: SPA 111 or instructor permission.*

SPA 114 FAST-TRACK SPANISH I & II 5 CR (5-0)
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. (Contact hours — 75)

SPA 115 SPANISH FOR THE PROFESSIONAL I 3 CR (3-0)
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. (Contact hours - 45) *Prerequisite: College-level reading.*

SPA 175 SPECIAL TOPICS 1-6
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

SPA 211 SPANISH III 3 CR (3-0)
Continues Spanish Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the Spanish language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. (Contact 45). *Prerequisite: SPA 112, SPA 114 or instructor permission.* State Guarantee Transfer Course.

SPA 212 SPANISH IV 3 CR (3-0)
Continues Spanish Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the Spanish language. Note: The order of the topics and the methodology will vary according to individual texts and instructors. (Contact hours - 45). *Prerequisite: SPA 211 or instructor permission.* State Guarantee Transfer Course.

SPA 215 SPANISH FOR THE PROFESSIONAL II 3 CR (3-0)
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. (Contact hours - 45) *Prerequisite: SPA 115 or Equivalent Placement Scores*

SPA 262 COMPOSITION FOR THE HERITAGE LANGUAGE SPEAKER 3 CR (3-0)
Provides formal composing instruction to Spanish Language students whether native or bilingual who want to develop their existing proficiency in the target language. (Contact hours - 45)

SPA 275 SPECIAL TOPICS 1-6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

SPA 285 INDEPENDENT STUDY 1-6 CR
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. *Prerequisite: Permission of the instuctor.*

THEATRE

THE 105 THEATRE APPRECIATION 3 CR (3-0)
Includes discussions, workshops, and lectures designed to discover, analyze and evaluate all aspects of the theatre experience: scripts, acting, directing, staging, history, criticism and theory. (Contact hours — 45) State Guarantee Transfer Course.

THE 111 ACTING I 3 CR (3-0)
Covers basic acting techniques and approaches including scene study, improvisation, and script analysis. It includes practical application through classroom performance.(Contact hours — 45)

THE 112 ACTING II 3 CR (3-0)
Continues to explore basic acting techniques and approaches including scene study, improvisation, and intermediate script analysis. It includes practical application through classroom performance.
(Contact hours — 45) *Prerequisite: THE 111 or permission of instructor. THE 105 is strongly advised.*

THE 115 STAGE MOVEMENT FOR ACTORS 3 CR (3-0)
Introduces the vocabulary of human movement, techniques of physical training, and anatomy and kinesiology for the actor. The course includes forms of basic dance and the coordination of movement with vocal delivery. (Contact hours — 45)

THE 116 TECHNICAL THEATRE 3 CR (3-0)
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. (Contact hours — 45)

THE 141 IMPROVISATION I 1 CR (1-0)
Helps students learn improvisation skills for performance and character development. Emphasis is placed on Second City style of improvisation. (Contact hours - 15)

THE 204 VOICE AND ARTICULATION 2 CR (2-0)
Emphasizes vocal development including diction, enunciation, projection, dialects, and vocal interpretation of written materials. Students strive to eliminate regionalisms and tonal faults, e.g., nasality, stridency, sibilance, breathiness. (Contact hours — 30)

THE 211 DEVELOPMENT OF THEATRE: GREEK RENAISSANCE 3 CR (3-0)
Surveys the history and evolution of drama from Ancient Greece to the Renaissance, emphasizing all aspects of the art from period values to analysis of dramatic literature and performance. (Contact hours — 45) State Guarantee Transfer Course.

THE 212 DEVELOPMENT OF THEATRE: RESTORATION-MODERN 3 CR (3-0)
Surveys the history and evolution of drama from the Renaissance to the present, emphasizing all aspects of the art from period values to the analysis of dramatic literature and performance. (Contact hours — 45) State Guarantee Transfer Course.

THE 246 REHEARSAL & PERFORMANCE 1 CR (0-2)
Gives the student actor practical experience in a real acting environment. Through the audition and rehearsal process the student `s imagination and creative potential will be stimulated. Special attention will be given to characterization, stage movement, speech techniques, dramatic form and the rehearsal / production / performance process. The successful rehearsal and presentation of the current production to the public will be the focal point of their activities. Previous acting experience is helpful but not required. (Contact hours — 60)

THE 247 REHEARSAL & PERFORMANCE II 2 CR (0-4)
Gives the student actor practical experience in a real acting environment. Through the audition and rehearsal process the student `s imagination and creative potential will be stimulated. Special attention will be given to characterization, stage movement, speech techniques, dramatic form and the rehearsal / production / performance process. The successful rehearsal and presentation of the current production to the public will be the focal point of their activities. Previous acting experience is helpful but not required. (Contact hours — 60)

THE 248 REHEARSAL & PERFORMANCE III 3 CR (0-6)
Gives the student actor practical experience in aw real acting environment. Through the audition and rehearsal process the student `s imagination and creative potential will be stimulated. Special attention will be given to characterization, stage movement, speech techniques, dramatic form and the rehearsal / production / performance process. The successful rehearsal and presentation of the current production to the public will be the focal point of their activities. Previous acting experience is helpful but not required. (Contact hours — 60)

THE 275 SPECIAL TOPICS 1-3 CR
Explores current topics, issues and activities related to one or more aspects of the named discipline.

