Course Descriptions

A ST—Applied Statistics

A ST 251G. Statistics for Business and the Behavioral Sciences 3 cr. Techniques for describing and analyzing data; estimation, hypothesis testing, regression and correlation; basic concepts of statistical inference. Prerequisite: C or better in MATH 120. Same as STAT 251G.

ACCT—Accounting

ACCT 221. Financial Accounting 3 cr. Interpretation and use of financial accounting information for making financing, investing, and operating decisions.

ACCT 222. Management Accounting 3 cr. Development and use of accounting information for management decision making. Prerequisite(s): ACCT 221.

AERT—Aerospace Technology

AERT 105. Aerospace Engineering PLTW 4 cr. (2+4P) Introduce the student to Aerospace Engineering (AE) concepts and history. Studied topics include History of Flight, Aerodynamics, Rocket Science, Orbital Physics, Systems Engineering and Life Support/Environmental Systems.

AERT 111. Basic Electricity and Electronics 3 cr. (2+2P) Fundamentals of electricity and electronics, basic circuit devices, meters, transistors, integrated fiber optics, and industrial application topics. Minimum math proficiency of CCDM 103 or CCDM 104 required or math placement into CCDM 114 or higher. Crosslisted with: ELT 105.

AERT 112. Introduction to Manufacturing 3 cr. (2+2P) Introduction to manufacturing evolution from basic assembly process to modern automated processes. Covers history, employability, soft skills, quality measurements, teamwork concept, production requirements, and considerations in plan layout and design. Minimum math proficiency of CCDM 114N required or math placement into MATH 120 or higher. Crosslisted with: MAT 105. Prerequisite(s)/Corequisite(s): AERT 111.

AERT 113. Print Reading for Industry 3 cr. (2+2P) Reading, interpretation and revisions of industrial technical drawings common to aerospace. Interpretation of aerospace drawings and related shop calculations. Crosslisted with: MAT 102.

AERT 114. Applied Manufacturing Practices 3 cr. (2+2P) Course will illustrate how various products are manufactured along with associated manufacturing processes. Crosslisted with: MAT 106. Prerequisite(s)/Corequisite(s): MAT 102 or AERT 115 or MAT 110.

AERT 115. Machine Operation and Safety 3 cr. (2+2P) Introduce the students to the operation and safety aspects of various types of machinery and equipment including both mechanical and electrical. Course will also include maintenance and safety operation of industrial equipment. Crosslisted with: MAT 110.

AERT 121. Introduction to the Aerospace Workplace 4 cr. (2+4P) The course covers space history, regulations, controls, aerospace industry terminology and acronyms as well as hands-on activities related to tools, procedures, and standard practices.

AERT 122. Aerospace Safety and Quality 3 cr. (2+2P) Covers identification of hazards, personal protective equipment, safe practices, and protection of personnel, property, and equipment in the aerospace environment. Basic principles of quality assurance engineering and quality control relating to work processes will be discussed.

AERT 123. Electronics I 4 cr. (2+4P) Fundamentals of electronics including: components, schematics, Ohm’s Law, Thévenin’s and Norton’s theorems, and series/parallel circuits incorporating passive, active, and magnetic elements. Introduction to AC circuits. Crosslisted with: ELT 110. Prerequisite(s)/Corequisite(s): ELT 120 or MATH 120.

AERT 124. Mathematics for Electronics 4 cr. (2+4P) Includes fundamental mathematics, algebra, sine cosine, and other elementary functions as they specifically apply to the operation, manipulation, and evaluation of direct current (DC) and alternating current (AC) circuits. Minimum math proficiency of CCDM 114N required or math placement into MATH 120 or higher. Crosslisted with: ELT 120.


AERT 213. Aerospace Fluid Systems 3 cr. (2+2P) This course includes a familiarization of fluid system components, characteristics, and applications. Cryogenic and hypergolic materials and high pressure systems are also covered.

AERT 214. Aerospace Systems 3 cr. (2+2P) This course provides an introduction to expendable and reusable spacecraft systems including, hydraulic, pneumatic, electrical, propulsion, mechanical, HVAC, and ECLS (Environmental Control and Life Support System). How systems interact with computer and data acquisition systems is also covered.

