

COURSE DESCRIPTIONS

Academic Achievement

AAA 090 ACADEMIC ACHIEVEMENT STRATEGIES 3 CREDITS

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

AAA 101 COLLEGE 101: THE STUDENT EXPERIENCE 1 CREDIT

Introduces students to college culture and prepares them for the challenges they will face in higher education. Through a series of interactive seminars, students discover learning in a multicultural environment and use College and community resources to attain education and career goals.

AAA 109 ADVANCED ACADEMIC ACHIEVEMENT 3 CREDITS

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. PREREQUISITE: CPT reading score 80-120.

Accounting

ACC 101 FUNDAMENTALS OF ACCOUNTING 3 CREDITS

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.

ACC 115 PAYROLL ACCOUNTING 3 CREDITS

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. PREREQUISITES: ACC 101 or 121, or enrolled concurrently or Instructor's permission.

ACC 118 ANALYZING AND INTERPRETING FINANCIAL STATEMENTS 3 CREDITS

Introduces accounting and its significant role in making sound business decisions. Designed to teach students how to use financial statements to be wise users of accounting information. Gives practical experience using ratio analysis to make credit and equity decisions. Instructional methods include lecture, case studies, group interaction and Internet research projects.

ACC 121 ACCOUNTING PRINCIPLES I 4 CREDITS

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.

ACC 122 ACCOUNTING PRINCIPLES II 4 CREDITS

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. PREREQUISITES: ACC 121 or equivalent; MAT 106, 111 or higher strongly recommended.

ACC 125 COMPUTERIZED ACCOUNTING 3 CREDITS

Introduces the capabilities of computer applications in accounting. Includes solving accounting problems of a financial nature and hardware and software controls. PREREQUISITE: ACC 101 or ACC 131

ACC 131 INCOME TAX I 3 CREDITS

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.

ACC 135 SPREADSHEET APPLICATION FOR ACCOUNTING 3 CREDITS

This course introduces spreadsheets as an accounting tool. Using an accounting perspective, the student applies fundamental spreadsheet concepts. The spreadsheet is used as a problem solving and decision making tool. PREREQUISITES: ACC 122, CIS 155 or spreadsheet experience (all required).

ACC 211 INTERMED. ACCOUNTING I 4 CREDITS

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.

ACC 212 INTERMEDIATE ACCT. II 4 CREDITS

Focuses on the theoretical and practical aspects of accounting for long-term liabilities, stockholders' equity, investments, pensions and leases. Includes income tax allocation, financial statement analysis, cash flow statements and accounting methods changes.

ACC 215 ACCOUNTING, INFORMATION SYSTEMS AND E-BUSINESS 3 CREDITS

Studies the principles, concepts and tools used in the analysis, design, implementation and integration of

accounting systems, internal controls systems and accounting procedures. Key elements of system analysis, business systems design, accounting software selection, and the acquisition and implementation of systems are studied. Techniques and systems for electronic control systems, electronic data interchange, electronic funds transfer and Web commerce are explored.

ACC 226 COST ACCOUNTING 3 CREDITS
Studies cost accumulation methods and reports. Focuses on the concepts and procedures of job order, process, standard and direct cost systems, budgeting, planning and control of costs.

ACC 229 MANAGERIAL ACCOUNTING 3 CREDITS
Focuses on the analysis of financial statements and other accounting data used by management in the planning and control functions. Includes a study of cost behavior, volume-cost-profit relationships, return on investment and the budgetary process. PREREQUISITE: ACC 122

ACC 235 COMPUTERIZED ACCOUNTING FOR SMALL BUSINESSES 3 CREDITS
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.

ACC 245 COMPUTERIZED ACCOUNTING WITH A PROFESSIONAL PACKAGE 3 CREDITS
Integrates accounting principles and practices with a computerized accounting package such as Peachtree, DacEasy, or other professional package. Emphasizes computerized functions of the general ledger and integrated accounts payable, accounts receivable, invoicing and payroll systems. PREREQUISITE: ACC 121 or 101

ACC 275 SPECIAL TOPICS 1-6 VARIABLE CREDITS
Provides students with a vehicle to pursue in-depth exploration of special topics of interest. PREREQUISITE: ACC 101 or ACC 131

ACC 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission

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

ACC 289 CAPSTONE 3 CREDITS
Provides pending accounting graduates with the opportunity to evaluate analysis skills. Using the knowledge acquired from their academic studies, the student evaluates the financial standing of three different companies. Financial

analysis using spreadsheet capabilities and written report skills are included. The student works independent of a traditional classroom setting. PREREQUISITES: ACC 122, 131, 135, 226

Activity Professional Training

APT 110 ACTIVITY PROFESSIONAL TRAINING I 8 CREDITS
Introduces students to the profession and its framework. This course will discuss behavioral sciences and its relationship to the late adult years, methods of service delivery and assessment and care planning practices. Successful completion of this course, APT 188, APT 210 and APT 288 satisfies the requirement of completion of a state approved activity program by Federal Regulation F249 for Medicare, Medicaid certified long care facilities and the requirement for the completion of the Modular Education Program for Activity Professionals (MEPAP) approved by the National Certification Council of Activity Professional (NCCAP). PREREQUISITE: High School diploma or GED. COREQUISITE: APT 188

APT 188 BASIC EDUCATION PRACTICUM 2 CREDITS
This course is the practical experience portion of the APT 100 courses, which together comprise the Basic Education Course curriculum established by the National Certification Council for Activity Professionals and the National Association of Activity Professionals. Focuses on the activity program in a long-term care setting, and the ability to assist with the quality of life components with the geriatric elderly through supervised learning experiences. COREQUISITE: APT 110

APT 210 ACTIVITY PROFESSIONAL TRAINING II 8 CREDITS
Introduces students to leadership and management skills. This course will also discuss client advocacy, community relations and volunteer management. Successful completion of this course, APT 110, 188 and 288 satisfies the requirement of completion of a state approved activity course by Federal Regulation F249 for Medicare, Medicaid certified long-care facilities and the requirement for the completion of the Modular Education Program for Activity Professionals (MEPAP) approved by the National Certification Council of Activity Professional (NCCAP). PREREQUISITES: APT 110 and APT 188. COREQUISITE: APT 288

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

APT 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission

APT 288 ADVANCED MANAGEMENT PRACTICUM 2 CREDITS

This course is the practical experience portion of the APT 200 courses which comprise the advanced management curriculum established by the National Certification Council of Activity Professionals and the National Association of Activity Professionals. The student will demonstrate an understanding of the management skills needed to be an Activity Professional through supervised learning experience in a geriatric-based care enter. PREREQUISITE: APT 110. COREQUISITE: APT 210

Air Force ROTC

For additional information concerning ROTC, please call 303-492-6495.

AIR 101 THE AIR FORCE TODAY I 1 CREDIT

Introduces students to the U.S. Air Force and the U.S.A.F. officer profession. Uses Instructor lectures, films videos and group activities to examine Air Force issues, officer qualities, military customs and courtesies. Examines the communication skills necessary for an Air Force officer. 38 Contact Hours. PREREQUISITE: Instructor's permission

AIR 102 THE AIR FORCE TODAY II 1 CREDIT

Continues the topics of AIR 101. 38 Contact Hours. PREREQUISITE: AIR 101 or Instructor's permission

AIR 201 DEVELOPMENT OF AIR POWER I 1 CREDIT

Studies air power from balloons through the jet age and historically reviews air power employment in military and nonmilitary operations in support of national objectives. Looks at the evolution of air power concepts and doctrine and introduces the development of communicative skills. 38 Contact Hours. PREREQUISITE: AIR 102 or Instructor's permission

AIR 202 DEVELOPMENT OF AIR POWER II 1 CREDIT

Focuses on the basic characteristics of air doctrine, United States Air; continues AIR 201. One hour lecture and two hours lab each week. PREREQUISITE: AIR 201 or Instructor's permission

American Sign Language

ASL 121 INTRTDUCTION TO AMERICAN SIGN LANGUAGE 5 CREDITS

Exposes the student to American Sign Language. Readiness activities are conducted focusing on visual/receptive skills and basic communication. Utilizes the direct experience method. Students must complete this course with a "B" or higher or pass the ASL proficiency test with a score of at least 80% or better prior to registering for ASL 122 if planning to enroll in the Interpreter Preparation Program. This course is a prerequisite for ASL 122.

ASL 122 AMERICAN SIGN LANGUAGE II 5 CREDITS

Develops a basic syntactic knowledge of American Sign Language (ASL), basic vocabulary and basic conversational skills. Incorporates vital aspects of deaf culture and

community. The direct experience method is used to enhance the learning process. Students must complete this course with a "B" or higher or pass the ASL 121 proficiency test at 80% or better prior to acceptance into the Interpreting and Transliterating Preparation program. (NOT OFFERED AT ACC) . PREREQUISITE: ASL 121

ASL 275 SPECIAL TOPICS 1-6 VARIABLE CREDITS

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

ASL 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission

Anthropology

ANT 101 CULTURAL ANTHROPOLOGY 3 CREDITS

Studies human cultural patterns and learned behavior. Includes linguistics, social and political organization, religion, culture and personality, culture change and applied anthropology. This course is one of the Statewide Guaranteed Transfer courses (GT-SS3) .

ANT 107 INTRODUCTION TO ARCHAEOLOGY 3 CREDITS

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. This course is one of the Statewide Guaranteed Transfer courses (GT-SS3)

ANT 111 PHYSICAL ANTHROPOLOGY 3 CREDITS

Studies human biology and its effects on behavior. Includes principles of genetics and evolution, vertebrates and primates, human origins, human variation and ecology. This course is one of the Statewide Guaranteed Transfer courses (GT-SS3) .

ANT 121 CULTURES OF THE SOUTHWEST 3 CREDITS

Includes the major prehistoric cultures (Paleoindian, Desert Culture, Anasazi, Hohokam, Mogollon) and ethnographic views of the historic cultures (Pueblos, Navajo, Apache, Pima, Papago, Spanish-American, and Anglo-American). The purpose of the study is to trace the stages through which these cultures have passed in order to evaluate environmental influences on human activities and to perceive human influences on the environment. Recommended Preliminary Coursework: ANT 101 or ANT 107. Recommended Subsequent Coursework: ANT 215, Anthropology Field Studies and Special Topics in Anthropology

ANT 215 INDIANS OF NORTH AMERICA 3 CREDITS

Studies Indians of North America from the origins of native peoples in the New World, through the development

of geographic culture areas, to European contact and subsequent contemporary Native American issues.

ANT 275 SPECIAL TOPICS IN ANTHROPOLOGY 1-6 CREDITS

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

ANT 280 SOUTHWEST FIELD EXPLORATION 2 CREDITS

Introduces the social, religious, economic, and cultural development of selected American Indian societies and Hispanic settlements of the American Southwest. Major ruins, archaeological sites, museums, reservations, and/or pre-statehood communities are explored by field trip. PREREQUISITE: Instructor's permission

ANT 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

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

Arabic

ARA 111 ARABIC LANGUAGE I 5 CREDITS

Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the Arabic language. NOTE: The order of the topics and the methodology will vary according to the individual texts and Instructors.