THE 285 INDEPENDENT STUDY 1-3 to 5 CR
Emphasizes structured and guided, individualized study that is organized and tailored around the interests and needs of the individual student.

WELDING

WEL 130 MAINTENANCE WELDING 2 CR (1-1.5)
Gives the student a basic understanding of the Oxyacetylene cutting and Arc welding processes, and introduction to the skills and techniques used to develop fillet and groove welds. Students will be introduced to oxyacetylene, sheilded, gas metal arc welding equipment set up, and various welding techniques. Safety will be stressed during the course. (Contact Hours --- 37.5)

WEL 140 WELDING PRACTICES & PROCEDURES 1.5 CR1.5)
Teaches applied metallurgy, welding process applications, and related safety. This intensive course provides a one-of-a-kind opportunity for welding operators, technicians, and supervisors to learn more about the maintenance process and is ideal for improving the skills and on-the-job expertise of a wide range of personnel including: inexperienced welding operators, experienced welding operators in management positions, and anyone else working in a plant or equipment maintenance position where welding repairs are required. (Contact hours --- 34)

WEL 275 SPECIAL TOPICS 1- 6 CR
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

WOMEN'S STUDIES

WST 200 INTRODUCTION TO WOMEN'S STUDIES 3 CR (3-0)
Examines the nature and function of women in society from an interdisciplinary perspective, focusing on the similarity and diversity of women`s experience over time and across cultures. The course will examine topics such as sex role, socialization, political, and philosophical perspectives on women`s issues, and women`s accomplishments in history, art, literature, science, health issues and the family. Students will gain an awareness of the limitations of traditional scholarship on women, and gain a means of practical application of the new scholarship on women`s roles and nature. (Contact Hours --- 45) State Guarantee Transfer Course.

WST 240 GODDESSES AND WOMEN IN THE ANCIENT WORLD 3 CR (3-0)
Surveys gender socialization and the roles, challenges, contributions, and images of women in the development of cultures. Through a study of arts, literature, music, politics, religion, philosophy, laws, and social standards students are introduced to the history of ideas that have defined women¿s place in societies. It examines goddesses, rituals, and ceremonies and how the image of the Feminine Divine changed from matriarchal cultures through the establishment of patriarchal cultures. These topics will be viewed through diverse cultures, including European and non-European, from the Ancient World through the Middle Ages. (Contact hours - 45) State Guaranteed Transfer Course.

WIND TURBINE GENERATOR

WTG 100 INTRODUCTION TO WIND INDUSTRY 3 CR (3-0)
Introduces students to the wind power generation industry. Topics covered will include physics of wind energy, various sizes and types of wind turbines, reading wind maps for finding the best wind locations. Students will also engage in discussions of the impact of the wind industry on social, environmental, economic, and political issues. (Contact hours - 45) *Prerequisites: EIC 101*

WTG 110 WIND TURBINE GENERATOR POWER DISTRIBUTION & CONTROL SYSTEMS 3 CR (1-3)
Provides a comprehensive overview of the wind turbine generator systems. Focus will be on the power distribution and systems controls, including theory, application, component identification, and schematics. Safety and appropriate PPE will be emphasized in lab environment. (Contact hours - 60) *Prerequisites: EIC 101*

WTG 170 LAB EXPERIENCE FOR DC/AC 1 CR (0-1.5)
Provides additional lab experience for students enrolled in ELT 106 Fundamentals of AC/DC. (Contact hours - 22.5) *Prerequisites: EIC 101*

WTG 210 WIND TURBINE GENERATOR AIRFOILS AND COMPOSITES 2 CR (1-1.5)
Introduces students to aerodynamic principles and theory of lift as it relates to wtg efficiency in converting wind energy into mechanical energy. Students then learn basics of wtg blade construction and repair. Lab will give students a limited hands on experience working with composite materials.
(Contact hours - 37.5) *Prerequisites: EIC 101*

WTG 220 WIND TURBINE GENERATOR TROUBLE-SHOOTING & REPAIR 4 CR (1-4.5)

Introduces students to standards and techniques of wind turbine technician operations, maintenance, troubleshooting, and repair. Emphasis on teamwork, safety, accuracy, and efficiency, as well as basic troubleshooting techniques. Discussion will cover building, commissioning, warranty, operations & maintenance, and hotshot troubleshooting crews and work environments. (Contact hours - 82.5) *Prerequisites: EIC 101*

WTG 280 WIND TECHNICIAN INTERNSHIP 6 CR

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. (Internship hours - 240) *Prerequisites: EIC 101*

WTG 289 WIND TECHNICIAN CAPSTONE 2 CR(2-0)

Provides a comprehensive overview of the Wind Technician Program, giving the student a unified picture of the wind industry and the role of the wind technician. Students are further prepared for entering industry by developing their own resume, introduced to online job services, and industry organizations. Current and future wind industry niches and trends will be discussed to give the students possible career paths to look further into and plan for. (Contact hours - 30) *Prerequisites: EIC 101*