AERT 221. Inspection Requirements and Planning Metrology 3 cr. (2+2P) Course teaches the benefits of inspection, quality control, material conditions. Also covers measurements, including temperature, ultrasonic, vibration and more.

AERT 222. Electromechanical Systems 3 cr. (2+2P) Principles and applications of preventive and corrective maintenance procedures on industrial production machines using systems technical and maintenance manuals to develop troubleshooting procedures using systems block and schematic diagrams. Pre/ Crosslisted with: MAT 245. Prerequisite(s)/Corequisite(s): AERT 221 or MAT 240. Prerequisite(s): ELT 160.

AERT 224. Aerospace Tests and Measurements 3 cr. (2+2P) This course covers electrical and mechanical testing procedures (primarily non-destructive testing), equipment, measurements, and instrumentation involved in aerospace systems. Verification of tool and equipment calibration is also covered. Pre/ Corequisite(s): AERT 221.

AERT 225. Cooperative Experience 1–3 cr. Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Consent of instructor required. Graded: S/U.

AERT 255. Special Topics 1–4 cr. Specific topics to be announced in the Schedule of Classes.

AERT 290. Independent Study 1–3 cr. Individual studies in areas directly related to aerospace. Consent of instructor required.

AHS—Allied Health Science

AHS 102. Careers in the Health Fields 1–3 cr. This course will provide students with a broad understanding of health careers, as well as emerging issues in health. This will also include the study of the functional roles of practice, education, administration, and research in health fields. May be repeated up to 3 credits.

AHS 116. Math for Health Occupations 3 cr. Principles of math and pharmacology necessary for administration of medications. Prerequisite(s): CCDM 114N or equivalent.

AHS 120. Medical Terminology 3 cr. Study of medical terminology as it relates to understanding diseases, their causes and effects, and the terminology used by the medical specialties. Stress is placed on medical terms, their use, spelling, English translation, and pronunciation. Same as NURS 150 and BOT 150.
AHS 202. Legal and Ethical Issues in Health Care 3 cr.
Consideration of legal and ethical issues in modern health care delivery.

AHS 220. Essentials of Counseling 3 cr.
Provides students interested in human services professions with theoretical and practical tools and strategies to establish and develop a helping relationship with clients in a diversity of helping settings. Class covers emotional, cognitive, sociocultural, and spiritual aspects of the human being, that help clients identity and deal with issues that affect their functioning and development.

AHS 250. Spanish for Health Professionals 3 cr.
Spanish for Health Professionals is a 3 cr course geared toward individuals working or majoring in health related areas. The course focus is on conversation and vocabulary needed for the workplace and task based practical skills.

AHS 255. Special Topics 1–6 cr.
Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 6 credits.

ANTH — Anthropology

ANTH 116. Native Peoples of the American Southwest 3 cr.
Introduction to the early history and culture of native people of the Southwest.

ANTH 120G. Human Ancestors 3 cr.
Evolutionary history of the human species from its origin in the primate order, with primary emphasis on the evolution of humankind during the past three million years. Examination of the social lives of apes and consideration of similarities to and differences from them. Biological foundations of human behavior, emphasizing thought, movement, and interaction.

ANTH 125G. Introduction to World Cultures 3 cr.
Introductory survey of anthropological studies of human thought and behavior in different world cultures, covering social, cultural, economic, political, and religious practices and beliefs.

ANTH 201G. Introduction to Anthropology 3 cr.
Exploration of human origins and the development of cultural diversity. Topics include biological and cultural evolution, the structure and functions of social institutions, belief systems, language and culture, human-environmental relationships, methods of prehistoric and contemporary cultural analysis, and theories of culture.

ANTH 202G. Introduction to Archaeology and Physical Anthropology 3 cr.
Provides an introduction to the methods, theories, and results of two subfields of anthropology: archaeology and physical anthropology. Archaeology is the study of past human cultures. Physical anthropology is the study of human biology and evolution.

ARCT — Architecture

ARCT 101. Introduction to Architecture 3 cr. (2+2P)
This course provides students the tools and vocabulary to analyze, interpret, and discuss the built environment from the social, historical, perceptual, and technical determinants. Lectures and assignments will introduce students to the elements of current and likely future directions of architecture from experiential, aesthetic, structural, functional, and historical perspectives. The course will provide students with knowledge about the people and processes involved with professional issues of architectural practice. Students will be required to participate in individual and group presentations and projects, as well as compile a portfolio of their work completed in the course.