ARA 112 ARABIC LANGUAGE II 5 CREDITS

Continues Arabic I in the development of functional proficiency in listening, speaking, reading and writing the Arabic language. NOTE: the order of topics and the methodology will vary according to the individual texts and Instructors. PREREQUISITE: ARA 111 or Instructor permission

ARA 211 ARABIC LANGUAGE III 3 CREDITS

Arabic III continues Arabic I and II in the development and increased functional proficiency in listening, speaking, reading and writing Arabic. Note: The order of the topics and the methodology will vary according to individual texts and Instructors. PREREQUISITES: ARA 111, 112 or Instructor permission

ARA 212 ARABIC LANGUAGE IV 3 CREDITS

Arabic IV continues Arabic I, II and III in the development and increased functional proficiency in listening, speaking, reading and writing Arabic. PREREQUISITES: ARA 111, 112, 211 or Instructor permission

ARA 275 SPECIAL TOPICS 3 CREDITS

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

Architectural Drafting, Contracts And Materials

ARC 101 INTRODUCTION TO ARCHITECTURAL DRAWING 5 CREDITS

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

ARC 102 RESIDENTIAL ARCHITECTURE 5 CREDITS

Covers residential planning, wood frame construction, elements of working drawings, freehand sketching, building code requirements, detailing and structural framing. PREREQUISITES: ARC 101 and CAD 102

ARC 107 BLUEPRINT READING RESIDENTIAL/COMMERCIAL 3 CREDITS

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

ARC 108 BLUEPRINT READING II (CIVIL) 3 CREDITS

Covers the interpretation and reading of civil blueprints. The branch of Engineering dealing with the design and construction of highways, bridges, tunnels and waterworks. PREREQUISITE: MAT 108

ARC 116 BUILDING MATERIALS 3 CREDITS

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

ARC 121 BUILDING STRUCTURE ANALYSIS 3 CREDITS

Provides an analysis of structural components for buildings. Study of vertical and horizontal loadings, shear and movement diagrams, wood, laminated wood and steel beams, wood and steel columns. Student will be able to solve simple structural engineering problems. PREREQUISITE: MAT 108

ARC 125 HISTORY OF ARCHITECTURE 3 CREDITS

Covers major periods of architectural development. Social and cultural values influencing architecture will be highlighted as well as the interaction of art, engineering and architecture as forms of expression.

ARC 205 COMMERCIAL DRAWING PRACTICE I 4 CREDITS

Studies small commercial and multiple family dwellings. Construction techniques are discussed. Working drawings are prepared through extensive use of references and manufacturers' catalogs. PREREQUISITE: ARC 102

ARC 215 ARCHITECTURAL GRAPHICS 3 CREDITS

Assists the architectural student in developing techniques of graphic design and rendering using pencil, ink, and color media. Both freehand and Mechanical Methods are stressed. Student will be able to produce architectural presentations.

ARC 216 ESTIMATING I 3 CREDITS

Covers basic construction estimating. The student will develop skills in estimating the amount and cost of various constructions. He/She will demonstrate these skills by making estimates of material and labor quantities and cost for representative types of construction. PREREQUISITES: ARC 107 or ARC 108 with a "C" or better.

ARC 218 SURVEYING 3 CREDITS

Course includes the fundamentals of plane surveying and the use of surveying instruments. It emphasizes construction-related aspects of surveying and the development of skills in using surveying field information. Surveying projects are generally covered in coordinated and fieldwork segments each 4-hour class period. PREREQUISITE: MAT 108

ARC 226 CONSTRUCTION SCHEDULING 3 CREDITS

Discusses various methods of project scheduling. Emphasis will be placed on critical path method techniques and strategies. PREREQUISITE: ARC 107 or Instructor's permission.

ARC 228 CONTRACTS, BONDS AND INSURANCE 3 CREDITS

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

ARC 231 BUILDING SERVICE SYSTEMS 3 CREDITS

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

ARC 236 CODES/ZONING/SPECIFICATIONS 3 CREDITS

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

ARC 275 SPECIAL TOPICS IN ARCHITECTURAL TECHNOLOGY 1-6 VARIABLE CREDITS

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

ARC 278 SEMINAR 1 CREDIT

Provides the students with experiential learning opportunities. PREREQUISITE: ARC 205

ARC 280 INTERNSHIP 1 CREDIT

Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the Instructor. PREREQUISITE: ARC 205

ARC 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission

Army ROTC**ARM 111 ADVENTURES IN LEADERSHIP I 2 CREDITS**

Introduces the student to fundamentals of leadership and the United States Army. Includes Army leadership doctrine, team-building concepts, time and stress management, an introduction to cartography and land navigation, marksmanship, briefing techniques and basic military tactics. Includes lecture and laboratory.

ARM 112 ADVENTURES IN LEADERSHIP II 2 CREDITS

Investigates leadership in small organizations. Covers basic troop leading procedures, military first aid and casualty evacuation concepts, creating ethical work climates, an introduction to Army organizations and installations and basic military tactics. Introduces students to effective military writing styles. Includes lecture and laboratory. PREREQUISITE: ARM 111 or Instructor's permission

ARM 211 METHODS OF LEADERSHIP AND MANAGEMENT I 3 CREDITS

Reviews leadership and management concepts including motivation, attitudes, communication skills, problem solving, human needs and behavior and leadership self-development. Students refine written and oral communications skills and explore the basic branches of the Army and officer and NCO duties. Students conduct practical exercises in small unit light infantry tactics and perform as mid-level leaders in the organization. Includes lecture and laboratory. PREREQUISITE: ARM 112 or Instructor's permission

ARM 212 METHODS OF LEADERSHIP AND MANAGEMENT II 3 CREDITS

Focuses on leadership and management functions in military and corporate environments. Studies various components of Army leadership doctrine to include the four elements of leadership, leadership principles, risk management and planning theory, the be-know-do framework and the Army leadership evaluation program. Continue to refine communication skills. Includes lecture and laboratory. PREREQUISITE: ARM 211 or Instructor's permission

Art

ART 110 ART APPRECIATION 3 CREDITS

Introduces the cultural significance of the visual arts, including media, processes, techniques, traditions, and terminology. This course is one of the Statewide Guaranteed Transfer courses (GT-AH1).

ART 111 ART HISTORY I 3 CREDITS

Provides the knowledge base to understand the visual arts, especially as related to Western Culture. Surveys the visual arts from the Ancient through the Medieval periods. This course is one of the Statewide Guaranteed Transfer courses (GT-AH1).

ART 112 ART HISTORY II 3 CREDITS

Provides the knowledge base to understand the visual arts, especially as related to Western Culture. Surveys the visual arts from the Renaissance through the Modern periods. This course is one of the Statewide Guaranteed Transfer courses (GT-AH1).

ART 113 HISTORY OF PHOTOGRAPHY 3 CREDITS

Surveys the history of photography from its beginnings to the present. Emphasizes individual photographers who have made significant contributions to the field. Includes technical, artistic, commercial and social development of photography as a form of visual communication.

ART 121 DRAWING I 3 CREDITS

Investigates the various approaches and media that students need to develop drawing skills and visual perception.

ART 122 DRAWING II 3 CREDITS

Explores expressive drawing techniques with an emphasis on formal composition, color media and content or thematic development. PREREQUISITE: ART 121

ART 123 WATERCOLOR I 3 CREDITS

Provides an introduction to the basic techniques and unique aspects of materials involved in the use of either transparent or opaque water media or both. Color theory is included. PREREQUISITES: ART 121, 131, its equivalency, or permission of the Instructor.

ART 124 WATERCOLOR II 3 CREDITS

Continues the study of watercolor techniques, emphasizing original compositions and experimentation with materials. Color theory is included. PREREQUISITE: ART 123 or its equivalency

ART 131 2-D DESIGN 3 CREDITS

Examines the basic elements of design, visual perception, and artistic form and composition as they relate to two-dimensional media.

ART 132 3-D DESIGN 3 CREDITS

Focuses on learning to apply the elements and principles of design to three dimensional problems. PREREQUISITE: ART 131

ART 138 PHOTOGRAPHY I 3 CREDITS

Introduces black-and-white photography as a fine art medium and develops skills necessary for basic camera and lab operations.

ART 139 PHOTOGRAPHY II 3 CREDITS

This course is a further exploration in camera and lab operations with an emphasis on individual creativity. It includes the development of a comprehensive portfolio. PREREQUISITE: ART 138

ART 140 COLOR PHOTOGRAPHY I 3 CREDITS

This course covers the fundamentals of color photography such as color theory and light, production, processing and printing of color negatives. PREREQUISITE: ART 138

ART 141 JEWELRY AND METALWORK I 3 CREDITS

Introduces the construction of jewelry designs in metals and small casting techniques.

ART 142 JEWELRY AND METALWORK II 3 CREDITS

Emphasizes conceptual design development, using casting and specialized techniques. PREREQUISITE: ART 141 or equivalent

ART 143 DIGITAL PHOTOGRAPHY I 3 CREDITS

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. PREREQUISITE: ART 138 or Instructor's permission

ART 144 NON-SILVER PROCESS 1 CREDIT

Explores several non-silver photographic processes including the Platinotype, Cyanotype and Van Dyke Brown printing techniques. Production of enlarged negatives from 35mm negatives and transparencies as required for contact printing these processes. PREREQUISITE: ART 138 or Instructor's permission

ART 156 FIGURE DRAWING I 3 CREDITS

Introduces the basic techniques of drawing the human figure.

ART 161 CERAMICS I 3 CREDITS

Introduces traditional and contemporary ceramic forms and processes including handbuilding and throwing on the potter's wheel.

ART 162 CERAMICS II 3 CREDITS

This course is a continuation of Ceramics I with an emphasis on skills, techniques and form. PREREQUISITE: ART 161 or equivalent

ART 205 MUSEUM STUDIES 3 CREDITS

Provides an overview of the museum field. Covers the museum as a business, its history and role in society and planning and implementation of a museum exhibition. PREREQUISITES: ART 110, 111, 112 or 207

ART 207 ART HISTORY-1900 TO PRESENT 3 CREDITS

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.

ART 210 LANDSCAPE PAINTING 3 CREDITS

Focuses on specific landscape concerns in the painting media of your choice.

ART 211 PAINTING I 3 CREDITS

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. PREREQUISITE: ART 121 or 131

ART 212 PAINTING II 3 CREDITS

This course further explores techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development. PREREQUISITE: ART 211

ART 213 PAINTING III 3 CREDITS

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. PREREQUISITES: ART 211, 212 or Instructor's permission

ART 214 PAINTING IV 3 CREDITS

Explores advanced techniques, materials and concepts used in opaque painting processes, with emphasis on the development of themes and a cohesive body of work.

ART 220 LANDSCAPE PAINTING AND DRAWING IN FRANCE 3 CREDITS

Focuses on specific landscape concerns in the painting media of your choice while working on location in southern France.

ART 238 PHOTOGRAPHY III 3 CREDITS

Further explores photography technique with emphasis on history, theory and assimilation of ideas into the students' creative work. Included is the development of a comprehensive portfolio. PREREQUISITES: ART 138, 139 or demonstrated competency

ART 239 COLOR PHOTOGRAPHY II 3 CREDITS

Designed for students who are approaching a personal style and aesthetic in the medium of color photography. It is an extension of Color Photography I. Personal expression will be stressed through individual critiques. PREREQUISITE: ART 140

ART 240 LARGE FORMAT PHOTOGRAPHY 3 CREDITS

Introduces the visual aesthetics and techniques of view camera photography. Students receive hands-on photographic experience with the 4x5 view camera, process film and produce prints. PREREQUISITE: ART 138

ART 241 JEWELRY AND METALWORK III 3 CREDITS

Focuses upon advanced work and emphasizes experimentation with materials and techniques, individual designs and superior craftsmanship. PREREQUISITE: ART 142

ART 242 JEWELRY & METALWORK IV 3 CREDITS

Provides continued study of the properties of metal and stone in creating decorative work. Students employ advanced design and techniques to explore original, personal expression. A variety of materials and approaches are used in discovering new and independently creative finished pieces.

ART 243 DIGITAL PHOTOGRAPHY II 3 CREDITS

Expands upon the beginning digital photography class. Focuses on digital photography in terms of design and communication factors including color, visual design, lighting, graphics and aesthetics. PREREQUISITE: ART 143

ART 244 DIGITAL PHOTOGRAPHY STUDIO 3 CREDITS

Introduces digital photography as a fine art medium and develops skills necessary for basic operation of a digital camera and production of digital imagery. PREREQUISITE: ART 138 or Instructor's permission

ART 248 DIGITAL DARKROOM 3 CREDITS

Teaches computer aided photography and darkroom techniques. The emphasis of this course is image-editing software, which can be used to color correct, retouch and composite photographic images. Other topics include image acquisition, storage file management, special effects, hard copy and Web-based image output. PREREQUISITE: ART 138 or Instructor's permission

ART 251 PORTRAIT PHOTOGRAPHY 3 CREDITS

Teaches the technical and aesthetic aspects of studio and location portrait photography. This course explores the personal style of portraiture as a visual language and creative expression. This topic also includes lighting composition, posing and equipment selection. PREREQUISITE: ART 138

ART 252 LANDSCAPE PHOTOGRAPHY 2 CREDITS

Focuses on traditional and contemporary approaches to landscape photography. Examines technical and aesthetic aspects of landscape photography through group discussions, a field study, lectures and print and slide critiques. PREREQUISITE: ART 138

ART 253 STUDIO PHOTOGRAPHY 3 CREDITS

Explores the creative uses of studio lighting from the perspective of fine art photography with an emphasis on

portraiture, three dimensional object photography and two dimensional collage photography. PREREQUISITE: ART 138

ART 254 SCULPTING THE FIGURE 1 CREDIT
Focuses on sculpting the human figure using modeling techniques in clay.

ART 256 ADVANCED FIGURE DRAWING II 3 CREDITS
Provides continuing study of the various methods of drawing the human figure, with emphasis on the description of form and individual type. PREREQUISITE: ART 156

ART 261 CERAMICS III 3 CREDITS
Encourages students to develop an individual style of wheel thrown and hand-built ceramic forms with continuing involvement in surface treatment. PREREQUISITE: ART 162

ART 264 MARKETING FOR THE VISUAL ARTIST 3 CREDITS
Provides students with the framework, tools and professional materials necessary for the practicing visual artist. Guidelines for writing proposals, artist's statements and resumes are discussed and practiced. Theoretical and practical considerations related to portfolio presentation and exhibiting artwork are explored through hands-on activities, readings and discussions.

ART 275-277 SPECIAL TOPICS 0.5-6 VARIABLE CREDITS
Provides the student with a vehicle to pursue in-depth exploration of special topics of interest. Includes PHO.

ART 285-286 INDEPENDENT STUDY 1-6 VARIABLE CREDITS
Provides structured and guided, individualized research that is organized and tailored around the interest needs of the individual student.

ART 286 INDEPENDENT STUDY 1-6 VARIABLE CREDITS
Provides an opportunity for students to undertake special projects or research in any of the disciplines involving the visual arts, including, but not limited to, gallery or museum administration, art history, graphic design, or other studio work. Instruction is provided by the Instructor and is based entirely on the student's independent study agreement. PREREQUISITE: Instructor's permission.

Astronomy

AST 101 ASTRONOMY I 4 CREDITS
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. This course is one of the Statewide Guaranteed Transfer courses (GT-SC1) .

AST 102 ASTRONOMY II 4 CREDITS
Emphasizes the structure and life cycle of the stars, the sun, galaxies and the universe as a whole, including cosmology and relativity. Incorporates laboratory experience. This course is one of the Statewide Guaranteed Transfer courses (GT-SC1) .

AST 275 TOPICS IN ASTRONOMY 1-6 VARIABLE CREDITS
Provides students with a vehicle to pursue in-depth exploration of special topics of interest.

AST 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission

Automotive Technology

ASE 102 INTRODUCTION TO THE AUTOMOTIVE SHOP 2 CREDITS
Prepares the incoming automotive student to work in the shop safely and gain familiarity with the shop and common equipment.

ASE 110 BRAKES I 3 CREDITS
Covers basic operation of automotive braking systems. Includes operation, diagnosis and basic repair of disc brakes, drum brakes and basic hydraulic systems.

ASE 120 BASIC AUTOMOTIVE ELECTRICITY 2 CREDITS
Introduces automotive electricity and includes basic electrical theory, circuit designs and wiring methods. Focuses on multi-meter usage and wiring diagrams.



ASE 123 AUTOMOTIVE BATTERY, STARTING AND CHARGING SYSTEMS 2 CREDITS

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

ASE 130 GENERAL ENGINE DIAGNOSIS 2 CREDITS

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

ASE 132 IGNITION SYSTEM AND REPAIR 2 CREDITS

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

ASE 134 AUTOMOTIVE EMISSIONS 2 CREDITS

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

ASE 140 SUSPENSION AND STEERING I 3 CREDITS

Focuses on lecture and related experiences in the diagnosis and repair of automotive emission control systems. PREREQUISITE: ASE 132

ASE 150 AUTOMOTIVE U-JOINT AND AXLE SHAFT SERVICE 2 CREDITS

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

ASE 151 AUTOMOTIVE MANUAL TRANSMISSION/TRANSAXLES 2 CREDITS

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

ASE 152 DIFFERENTIALS AND 4WD/AWD SERVICE 2 CREDITS

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

ASE 160 AUTOMOTIVE ENGINE REMOVAL AND INSTALLATION 1 CREDIT

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

ASE 161 ENGINE, DISASSEMBLY DIAGNOSIS AND ASSEMBLY 5 CREDITS

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

ASE 163 AUTOMOTIVE COMPONENT REMOVAL AND REPLACEMENT 3 CREDITS

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

ASE 210 BRAKES II 3 CREDITS

Covers the operation and theory of the modern automotive braking systems. Includes operation, diagnosis, service and repair of the anti-lock braking systems, power assist units and machine operations of today's automobile. PREREQUISITE: ASE 110

ASE 220 SPECIALIZED ELECTRONICS 2 CREDITS

Provides a systematic approach to automotive electrical systems. Builds from the basic electrical principles and concepts through semiconductors and microprocessors. Features on-bench exercises. Students practice diagnostic procedures that have applications to present and future automotive electronics and electrical systems. PREREQUISITE: ASE 120

ASE 221 AUTOMOTIVE BODY ELECTRICAL 4 CREDITS

Provides a comprehensive study of the theory, operation, diagnosis and repair of vehicle accessories. PREREQUISITE: ASE 120

ASE 231 AUTOMOTIVE COMPUTERS 2 CREDITS

Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems. PREREQUISITES: ASE 120, ASE 134, ASE 220

ASE 233 FUEL INJECTION AND EXHAUST SYSTEMS 4 CREDITS

Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems. PREREQUISITES: ASE 120, ASE 134, ASE 231

ASE 235 DRIVEABILITY DIAGNOSIS 1 CREDIT

Emphasizes lecture and related laboratory experience in diagnostic techniques and the use of diagnostic scan tools, oscilloscopes, lab scopes, multi-meters and gas analyzers. Students diagnose live vehicle driveability problems. PREREQUISITE: ASE 233

ASE 240 SUSPENSION & STEERING II 3 CREDITS

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

ASE 250 AUTOMATIC TRANSMISSION TRANSAXLE SERVICE 1 CREDIT

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

ASE 251 AUTOMATIC TRANSMISSION TRANSAXLE DIAGNOSIS AND ASSEMBLIES 5 CREDITS

Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation, removal of transmission/transaxle, tear down, replacement of components, measurement and subsequent adjustment of components and replacement of transmission/transaxle. PREREQUISITE: ASE 250; COREQUISITE: ASE 250

ASE 265 AUTOMOTIVE HEATING AND AIR CONDITIONING 5 CREDITS

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

ASE 276 SPECIAL TOPICS 1-9 CREDITS

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

ASE 277 INDEPENDENT STUDY 1-9 CREDITS

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

ASE 280 INTERNSHIP: BASIC ELECTRICAL AND ENGINE PERFORMANCE 1 CREDIT

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

ASE 281 INTERNSHIP; BASIC HEAVY DUTY AND POWER TRAIN 1 CREDIT

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

ASE 282 INTERNSHIP: GENERAL (SUMMER) 1 CREDIT

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

ASE 283 INTERNSHIP: ADVANCED ELECTRICAL AND ENGINE PERFORMANCE 1 CREDIT

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

performance and electrical systems.

ASE 284 INTERNSHIP: ADVANCED HEAVY DUTY AND POWER TRAIN 1 CREDIT

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

ASE 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission

Biology

BIO 104 BIOLOGY: A HUMAN APPROACH 4 CREDITS

Develops a basic knowledge of the structure and function of the human body by studying the body's structure as a series of interrelated systems. Includes cardiovascular, respiratory, digestive, lymphatic, musculoskeletal, nervous, endocrine, reproductive and urinary systems and genetics. Emphasizes disease prevention and wellness. This course includes laboratory experiences.

BIO 105 SCIENCE OF BIOLOGY 4 CREDITS

Examines the basis of biology in the modern world and surveys the current knowledge and conceptual framework of the discipline. Biology as a science-process of gaining new knowledge-is explored as is the impact of biological science on society. This course includes laboratory experiences. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

BIO 111 GENERAL COLLEGE BIOLOGY WITH LAB 5 CREDITS

Examines the fundamental molecular, cellular and genetic principles characterizing plants and animals. Includes cell structure and function and the metabolic processes of respiration and photosynthesis, as well as cell reproduction and basic concepts of heredity. This course includes laboratory experience. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

BIO 112 GENERAL COLLEGE BIOLOGY II WITH LAB 5 CREDITS

A continuation of Biology I. Includes ecology, evolution, classification, structure and function in plants and animals. This course includes laboratory experience. PREREQUISITE: BIO 111. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

BIO 115 HUMAN GENETICS 3 CREDITS

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

BIO 143 ECOLOGY OF COLORADO 3 CREDITS

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

BIO 201 HUMAN ANATOMY AND PHYSIOLOGY I 4 CREDITS

Focuses on an integrated study of the human body including the histology, anatomy and physiology of each system. Examines molecular, cellular and tissue levels of organization plus integuments, skeletal, articulations, muscular, nervous and endocrine systems. Includes a mandatory hands-on laboratory experience covering experimentation, microscopy, observations and dissection. This is the first semester of a two-semester sequence. PREREQUISITES: BIO 111 and BIO 104 or equivalent, or permission of Dept. chair. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

BIO 202 HUMAN ANATOMY AND PHYSIOLOGY II 4 CREDITS

Focuses on the integrated study of the human body and the histology, anatomy and physiology of the following systems and topics: cardiovascular, hematology, lymphatic and immune, urinary, fluid and electrolyte control, digestive, nutrition, respiratory, reproductive and development. Includes a mandatory hands-on laboratory experience involving experimentation, microscopy, observations and dissection. This is the second semester of a two-semester sequence. PREREQUISITE: BIO 201 or equivalent, or permission of Dept. chair. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

BIO 204 MICROBIOLOGY 4 CREDITS

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. PREREQUISITE: BIO 201 or equivalent, or permission of Dept. chair. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

BIO 208 GENERAL COLLEGE MICROBIOLOGY 5 CREDITS

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.

BIO 216 PATHOPHYSIOLOGY 4 CREDITS

Focuses on the functions of the human body systems with emphasis on their interrelationships and adaptation to stress and disease.

BIO 220 GENERAL ZOOLOGY 5 CREDITS

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

BIO 221 BOTANY 5 CREDITS

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

BIO 224 GENETICS 4 CREDITS

Studies the fundamental laws of heredity and their application to living organisms. Covers the basics of genetics. Focuses on the laws of Mendel, linkage, mutation concept, molecular genetics, and the Hardy-Weinberg law. Includes a laboratory experience. PREREQUISITE: BIO 111 or equivalent or permission of Department chair.

BIO 275 TOPICS IN BIOLOGY 1-6 VARIABLE CREDITS

Covers a specific topic within Biology, as determined by the Instructor. Reflects the special expertise of the faculty and/or the special needs of the students.

BIO 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

Allows students to pursue a specific project within Biology. The student and Instructor determine the topic, outline of work, and method of evaluation. PREREQUISITE: Instructor's permission

BIO 287 COOPERATIVE EDUCATION 1-6 VARIABLE CREDITS

Provides an opportunity to gain practical experience in applying occupational skills and/or to develop specific skills in a work setting. The Instructor works with the student to select an appropriate work site, establish learning objectives and coordinate learning activities with the employer or work site supervisor. Attendance at seminars and/or interaction with Instructor is required.

Business**BUS 110 WORKING FOR YOURSELF 2 CREDITS**

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.

BUS 115 INTRO TO BUSINESS 3 CREDITS

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.

BUS 116 PERSONAL FINANCE 3 CREDITS

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.

BUS 203 INTRO TO INTERNATIONAL BUSINESS 3 CREDITS

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 transactions; legal aspects of international business; and developing an effective international marketing strategy.

BUS 216 LEGAL ENVIRONMENT OF BUSINESS 3 CREDITS

Emphasizes public law, regulation of business, ethical considerations, and various relationships existing within society, government, and business. Specific attention is devoted to economic regulation, social regulation, regulation and laws impacting labor-management issues, and environmental concerns. Students develop an understanding of the role of law in social, political, and economic change.

BUS 217 BUSINESS COMMUNICATION AND REPORT WRITING 3 CREDITS

Emphasizes effective business writing and covers letters, memoranda, reports, application letters, and resumes. Includes the fundamentals of business communication and an introduction to international communication.

BUS 226 BUSINESS STATISTICS 3 CREDITS

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.

BUS 241 CULTURAL DIVERSITY IN BUSINESS 3 CREDITS

Covers the business person's guide to cultural, travel and information resource needs in the international arena. Specifics in negotiation, communications (verbal and non-verbal), networking, and understanding what individual countries' needs are as far as business culture.

BUS 275 SPECIAL TOPICS IN BUSINESS 1-6 VARIABLE CREDITS

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 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

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

BUS 287 COOPERATIVE EDUCATION/ INTERNSHIP 1-6 VARIABLE CREDITS

Provides students with the opportunity to supplement course work with practical work experience related to their educational program and occupational objectives. Students are placed at approved work 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.

Business Technologies

BTE 100 COMPUTER KEYBOARDING 1 CREDIT

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

BTE 102 KEYBOARDING APPLICATIONS I 2 CREDITS

Designed for students with minimal keyboarding skills. Introduces letters, tables, memos, and manuscripts. Emphasizes speed and accuracy. PREREQUISITE: Ability to keyboard 20 wpm or Instructor's permission

BTE 103 KEYBOARDING APPLICATIONS II 3 CREDITS

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

BTE 108 TEN-KEY BY TOUCH 1 CREDIT

Introduces touch control of the ten-key pad. Emphasizes the development of speed and accuracy using proper technique.

BTE 111 KEYBOARDING SPEEDBUILDING I 2 CREDITS

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

BTE 112 KEYBOARDING SPEEDBUILDING II 2 CREDITS

Continues the skill building sets from BTE 111. This course is designed to further increase speed and improve accuracy in keyboarding on the PC through the use of correct techniques and concentrated effort.

BTE 120 ELECTRONIC OFFICE PROCEDURES 2 CREDITS

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

BTE 125 RECORDS MANAGEMENT 3 CREDITS

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

BTE 156 BUSINESS MATHEMATICS WITH CALCULATORS 4 CREDITS

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

BTE 166 BUSINESS EDITING SKILLS 3 CREDITS

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

BTE 202 OFFICE SIMULATION II 3 CREDITS

Provides experience in using in-basket exercises typical of those occurring in an office operation. It focuses on procedures and computer skills needed for successful performance in the workplace. PREREQUISITES: experience with advanced word processing, spreadsheets, or Instructor's permission

BTE 209 BASICS OF MACHINE TRANSCRIPTION 1 CREDIT

Provides a basic working knowledge for transcribing from machine dictation using word processing and proficient levels of punctuation, spelling, and grammar. PREREQUISITES: Keyboarding and word processing skills or Instructor's permission

BTE 225 ADMINISTRATIVE OFFICE MANAGEMENT 3 CREDITS

Emphasis is placed on functions of the office. Includes office organization, work in the office, office layout, equipment and supplies, procurement and control, work flow, forms design, record storage and retrieval systems, personnel administration and problems, and government control.

BTE 238 LEGAL OFFICE PROCEDURES 3 CREDITS

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

BTE 275 SPECIAL TOPICS 1-6 VARIABLE CREDITS

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

BTE 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission

BTE 287 COOPERATIVE EDUCATION INTERNSHIP 1-6 VARIABLE CREDITS

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

Carpentry

CAR 101 BASIC SAFETY 1 CREDIT

An overview of safety concerns and procedures in the construction field.

CAR 102 HAND AND POWER TOOLS 1 CREDIT

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

CAR 105 JOB SITE LAYOUT AND BLUEPRINT READING 1 CREDIT

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

CAR 115 FORM AND FOUNDATION SYSTEMS 1 CREDIT

Covers materials and methods for concrete forms and foundations. Includes various reinforcement methods such as re-bar and welded-wire fabric.

CAR 121 FLOOR FRAMING 1 CREDIT

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

CAR 122 WALL FRAMING 1 CREDIT

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

CAR 123 ROOF FRAMING 1 CREDIT

Describes the various kinds of roofs and contains instructions for laying out rafters for gable roofs, hip roofs and valley intersections. Coverage includes both stick-built and truss-built roofs.

CAR 125 ROOFING MATERIALS METHODS 1 CREDIT

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

CAR 130 WINDOWS AND EXTERIOR DOORS 1 CREDIT

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

CAR 131 EXTERIOR TRIM 1 CREDIT

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

CAR 135 THERMAL AND MOISTURE METHODS AND MATERIALS 1 CREDIT

Focuses on selection and installation of various types of insulating materials in walls, floors, and attics. Covers the uses and installation practices for vapor barriers and waterproofing materials.

CAR 145 INTERIOR FINISHES—GENERAL 1 CREDIT

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

CAR 146 INTERIOR FINISHES—DRYWALL CONSTRUCTION 1 CREDIT

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

CAR 151 INTERIOR TRIM—DOORS AND TRIM 1 CREDIT

Covers interior doors and trim with focus on material choices, methods of work, and estimation. Teaches in conjunction with a construction lab experience to provide application of techniques covered in classroom environment.

CAR 153 INTERIOR TRIM—CABINET/COUNTERTOPS 1 CREDIT

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

CAR 160 FLOOR FINISHES 1 CREDIT

Covers installation and finishing of hardwood floors, laminate/engineered floors, and tile. Includes discussion on advantages and disadvantages of various choices available. PREREQUISITE: Instructor's permission

CAR 215 FORM AND FOUNDATION SYSTEMS II 1 CREDIT

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

CAR 221 ADVANCED FLOOR SYSTEMS 2 CREDITS

Expands upon skills and knowledge learned in CAR 121 and focuses on an in-depth look at floor framing. Allows students to hone skills previously learned. PREREQUISITE: CAR 121 or Instructor's permission

CAR 222 ADVANCED WALL SYSTEMS 2 CREDITS

Expands upon those skills and knowledge learned in CAR 122. Covers complex wall framing issues and leadership/foreman responsibilities. PREREQUISITE: CAR 122 or Instructor's permission

CAR 223 ADVANCED ROOFING SYSTEMS 2 CREDITS

Builds on those skills learned in CAR 123. Offers an opportunity for students to hone skills and apply knowledge to more complex systems of roof framing. PREREQUISITE: CAR 123 or Instructor's permission

CAR 250 ADVANCED INTERIOR TRIM—GENERAL 2 CREDITS

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

CAR 251 ADVANCED INTERIOR TRIM—DOORS 2 CREDITS

Expands upon material covered in CAR 151. Includes in-depth study of premium interior doors and trim, including full mortise lock sets, furniture grade trim, and techniques for matching existing high-end and antique woodworking. PREREQUISITE: CAR 151 or Instructor's permission

CAR 254 ADVANCED INTERIOR TRIM—SPECIAL 2 CREDITS

Explores the craftsmanship and fine woodworking involved in many fine homes. Includes mantel and various fireplace designs, custom shelves and closets, and custom moulding. PREREQUISITE: CAR 154 or Instructor's permission.

CAR 275 SPECIAL TOPIC 1–6 VARIABLE CREDITS

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

Chemistry

CHE 101 INTRO TO CHEMISTRY I 5 CREDITS

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. PREREQUISITE: MAT 060 This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

CHE 102 INTRO TO CHEMISTRY II 5 CREDITS

Focuses on introductory organic and biochemistry (sequel to Introduction to Chemistry I). This course includes the study of hybridization of atomic orbitals for carbon, nomenclature of both organic and biochemical compounds, physical and chemical properties of various functional groups of organic chemistry, and physical and chemical properties of biochemical compounds along with their biochemical pathways. Laboratory experiments are included. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

CHE 111 GENERAL COLLEGE CHEMISTRY I 5 CREDITS

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. COREQUISITE: MAT 121 or Instructor's permission This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

CHE 112 GENERAL COLLEGE CHEMISTRY II 5 CREDITS

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. Laboratory experiments demonstrate qualitative and quantitative analytical techniques. PREREQUISITE: CHE 111. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

CHE 211 ORGANIC CHEMISTRY I 5 CREDITS

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 mechanisms such as SN1, SN2, E1 and E2. Laboratory experiments demonstrate the above concepts plus the laboratory techniques associated with organic chemistry. PREREQUISITE: CHE 112

CHE 212 ORGANIC CHEMISTRY II 5 CREDITS

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. PREREQUISITE: CHE 211
This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

CHE 275 SPECIAL TOPICS IN CHEMISTRY 1-6 VARIABLE CREDITS

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

CHE 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

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's permission

Chinese

CHI 111 CHINESE LANGUAGE I 5 CREDITS

Focuses on the development of functional proficiency in listening, speaking, reading and writing the Chinese language. Note: The order of the topics and methodology varies according to individual texts and Instructors.

CHI 112 CHINESE LANGUAGE II 5 CREDITS

Continues Chinese Language I in the development of functional proficiency in listening, speaking, reading and writing the Chinese language. Note: The order of the topics and the methodology will vary according to individual texts and Instructors. PREREQUISITE: CHI 111

Computer Aided Design/drafting

CAD 101 COMPUTER AIDED DRAFTING I 3 CREDITS

Focuses on basic computer aided drafting skills using the latest release of CAD software. Includes file management, Cartesian coordinate system, drawing set-ups, drawing aids, layer usage, drawing geometric shapes, editing objects, array, text applications, basic dimensioning, and Help access. PREREQUISITE: Students must have Windows File Management skills to create file folders, rename files, delete files, copy and move files.

CAD 102 COMPUTER AIDED DRAFTING II 3 CREDITS

Focuses on advanced computer aided drafting skills using the latest release of CAD software. Includes blocks and wblocks, polylines, multilines, polyline editing, advanced editing, editing with grips, hatching, isometric drawings, dimensions and dimension variables, paper space and viewports, templates, external references, and printing/plotting. PREREQUISITE: Students must have Windows File Management skills to create file folders, rename files, delete files, copy and move files.

CAD 105 AUTOCAD FOR INTERIORS 4 CREDITS

Provides an opportunity for the Interior Design student to obtain the basic skills necessary to operate Computer Aided Design (CAD) software. AutoCAD software is emphasized. PREREQUISITES: CIS 118; IND 100, 111, 112 and 114

CAD 201 COMPUTER AIDED DRAFTING/CUSTOM 3 CREDITS

Focuses on program customization using the latest release of CAD software. Includes customizing menus, customizing toolbars, attribute extraction, basic CAD programming, advanced dimensioning, path options, script files, and slide shows. PREREQUISITE: CAD 102 or Instructor's permission

CAD 202 COMPUTER AIDED DRAFTING/3D 3 CREDITS

Focuses on construction of three-dimensional objects using the latest release of CAD software. Includes wireframe construction, surface modeling, solid modeling, extrusions, Boolean operations, 3D editing, 3D views, rendering, and 3D to 2D construction. PREREQUISITE: CAD 102 or Instructor's permission

CAD 203 PRO/E BASIC PT AND ASSEMBLY DESIGN 6 CREDITS

Introduces the basic part and assembly design principles of Solid modeling, Parametric Design, and Associativity along with basic detailing using PRO-ENGINEER as a design tool. Upon completion of this course the student will understand the basic functions needed to generate parts, assemblies and drawings along with the proper basic

technique. PREREQUISITES: CAD 103, CAD 128 or Instructor's permission.

CAD 204 PRO/E DRAWING/DETAILING FUNDAMENTALS 6 CREDITS

Introduces the fundamentals of production drawings and how to fully manipulate the associability of PRO/E between parts or assemblies while in drawing, along with general drawing configuration administration related to drawings
PREREQUISITE: CAD 203

CAD 206 PRO/E ADVANCED APPLICATIONS 6 CREDITS

Introduces various advanced applications of the design principles used in parametric design software, ranging from sheet metal design, advanced Surfacing, Animation, Basic Mechanisms and Basic Manufacturing. PREREQUISITE: CAD 204.

CAD 217 3D VIZ 3 CREDITS

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

CAD 225 ARCHITECTURAL DESKTOP/AUTODESK 3 CREDITS

This course provides students with the software application training in Architectural desktop necessary to produce 3D Architectural drawings utilizing students' 2D drafting skills. PREREQUISITES: CAD 102 and ARC 102 or Instructor's permission.

CAD 231 LAND DESKTOP/AUTODESK 3 CREDITS

Focuses on the basic command structure and applications of civil mapping concepts utilizing a civil software, to include data collection files, symbols libraries, setting attributes, COGO, layer control, surface modules, road calc, and site design. All course work is completed on a CAD system. PREREQUISITE: CAD 102 or Instructor's permission.

CAD 249 AUTOLISP PROGRAMMING 3 CREDITS

Introduces the student to the development of AutoLISP programming language. Covers techniques and concepts needed to design the AutoCAD environment to suit the drafter's specific needs. PREREQUISITE: CAD 102

CAD 254 MECHANICAL DESKTOP/AUTODESK 3 CREDITS

Examines 3D Parametric Solid modeling techniques. Students construct solid models and generate 2D mechanical drawings utilizing these models. PREREQUISITE: CAD 102 or Instructor's permission.

CAD 275 SPECIAL TOPICS 1-6 VARIABLE CREDITS

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

CAD 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission.

Computer Information Systems

CIS 103 LEARNING WINDOWS 1 CREDIT

Provides foundational skills in Windows operating system for personal use. This course is designed for the more mature learner and/or those students who wish to advance at a slower pace.

CIS 111 INTRODUCTION TO MICROSOFT ONENOTE 1 CREDIT

Provides introduction to using Microsoft OneNote software to take as well as organize notes. The student will use OneNote to integrate notes with other applications and collaborate with others.

CIS 115 INTRO TO COMPUTER INFORMATION SYSTEMS 3 CREDITS

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.

CIS 118 INTRO TO PC APPLICATIONS 3 CREDITS

Introduces computer concepts and components, as well as application-suite software and the Internet. Includes descriptions of and hands-on experiences with word processing, spreadsheets, databases, operating environments and other common PC application packages. PREREQUISITES: CIS 103, CIS 115 or familiarity with MS Windows.

CIS 124 INTRO TO OPERATING SYSTEMS 3 CREDITS

Introduces concepts, terminology and hands-on skills in the use of DOS and Windows. Emphasizes navigation, file manipulation, file creation and troubleshooting.

CIS 128 WINDOWS COMPLETE 3 CREDITS

Introduces the functions and capabilities of Microsoft Windows. Includes configuring and modifying the operating system environment.

CIS 130 INTRO TO INTERNET 1 CREDIT

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

CIS 135 COMPLETE PC WORD PROCESSING (MS WORD 2003) 3 CREDITS

Explores a complete array of word processing skills. The skills needed to create, edit, format, and printing documents are covered. Other topics include character, paragraph, and page formats, the use of spelling checkers and thesaurus, hyphenation, tables, mail merge, document design, and graphics.

**CIS 136 MICROSOFT OFFICE SPECIALIST
CERTIFICATION: WORD 1 CREDIT**

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.
PREREQUISITE: CIS 135 or Instructor permission based on prior experience

CIS 140 MICROSOFT OUTLOOK 1 CREDIT

Introduces the functions used in Microsoft Outlook including e-mail messages, calendar, contacts, tasks, journals, and notes.

CIS 145 COMPLETE PC DATABASE 3 CREDITS

Explores a complete array of database skills. Includes table, query, form, and report creation and modification. Other topics include application integration and automation of database tasks within the database.

**CIS 149 MICROSOFT OFFICE SPECIALIST
CERTIFICATION PREP: ACCESS 1 CREDIT**

Prepares students for the Microsoft Office Specialist certification examination for Access. Students use software to determine strengths and weaknesses and elect to review and prepare for the Core level Certification exam.

**CIS 155 PC SPREADSHEET
CONCEPTS: EXCEL 3 CREDITS**

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

**CIS 159 MICROSOFT OFFICE SPECIALIST
CERTIFICATION: EXCEL 1 CREDIT**

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

CIS 161 PRESENTATION GRAPHICS 1 CREDIT

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

CIS 167 DESKTOP PUBLISHING 3 CREDITS

Introduces the concepts and applications for desktop publishing using work processing software. Emphasizes page layout and design with techniques for incorporating text and graphics and final production of printed documents.

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

Prepares students for the Microsoft Office Specialist certification examination for PowerPoint. Students use software to determine strengths and weaknesses and elect to review and prepare for the Core level Certification exam.

**CIS 202 AUTOMATED PROJECT
MANAGEMENT: MS PROJECT 3 CREDITS**

Provides an in-depth exploration of project management techniques that use software to automate the project management processes. The course emphasizes project management strategies, goal setting and communication with team members, management and vendors. Critical thinking, discussion, and real world projects will be used to explore the creation of a task list, resource assignment and leveling. Students will learn to use GANTT charts, milestones, Critical Path Methodology, PERT, project tracking and reporting.

CIS 218 ADVANCED PC APPLICATIONS 3 CREDITS

Covers the advanced capabilities of a PC software applications suite. Emphasizes solving business problems by integrating data from all of the software applications that facilitate the production of useful information. Printed documents, reports, slides, and forms are produced to communicate information.

**CIS 220 FUNDAMENTALS OF
UNIX (LINUX) 3 CREDITS**

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

**CIS 222 UNIX SYSTEM
ADMINISTRATION 3 CREDITS**

Introduces the UNIX/Linux operating system and covers the skills required to install, configure and operate a UNIX/Linux sys. PREREQUISITES: CIS 220, 232

**CIS 232 UNIX SHELL
PROGRAMMING (LINUX) 3 CREDITS**

Covers simple scripts to automate frequently executed commands followed by an explanation of adding conditional logic, user interaction, loops, menus, traps, and functions to enhance the productivity and effectiveness of the user. In addition, students explore in detail Bourne and Korn shell scripting languages. PREREQUISITE: CIS 220 or Instructor's permission.

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

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

**CIS 245 DATA MODELING AND
RELATIONAL DATABASES 3 CREDITS**

Introduces a systematic approach to database development using entity-relationship models and relational database design. Students learn how to interpret and create ER models and first-cut database designs based on business information requirements. PREREQUISITE: Instructor's permission

**CIS 246 ORACLE DATABASE
ADMINISTRATION I 4 CREDITS**

Provides a foundation in basic Oracle architecture, storage structure and database administrative tasks. Emphasizes the knowledge and skills to create databases and data dictionary

views, and to manage Oracle instances, tables, tablespaces, data files, control files, redo log files and rollback segments. PREREQUISITE: CIS 240 or Instructor's permission

CIS 252 QUERYING A MICROSOFT SQL SERVER 2000 WITH TRANSACT-SQL 3 CREDITS

Teaches students to use the products and tools necessary to implement and maintain a MS SQL Server 2005. Students learn to plan, create and optimize databases, implement views, store procedures and functions. Students will work with managed code and XML schemas. Students will also learn to implement data integrity, manage security, perform administrative tasks, backup, restore, transfer data and maintain high availability

CIS 266 TOPICS IN COMPUTING 3 CREDITS

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

CIS 267 MANAGEMENT OF INFORMATION SYSTEMS 3 CREDITS

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

CIS 268 SYSTEMS ANALYSIS AND DESIGN I 3 CREDITS

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

CIS 287 COOPERATIVE EDUCATION 3 CREDITS

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

Computer Networking

CNG 101 INTRO TO NETWORKING 3 CREDITS

Focuses on underlying concepts of data communications, telecommunications and networking. Emphasizes the terminology and technologies in current networking environments and provides a general overview of the field of networking as a basis for continued study in the field.

CNG 102 LOCAL AREA NETWORKING 3 CREDITS

Introduces Local Area Networking. Focuses on discussions and demonstrations of planning, installing, and supporting networks. PREREQUISITE: CNG 101 or Instructor's permission

CNG 103 WIDE AREA NETWORKS 3 CREDITS

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

CNG 104 INTRO TO TCP/IP 3 CREDITS

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

CNG 108 NETWORK ANALYSIS AND DESIGN 3 CREDITS

Provides advanced instruction for networking professionals and students who grasp the basic concepts of networking but would like to understand methods used to analyze, design and manage LAN's point-to-point networks. Exercises are geared toward learning techniques used to design and analyze networks.

CNG 121 COMPUTER TECHNICIAN I: A+ 4 CREDITS

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

CNG 122 COMPUTER TECHNICIAN II: A+ 4 CREDITS

Teaches students to upgrade, install, configure, maintain and troubleshoot current and legacy MS Windows operating systems. In addition, students learn to install, configure and troubleshoot device drivers. Students will also learn to identify the network capabilities of the operating system and configure the operating system to connect to the network. This course will prepare you for the CompTIA A+ OS Technologies Exam. PREREQUISITE: CNG 121 or Instructor's permission

CNG 123 NETWORK SERVER BASICS SERVER+ 3 CREDITS

Provides students who are preparing for roles as network support technicians with skills training in the support of multi-processor computers and high capacity data storage systems typical of servers used in medium to large-scale networks.

CNG 124 NETWORKING I: NETWORK+ 3 CREDITS

Provides students with the knowledge necessary to understand, identify and perform necessary tasks involved in supporting a network. Covers the vendor-independent networking skills and concepts that affect all aspects of networking, such as installing and configuring TCP/IP.

This course also prepares students for the Networking II: Network + course.

CNG 125 NETWORKING II: NETWORK+ 3 CREDITS

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

CNG 129 NETWORK CABLING 2 CREDITS

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

CNG 131 NETWORK SECURITY FUNDAMENTALS 3 CREDITS

Delivers a comprehensive overview of network security, including general security concepts. Communication security is studied, including remote access, e-mail, the Web, directory and file transfer, and wireless data. Common network attacks are introduced. Cryptography basics are incorporated, and operational/organizational security is discussed as it relates to physical security, disaster recovery, and business continuity. Computer forensics is introduced.

CNG 136 GUIDE TO DISASTER RECOVERY 3 3 CREDITS

Presents methods to identify vulnerabilities and take appropriate countermeasures to prevent and mitigate failure risks for an organization. It will take an enterprise-wide approach to developing a disaster recovery plan.

CNG 211 WINDOWS XP CONFIGURATION 3 CREDITS

Provides students with the knowledge and skills necessary to address the implementation and desktop support needs of customers who are planning to deploy and support Microsoft Windows XP Professional in a variety of network operating system environments. PREREQUISITE: CNG 124 or Instructor's permission

CNG 212 MANAGE A MS WINDOWS SERVER ENVIRONMENT 4 CREDITS

Provides students with the knowledge and skills that are required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows Server environment. PREREQUISITE: CNG 124 or Instructor's permission

CNG 213 IMPLEMENTING AN MS WINDOWS NETWORK INFRASTRUCTURE 4 CREDITS

Provides students with the knowledge and skills to implement and manage a Microsoft Windows Server network infrastructure. Students will learn to implement routing, implement and manage Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), and Windows Internet Name Service (WINS); secure Internet Protocol (IP) traffic with Internet Protocol security (IPSec) and certificates; configure a network access infrastructure, manage and monitor network access. PREREQUISITE: CNG 212 or Instructor's permission

CNG 214 PLAN A MS WINDOWS SERVER NETWORK INFRASTRUCTURE 4 CREDITS

Provides students with the knowledge and skills necessary to plan and maintain a Windows Server network infrastructure. Students will learn to Plan optimize and troubleshoot a TCP/IP physical and logical network, routing, Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS) Windows Internet Naming Service (WINS) and IPSec network access. PREREQUISITE: CNG 213 or Instructor's permission

CNG 215 MANAGING A MICROSOFT WINDOWS NETWORK ENVIRONMENT 3 CREDITS

Provides the knowledge required to implement, manage and troubleshoot existing network and server environments based on the Microsoft Windows® platform. These skills are generally required in medium to large size organizations that maintain 200 to 26,000 user desktops and servers, spanning 2 to 100 physical locations via Large Area Networks (LANs) and the Internet or Intranets. PREREQUISITE: CNG 212 or Instructor's permission

CNG 216 PLAN A MS WINDOWS SERVER ACTIVE DIRECTORY INFRASTRUCTURE 4 CREDITS

Provides students with the knowledge and skills to successfully plan, implement, and troubleshoot a Microsoft Windows Server Active Directory service infrastructure. The course focuses on a Windows Server directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies. PREREQUISITE: CNG 212 or Instructor's permission

CNG 221 DESIGN MS WINDOWS ACTIVE DIRECTORY AND NETWORK INFRASTRUCTURE 3 CREDITS

Provides students with the knowledge and skills to design an Active Directory service and network infrastructure for a Microsoft Windows Server environment. The course is intended for systems engineers who are responsible for designing directory service and/or network infrastructures. PREREQUISITE: CNG 215 or Instructor's permission

CNG 222 DESIGNING A WINDOWS SECURE NETWORK 3 CREDITS

Provides students with the knowledge and skills necessary to design a security framework for small, medium, and enterprise networks by using Microsoft Windows technologies. Students learn to secure access to Local Network Users, Remote Users and Remote Offices, Partners, and to secure access between private and public networks. PREREQUISITE: CNG 212 or Instructor's permission

CNG 223 DESIGNING A WINDOWS NETWORK INFRASTRUCTURE 3 CREDITS

Provides students with information and skills needed to create a networking services infrastructure design that supports the required network applications. Each module provides a solution based on the needs of the organization. Covers Windows network solutions that require a single

technology, such as DHCP, to provide Internet Protocol (IP) address configuration support. Examines several technology options such as Open Shortest Path First (OSPF), Routing Information Protocol (RIP), and Internet Group Management Protocol (IGMP) to design an IP routing scheme. PREREQUISITE: CNG 214 or Instructor's permission

CNG 224 MICROSOFT WINDOWS WIRELESS NETWORK 3 CREDITS

Provides the student with the Microsoft official curriculum from the Microsoft Regional Academy. Offers detailed instruction on the foundation concepts and technologies of wireless data networking. Upon completion of this course, students are prepared to take the Certified Wireless Network Administrator (CWNA) Certification Exam. PREREQUISITE: CNG 124 or Instructor's permission

CNG 225 WIRELESS NETWORK SECURITY 3 CREDITS

Offers detailed instruction on the security issues related to wireless data networking. Topics include vulnerabilities and attacks, hardware and software solutions, prevention and countermeasures, and implementation and management. Upon completion of this course, students should be prepared to take the Certified Wireless Security Expert (CWSE) Certification Exam. PREREQUISITES: CNG 224, CWNA Certification, or equivalent documented knowledge and skill level.

CNG 226 IMPLEMENTING AND MANAGING MS EXCHANGE 3 CREDITS

Provides the knowledge and skills necessary to install, configure, and administer Microsoft Exchange. Students learn to use Exchange in medium to very large computing environments that typically have multiple physical locations, mixed client connection protocols, and Internet messaging connectivity. PREREQUISITE: CNG 212 or Instructor's permission

CNG 227 ADMINISTERING A MICROSOFT SQL SERVER DATABASE 3 CREDITS

Provides students with the knowledge and skills required to install, configure, administer, and troubleshoot the client-server database management system of Microsoft® SQL Server. PREREQUISITE: CNG 214

CNG 230 FAST TRACK CCNA 1 AND 2 5 CREDITS

Presents the first of two parts of a CCNA certification preparation course for students that already have a solid networking background. It will consist of Internetworking, Internet protocols, IP subnetting, introduction to the Cisco IOS, IP routing, EGRIP, and OSPF.

CNG 231 FAST TRACK CCNA 3 AND 4 5 CREDITS

Presents the second of two parts of the CCNA certification preparation course for students who have completed the CCNA I (CNG 230) course. It will consist of VLSM, Layer 2 switching, VLANs, ACLs, PPP, Frame Relay, DDR and ISDN.

CNG 251 ANTI VIRUS CONCEPTS 3 CREDITS

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

written. Emphasizes virus eradication and cleaning. PREREQUISITE: CNG 131 or Instructor's permission

CNG 252 SECURITY MODELING 3 CREDITS

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

CNG 253 FIREWALLS AND HOW THEY WORK 3 CREDITS

Introduces students to the design and implementation of firewalls. Covers such topics as firewalls using CISCO Routers, Microsoft server platform and UNIX platform. Focuses on how firewalls function in these environments and the basic steps to plan and implement firewalls. PREREQUISITE: CNG 131 or Instructor's permission

CNG 254 DATA ENCRYPTION 3 CREDITS

Exposes the student to data encryption models. Examines the differences between data storage including Microsoft, Novell Netware and UNIX. Includes encryption and data transmission. Covers encryption over various networks including the Internet. PREREQUISITE: CNG 131 or Instructor's permission

CNG 255 INDUSTRY CERTIFICATION A+ 3 CREDITS

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

CNG 257 NETWORK DEFENSE AND COUNTER MEASURES 3 CREDITS

Examines the tools, techniques and technologies used in the technical securing of information assets. This course provides in-depth information of the software and hardware components of Information Security and Assurance. Topics include firewall configurations, hardening UNIX and NT servers, Web and distributed systems security and specific implementation of security modes and architectures. The curriculum maps to the Security Certified Network Professional (SCP) Network Defense and Countermeasures Exam.

CNG 258 COMPUTER FORENSICS 4 CREDITS

Exposes the student to the field of Computer Forensics and investigation. Provides the student with methods to properly conduct a computer forensics investigation beginning with a discussion of ethics. Topics covered include fundamental concepts, history of computer forensics, file structures, data recovery techniques, computer forensic tools and analysis. The curriculum and objectives map to the International Association of Computer Investigative Specialists (IACIS) Certification.

CNG 260 CISCO NETWORK ASSOCIATE I 5 CREDITS

Introduces network fundamentals, the OSI model and industry standards, IP addressing (subnet masks) and basic network design. PREREQUISITE: CNG 124 or Instructor's permission

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

Focuses on router theory and technologies, including router configurations, protocols, network management and introductory LAN switching. PREREQUISITE: CNG 260

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

Focuses on advanced routing and switching configurations, LAN switching, network management and advanced network design. PREREQUISITE: CNG 261

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

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

Computer Science

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

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

CSC 119 INTRO TO PROGRAMMING 3 CREDITS

Focuses on a general introduction to computer programming. Emphasizes the design and implementation of structured and logically correct programs with good documentation. Focuses on basic programming concepts, including numbering systems, control structures, modularization, and data processing. A structured programming language is used to implement the students program designs.

**CSC 150 VISUAL BASIC
PROGRAMMING 3 CREDITS**

Introduces programming and applications development for the Microsoft Windows Programming environment using Visual Basic for Windows. PREREQUISITE CSC 116 or equivalent experience or Instructor's permission

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

Builds on the skills learned in CSC 150. Focuses on more involved applications, work with advanced controls, and deal with additional advanced topics. PREREQUISITE: CSC 150 or Instructor's permission

**CSC 154 INTRODUCTION TO MS VISUAL
BASIC.NET (OOP) 3 CREDITS**

Provides students with the knowledge and skills needed to develop applications in Microsoft Visual Basic.NET for the Microsoft.NET platform. Focuses on user interfaces, program structure, language syntax, and implementation details. This is the first course in the Visual Basic.NET curriculum and serves as the entry point for other .NET courses. PREREQUISITE: CSC 116 or Instructor's permission

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

Continues the structured algorithm development and problem solving techniques begun in CSC 154. Students are introduced to more advanced features of the Visual Basic.NET programming language. This course will explore the relationships between Visual Basic.NET and the .NET Framework and introduces some important .NET services. We will introduce the student to collections, copying and comparing objects, and how the .NET framework interfaces to XML. Content will focus on writing clear, properly structured, and well-documented programs using Visual Basic.NET and object oriented methodology. PREREQUISITE: CSC 156

**CSC 160 COMPUTER SCIENCE I
(JAVA OR C++ OR C) 4 CREDITS**

Introduces students to the discipline of computer science. Covers algorithm development, data representation, logical expressions, sub-programs and input/output operations using a structured programming language. Requires intensive lab work outside of class time. PREREQUISITES: CSC 116 and MAT 106 or Instructor's permission

**CSC 161 COMPUTER SCIENCE II
(JAVA OR C++ OR C) 4 CREDITS**

Continues the structured algorithm development and problem solving techniques begun in Computer Science I. Enables students to gain experience in the use of data structures and design of larger software projects. Requires intensive computer laboratory experience. PREREQUISITE: CSC 106

**CSC 225 COMPUTER ARCHITECTURE ASSEMBLY
LANGUAGE PROGRAMMING 4 CREDITS**

Introduces concepts of computer architecture, functional logic, design and computer arithmetic. Focuses on the mechanics of information transfer and control within a computer system. Includes symbolic programming techniques, implementing high level control structures, addressing modes and their relation to arrays, subprograms, parameters, linkage to high level languages and the assembly process.

CSC 230 C PROGRAMMING: WINDOWS 3 CREDITS

Introduces C programming language - a 'mid level' language whose economy of expression and data manipulation features allow a programmer to deal with the computer at a 'low level.' PREREQUISITES: MAT 121 and any programming language course

**CSC 233 OBJECT-ORIENTED
PROGRAMMING IN C++ 3 CREDITS**

Covers all syntactical components of the C++ language including arrays, structures, pointers, functions and classes. Emphasizes inheritance, overloading, and polymorphism. Focuses on writing clear, properly structured, and well documented programs using the C++ Language and Object-Oriented methodology. It is the advanced course in C++ Programming. PREREQUISITES: CSC 116 and MAT 106 or Instructor's permission

CSC 234 C++ PROGRAMMING 4 CREDITS

Continues CSC 233 Object-Oriented Programming in C++. This is an advanced level computer programming course. Although it teaches C++ as a computer language, it presumes knowledge of at least similar language of C or Pascal. It covers advanced object-oriented features such as standard string class, operator overloading, friends, references, namespaces, pointers and dynamic arrays, streams and file I/O, recursion, inheritance, polymorphism and linked data structures. PREREQUISITE: CSC 233 or Instructor's permission

CSC 236 C# PROGRAMMING 4 CREDITS

Introduces the C# programming language. Covers all syntactical components of the language including arrays, structures, functions, and classes. Content will focus on writing clear properly structured, and well-documented programs using C# and object oriented methodology. PREREQUISITE: Familiarity with the C++ programming language or permission of the Instructor.

CSC 237 ADV. C# PROGRAMMING 4 CREDITS

Continues the structured algorithm development and problem solving techniques begun in CSC 236. Introduces more advanced features of the C# programming language. Explores the relationships between C# and the .NET Framework and introduces important .NET services. Emphasizes collections, copying and comparing objects, and how the .NET framework interfaces to XML. Focuses on writing clear, properly structured, and well-documented programs using C# and object oriented methodology. PREREQUISITE: Familiarity with the C# Programming Language or Instructor's permission

CSC 240 JAVA PROGRAMMING 3 CREDITS

Introduces the Java programming language and covers basic graphics, events/procedures, user interface, and libraries. Enables the student to write and execute a variety of Java programs. Incorporates Java Applets into HTML. PREREQUISITE: MAT 106 or equivalent experience, or Instructor's permission

CSC 241 ADVANCED JAVA PROGRAMMING 3 CREDITS

Continues the study of the Java programming language. Covers advanced programming topics including multi-threading, network/Internet programming, database programming, and JavaBeans. Enables the student to write advanced, large, and complex programs. PREREQUISITE: CSC 240 or Instructor's permission

CSC 250 PROGRAMMING WITH MS ADO.NET 3 CREDITS

Teaches students to build data-centric applications and Web services with Microsoft ADO.NET, Microsoft SQL Server 2000, and the Microsoft.NET Framework. Includes designing and building data-centric, distributed applications. PREREQUISITES: CSC 154, 236 or equivalent knowledge and experience.

CSC 251 PROGRAMMING IN VISUAL BASIC.NET 3 CREDITS

Provides students with the knowledge and skills needed to develop Microsoft.NET-based applications by using Visual Basic.NET. Focuses on Visual Basic.NET (a

significant upgrade to Visual Basic) and incorporates new features and framework goals of the .NET architecture. Enables the student to create enterprise applications for the .NET Platform and to create more traditional Visual Basic applications that take advantage of the enhancements to the language. PREREQUISITE: CSC 154 or equivalent knowledge and experience.

CSC 252 MS VISUAL BASIC.NET APPLICATION DEVELOPMENT 3 CREDITS

Provides Visual Basic programmers with the skills required to create Windows Forms applications by using the .NET Framework. Covers major topics for Windows client application programming on the .NET Framework. Includes Windows Forms, GDI+, simple data access, interoperating with unmanaged code, threading and asynchronous programming issues, simple remoting, Web access, XML Web services consumption, debugging, security, and deployment issues for desktop applications. PREREQUISITE: CSC 251 or equivalent knowledge and experience.

CSC 253 MS ASP.NET WEB APPLICATION DEVELOPMENT 4 CREDITS

Teaches programmers and beginning Web developers the fundamentals of Web application site implementation by using Microsoft ASP.NET and Microsoft Visual Basic .NET. Focuses on using the Microsoft Visual Studio .NET environment and the Microsoft .NET platform to create an ASP.NET Web application that delivers dynamic content to a Web site. PREREQUISITE: Experience in programming in Microsoft's .NET framework.

CSC 261 PROGRAMMING WITH C# 3 CREDITS

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

CSC 262 MS C#.NET APPLICATION DEVELOPMENT 3 CREDITS

Provides C# programmers with the skills required to create Windows Forms applications by using the .NET Framework. Covers the major topics for Windows client application programming on the .NET Framework. Includes Windows Forms, GDI+, simple data access, interoperating with unmanaged code, threading and asynchronous programming issues, simple remoting, Web access, Web Services consumption, debugging, security, and deployment issues for desktop applications. PREREQUISITE: CSC 261

CSC 263 MS ASP.NET XML WEB SERVICES DEVELOPMENT 3 CREDITS

Provides students with the knowledge and skills that are required to develop XML Web services-based solutions to solve common problems in the distributed application domain. Focuses on using Microsoft Visual Studio .NET, Microsoft ASP.NET, and Universal Description, Discovery, and Integration (UDDI) to enable students to build, deploy, locate, and consume Extensible Markup Language (XML) Web services. PREREQUISITE: CSC 262

CSC 269 PROGRAMMING IN PERL 2 CREDITS

Introduces the knowledge and skills necessary to be able

to write programs in the Perl programming language. This course will offer a brief introduction of writing CGI programs using Perl. **PREREQUISITE:** Previous programming experience.

Computer - Web Based

CWB 106 MASTERING THE WEB 3 CREDITS

Focuses on creating and managing Web sites, the tasks and tools involved in building and maintaining a Web site, and the Web administrator's responsibilities and challenges. **PREREQUISITE:** XML

CWB 110 COMPLETE WEB AUTHORING 3 CREDITS

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

CWB 130 WEB EDITING TOOLS (FRONTPAGE) 3 CREDITS

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 the Microsoft FrontPage program. Use of images, forms, frames, tables, templates and layers will be covered.

CWB 164 XML 3 CREDITS

Provides students with an introduction to the XML language's structure and syntax. Examines supporting tools such as XSL and CSS. This course is not designed to focus on a particular implementation of XML, but to examine the possibilities of using XML with popular technologies such as Java SAX, SOAP, RDF, and the DOM. **PREREQUISITE:** CWB 110 or Instructor's permission

CWB 205 COMPLETE WEB SCRIPTING 3 CREDITS

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

Convergent Technologies

CTC 107 INSTALLER 3 CREDITS

Teaches the proper procedures for performing aerial, underground and interior CATV drop installations. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 108 BROADBAND CABLE OVERVIEW 1 CREDIT

Provides technical, sales/marketing, customer service, dispatch and management personnel with general understanding of CATV System equipment operation and terminology. This course is only available for students who are in a degree and/or certificate program through

the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 109 INSTALLER TECHNICIAN 4 CREDITS

Teaches an experienced installer the CATV signal level fundamentals, test equipment, signal leakage detection procedures, and servicing single and multiple dwelling unit drops. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 111 SERVICE TECHNICIAN 4 CREDITS

This course teaches a trained Jones/NCTI Installer Technician the basic characteristics and functions of the feeder line system, active and passive devices, the fundamentals of cable powering, basic test equipment operation, signal leakage basics, coaxial cable and connectorization, and an overview of fiber optics. The study of AC electronic theory provides the foundation for understanding the lessons on coaxial cable, passive devices, amplifiers and cable powering. **PREREQUISITE:** CTC 109 This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 113 SYSTEM TECHNICIAN 4 CREDITS

Teaches a trained Jones/NCTI Service Technician how to activate, test and troubleshoot the RF trunk system. Covers RF trunk and distribution amplifier theory of operation and includes testing and measurement standards, and procedures. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 116 FIBER OPTICS TECHNICIAN 3 CREDITS

Provides information on fiber optic system overview, applications, rackmount optical transmitters and receivers, forward and return optical node operations and activation, fiber optic design topologies, fiber design cost studies, fiber optic system design, fiber construction, fiber tests and documentation, and optical test equipment. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 117 COMPUTERS AND BROADBAND MODEMS 3 CREDITS

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

a comprehensive understanding of Personal Computer technology and how the PC works with broadband modems. **COREQUISITE:** Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 118 BROADBAND DIGITAL INSTALLER 3 CREDITS

Introduces the basics of digital video and high-speed Internet access services by presenting the typical features and functions of digital set-top terminals and cable modems. Covers computer hardware and operating system setup basics. Enables students to learn how to certify the reliability of the drop prior to performing the extensive step-by-step installation procedures. Teaches how to effectively educate customers to use these new digital services reducing unnecessary repeat service calls and improving customer satisfaction. Covers installation procedures for twisted-pair inside wiring and constant bit rate telephony equipment. Incorporates information on communication service competitors to answer customer questions regarding competitive technologies offering similar digital services. **COREQUISITE:** Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 119 DSL INSTALLATION 3 CREDITS

Introduces the basic operations of the telephone network, DSL technology, today's computer system hardware and software, and the Internet. Describes the procedures of installing twisted-pair inside wiring and connecting the premises to the phone network. Examines techniques on the proper use and maintenance of the tools necessary for installation and examines the step-by-step process of installing internal and external DSL modems. Provides practical techniques for applying customer service skills and instructing new customers how to get the most from their DSL service and the Internet. **COREQUISITE:** Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 120 UNDERSTANDING VOICE AND DATA NETWORKS 3 CREDITS

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

program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 121 UNDERSTANDING BROADBAND TECHNOLOGY 3 CREDITS

Provides a thorough grounding in the fundamental concepts of broadband technology. Includes an overview of the underlying technologies of the entire broadband network from signal source to the customer premises. Focuses on a review of digital video, telephony, and high-speed data services. Addresses safety and regulatory issues. **COREQUISITE:** Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 123 BASIC TROUBLESHOOTING OF BROADBAND TECHNOLOGY 3 CREDITS

Teaches students to diagnose and resolve technical problems for customers over the phone. Provides a thorough understanding of the drop system, interconnection between devices, and other problems faced by broadband customers. Trains customer service representatives to distinguish problems that can be solved over the phone and not require a technician to be dispatched. **COREQUISITE:** Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 124 TROUBLESHOOTING ADVANCED SERVICES 3 CREDITS

Focuses on making the transition from analog to digital services troubleshooting. The course teaches how digital signals are transported, explains the use of test equipment used to test digital signals in the cable plant and teaches specific techniques for troubleshooting digital video, telephony and cable modem services. **COREQUISITE:** Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 125 HIGH SPEED DATA CUSTOMER SERVICE 2 CREDITS

Focuses on high-speed data services, equipment, operations and troubleshooting. Covers cable modems, and personal computer hardware and software used in high-speed data services. Provides an understanding of data networking, the Internet and how cable modems interface with it, TCP/IP and the open system interconnection model, cable modem termination systems, and the return paths effect on high speed data service. **COREQUISITE:** Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

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

Covers cable modems, computer systems, and troubleshooting of personal computers. Emphasizes the boot process, software, the system board, memory management, floppy and hard drives, input/output devices, return path fundamentals, and data communications. Explores and compares the technology related to wide area networks and broadband access including packet switching, frame relay, SMDS, ISDN, SONET and ATM. PREREQUISITE: CTC 125 High Speed Data Customer Service. COREQUISITE: Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

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

Fiber Installation and Activation provides the student with current information on the development of fiber in optical broadband networks. The student will learn the basics of light transmission through optical fibers, how fibers are combined into optical cables and how fiber networks are designed and constructed. Network architecture, topology and design will be covered. Training will also prepare the student to splice fibers using mechanical and fusion methods. The course teaches the topics required to provide the student with the ability to install and activate fiber optic networks. It assumes previous knowledge and experience in RF Broadband Technology. COREQUISITE: Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

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

Provides the student with an understanding of the application of fiber optic theory on the job. The course concentrates on the test equipment and procedures necessary to perform test and turn-up for new Fiber Optic links, troubleshoot service outages, and restoring fiber optic links to their original standards. The course also describes the process of Fiber Optic restoration planning and implementing preventive maintenance regimens in an HFC network. COREQUISITE: Employment in the Broadband industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses. For additional information please call 303-797-5989.

CTC 150 DATA COMMUNICATIONS 3 CREDITS

Provides the student with an overview of network systems. Focuses on the architecture of each network, transmission modes, functions, uses, protocols and advantages of each. Addresses synchronous as well as asynchronous data systems.

CTC 160 CABLE COMMUNICATIONS 3 CREDITS

Provides the student with an overview of cable communication systems and their attributes. Includes architecture, satellite applications, coaxial cable attributes, typical systems from tap to TV, and common construction practices. Includes applicable math skills. PREREQUISITES: ELT 106, ELT 110 or Instructor's permission

CTC 161 VOICE COMMUNICATIONS 3 CREDITS

Provides students with an overview of telephone communication systems. Addresses the components and processes used in a public switched network, residence, business and special telephone service, class 5 switching centers, outside telephone plants, video delivery and video conferencing. Covers the operation and application of pagers. PREREQUISITES: ELT 106, ELT 110 or Instructor's permission

**CTC 162 TELECOMMUNICATION
CONSTRUCTION AND
OSHA SAFETY 3 CREDIT**

Emphasizes the constant awareness of safety issues. Enables the student to understand safety issues for situations in buildings, in the field, and vehicles. PREREQUISITES: ELT 106, ELT 110 or Instructor's permission

CTC 163 VIDEO TECHNOLOGY 3 CREDITS

Provides an overview of video technology including the principles, color as well as black and white signal construction, fundamentals of color and color mixing, and color signal construction. Covers waveform analysis and interlaced and non-interlaced scanning schemes. Includes distortion, signal processing, measurements and video data compression. PREREQUISITES: ELT 106, ELT 110 or Instructor's permission

CTC 165 ADVANCED TECHNICIAN 3 CREDITS

Trains a technician how to set up, operate and maintain the CATV headend. Focuses on communication electronics theory and provides a foundation for understanding broadcast television, microwave, satellite and data communication systems. PREREQUISITE: Employment in the Broadband Industry. This course is only available for students who are in a degree and/or certificate program through the partnership between Jones/NCTI and ACC. Additional charges may apply to these courses.

CTC 166 EMERGING TECHNOLOGIES 2 CREDITS

Provides the student with an opportunity to research concepts and applications of related technologies that are being reviewed and experimented with today. Focuses on presentations and discussions with industry experts. Enables students to develop presentations on areas of interest in emerging technologies. Covers applications and implications of new discoveries.

CTC 215 OPTICAL NETWORKS 3 CREDITS

Introduces optical networks - the next great bandwidth provider. Addresses optical networking from a practical point-of-view and examines other evolving transport challenges. Focuses on alternatives such as ISDN, xDSL, cable modems, wireless local loop offerings such as LMDS, MMDS, and satellite and copper-based transport schemes including T1, T3, SONET, and SDH. PREREQUISITE: CTC 161

CTC 220 REGULATIONS AND STANDARDS 3 CREDITS

Provides the students with an overview of the regulations and standards that pertain to technicians in the communication industries. Covers regulated as well as unregulated business operations. Addresses the function and control of local regulatory agencies. PREREQUISITES: CTC 150, 161 215

CTC 240 TELECOMMUNICATIONS ENGINEERING OUTSIDE PLANT 3 CREDITS

Covers the components of engineering the telephone outside plant. Includes the fundamentals of transmission, resistance design, and distribution cable design in serving a customer area. PREREQUISITES: CAD 101, CTC 161, CTC 215

CTC 255 FIELD STUDIES: TELECOM ENGINEERING PLANNING 3 CREDITS

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

CTC 267 TELECOMMUNICATIONS INSTALLATIONS, SPLICING AND REPAIR 3 CREDITS

Provides students with an understanding in the basic phone installation from pedestal to customer premise equipment (CPE). Includes troubleshooting and testing skills to maintain the integrity of the phone service. Covers instruction in print reading, safety, cable locating, fault location and splicing. PREREQUISITES: CTC 161, 215

CTC 275 SPECIAL TOPICS 3 CREDITS

Provides students with opportunities to study topics of special interest that are not addressed in the standard CTC program. A syllabus specifies the content of each course at the time it is offered. Contact the CTC department chair for additional details.

CTC 280 INTERNSHIP: TELECOM ENGINEERING PLANNING 3 CREDITS

Provides students with an opportunity to gain practical experience in applying their occupational skills and/or to develop specific skills in a practical work setting. The Instructor will work with the student to select an appropriate work site, establishing learning objectives and to coordinate learning activities with employer or work site supervisor. Attendance at seminars/update status orientations and periodic interaction with the Instructor is required.

Criminal Justice

The following PREQUISITES apply to all CRJ courses in addition to additional PREQUISITES listed with individual courses: ENG 090 – REA 090 or equivalent CPT scores.

CRJ 101 BASIC LAW ENFORCEMENT ACADEMY I 6 CREDITS

Conforms to P.O.S.T. standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry-level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning. PREREQUISITE: Permission of Academy Director

CRJ 102 BASIC LAW ENFORCEMENT ACADEMY II 12 CREDITS

Conforms to P.O.S.T. standards and state certification requirements as well as the basic skills and knowledge to perform the entry-level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning. PREREQUISITE: Permission of Academy Director

CRJ 103 BASIC LAW ENFORCEMENT ACADEMY III 2 CREDITS

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

CRJ 104 BASIC LAW ENFORCEMENT ACADEMY IV 1 CREDIT

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

CRJ 105 BASIC LAW 8 CREDITS

Conforms to P.O.S.T. standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry-level duties of a peace officer. Emphasis will be on United States Constitution, arrest, search and seizure, interrogation and confessions, rules of evidence, Colorado Criminal Code, Colorado Traffic Code, Colorado Children's Code, Liquor Code and controlled substances. PREREQUISITE: Permission of Academy Director

CRJ 106 ARREST CONTROL TECHNIQUES 6 CREDITS

Covers the skills, knowledge and abilities necessary to effectively maintain control of a suspect when making an arrest. Emphasizes the continuum of force and de-escalation of force

CRJ 107 LAW ENFORCEMENT DRIVING 3 CREDITS

Covers the skills, knowledge and abilities required for operation of a law enforcement vehicle. Emphasizes defensive driving. Enables students to demonstrate skills by driving a vehicle under simulated conditions.

CRJ 108 FIREARMS 3 CREDITS

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

CRJ 110 INTRODUCTION TO CRIMINAL JUSTICE 3 CREDITS

Introduces a study of the agencies and processes involved in the criminal justice system: the legislature, 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. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 111 SUBSTANTIVE CRIMINAL LAW 3 CREDITS

Teaches legal definitions of crime, purposes and functions of the law, historical foundations, and the limits of the criminal law. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 112 PROCEDURAL CRIMINAL LAW 3 CREDITS

Covers constitutional and procedural considerations affecting arrest, search and seizure, post-conviction treatment, origin, development, philosophy, and constitutional basis of evidence. Focuses on degrees of evidence and rules governing admissibility, judicial decisions interpreting individual rights, and an analysis of case studies from arrest through final appeal. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 125 LAW ENFORCEMENT OPERATIONS 3 CREDITS

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. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 135 JUDICIAL FUNCTION 3 CREDITS

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. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 140 CRIME ANALYSIS I 3 CREDITS

Offers an in-depth introduction to the underlying concepts of crime analysis, understanding criminal behavior, including modus operandi and crime pattern theory. The course will emphasize the foundations of critical thinking and reading comprehension. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 145 CORRECTIONAL PROCESS 3 CREDITS

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. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 200 CRIME ANALYSIS II 3 CREDITS

Offers application of research methods where students will learn to interpret the data and the statistics involved in crime analysis, including descriptive, inferential and multivariate statistics. PREREQUISITE: CRJ 140

CRJ 210 CONSTITUTIONAL LAW 3 CREDITS

Focuses on the powers of government as they are allocated and defined by the United States Constitution. Includes intensive analysis of United States Supreme Court decisions. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 220 HUMAN RELATIONS/SOCIAL CONFLICTS 3 CREDITS

Highlights the environmental, organizational and socio-psychological dimensions of social control. Includes the study of individual attitudes, beliefs and behavior involved in role conflicts, community relations and conflict management in the social structure. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 228 CRIME ANALYSIS III 3 CREDITS

Focuses on using temporal and spatial analysis by utilizing crime mapping software (GIS) to identify patterns, demographic and trend analysis, and redistricting. PREREQUISITES: CRJ 140, GIS 101 or Instructor's permission. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 230 CRIMINOLOGY 3 CREDITS

Examines the question of crime causation from legal, social, political, psychological and theoretical perspectives. Covers the history and development of criminology. PREREQUISITES: ENG 090, REA 090 or equivalent CPT test scores

CRJ 254 CRIME ANALYSIS IV 3 CREDITS

Focuses on using readily available computer software (especially Microsoft Office) to assist in different facets of crime analysis. PREREQUISITES: CRJ 140, CIS 118 or Instructor's permission

CRJ 265 CRIME ANALYSIS V 3 CREDITS

Offers practical application and implementation of problem-oriented policing, including but not limited to COMPSTAT and the behind-the-scenes analysis work that is needed to make problem-oriented policing happen. PREREQUISITES: CRJ 140, GIS 101 or Instructor's permission

CRJ 266 CRIME ANALYSIS VI 6 CREDITS

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

CRJ 275 SPECIAL TOPICS 1-6 VARIABLE CREDITS

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

CRJ 285 INDEPENDENT STUDY 1-6 VARIABLE CREDITS

This course meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified Instructor. PREREQUISITE: Instructor's permission

CRJ 287 CO-OPERATIVE EDUCATION 6 CREDITS

Provides work experience for students to gain practical work experience related to their educational program. PREREQUISITES: CRJ 266 and Instructor's permission

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

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

DRT 102 TECHNICAL DRAFTING II 3 CREDITS

Introduces students to auxiliary views, pictorials, sections, threads, fasteners, springs, intersections and developments. PREREQUISITES: DRT 101, CAD 102, or Instructor's permission

DRT 105 BLUEPRINT READING 3 CREDITS

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

DRT 109 DESCRIPTIVE GEOMETRY 3 CREDITS

Enables the student to develop the ability to visualize points, lines, and surfaces in space, to relate them to each other, and to apply these relationships in the solution of drafting assignments. PREREQUISITE: DRT 102 or Instructor's permission

Early Childhood Education**ECE 101 INTRO TO EARLY CHILDHOOD EDUCATION 3 CREDITS**

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.

ECE 102 INTRODUCTION TO EARLY CHILDHOOD LAB 3 CREDITS

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. PREREQUISITE: ECE 101 or COREQUISITE ECE 101

ECE 103 GUIDANCE STRATEGIES FOR CHILDREN 3 CREDITS

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

ECE 111 INFANT AND TODDLER THEORY AND PRACTICE 3 CREDITS

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.

ECE 112 INTRODUCTION TO INFANT/TODDLER LAB TECHNIQUES 3 CREDITS

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 two. PREREQUISITES: ECE 111, health screening, including TB and HiB tests

ECE 125 SCIENCE/MATH AND THE YOUNG CHILD 3 CREDITS

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