ARCT 104. Introduction to Architectural Drawing 4 cr. (2+4P)
This course is designed as an introduction to architectural drawing and design for students without prior experience in the fine arts. Students are guided through a series of spatial and analytical exercises that focus attention on not only how architects draw, but also the reasoning and processes embedded within the technique. Direct linkages with the Introduction to Architecture course provide exposure to a wide range of interconnected architectural concepts.

ARCT 111. Architecture World History I 3 cr. (2+2P)
A survey of the development of world architecture from the ancient era to the advent of the enlightenment in Europe. Major emphasis is on the visual, intellectual, cultural and technological aspects of the ancient and indigenous cultures of the classical and pre-modern world. Restricted to Alamogordo, Dona Ana and Grants campuses.

ARCT 115. General Construction Safety 3 cr. (2+2P)
Overview of general construction safety related to building construction, highway and road construction, and surveying field work.

ARCT 124. Global Issues and Sustainability 3 cr.
This is a ‘critical thinking’ course. This course introduces students to global environmental issues (historic, present, and future), and the impact on tomorrow’s design and construction professions. Issues will include, but shall not be limited to global warming, energy consumption, population, natural resource consumption, air and water quality, waste management, facilities operation management, politics, and facilities design & construction. Through extensive readings, research, dialogue, and debates, students will establish a personal position (opinion) on each of the topics covered. Guest speakers will also be invited. Students will develop reports and presentations on various related issues, as well as develop ideas for solutions to problems related to environmental issues. The impact on the design and construction industry, including ‘Green Building’ and ‘LEED Accreditation and Certification/Criteria’ will also be addressed on each issue.

ARCT 150. Orientation and Mentoring in Architecture-Construction-Engineering (ACE) 1–3 cr.
This course is intended for high school dual credit students and college/university students wishing to explore careers in Architecture, Construction, and Engineering (ACE), which includes the specific fields of Architectural, Civil, Mechanical, Structural, Interior, Landscape, Sustainability, Environmental. Course is co-taught by a college instructor in conjunction with mentors who are local professionals in the fields of ACE. Students receive one-on-one mentoring, lectures, demonstrations, and attend field trips to construction sites, offices of Architects, Engineers and Designers, etc. Students also engage in hands-on activities such as Design (Architectural, Civil, Mechanical, Structural, Interior, Landscape, Environmental), analysis, model building, software, and research topics related to the ACE fields, as well as Sustainability, Interior Design, Landscape Design, Construction Materials and Fabrication processes. May be repeated up to 6 credits.

ARCT 151. Construction Principles and Print Reading 4 cr. (3+2P)
Introduction to construction materials, methods, and basic cost estimating and print reading applicable in today’s residential, commercial, and public works industry. Instruction by print reading and interpretation, field trips, and actual job-site visits and progress evaluation. Crosslisted with: DRFT 151.

ARCT 170. Computers in Architecture 3 cr. (2+2P)
Explore various software and photography techniques widely used in the architectural field. In addition to using industry standard CAD program as primary 2-d drafting tool, focus is to produce digital architectural models and renderings, presentation boards, and animations. Digital images will be produced and enhanced through basic techniques in photography and integration of various software. Both individual and group work will be required.

ARCT 204. Architectural Design Studio I 5 cr. (1+8P)
Enhancement of general graphic communication skills and introduction to fundamental design including exploration, development and defense of design concepts; structural order; 2D and 3D processes in manual and digital architectural graphic expression; model building; general communication and presentation techniques; and development of course portfolio. Course is Studio/critique-based with considerable amount of work/hours required. This course is designed to be taken during student’s last year in the Pre-Architecture program at DACC. Consent of Instructor required. Prerequisite(s): Grade of B– or better in both ARCT 101 and ARCT 104.

ARCT 210. Architectural Delineation I 3 cr. (2+2P)
Introduction to visual literacy, architectural graphic communication, & basic analytical skills. Architectural concepts primarily explored through the application of technical drawing, descriptive geometry, & material manipulation; primarily black & white media.

ARCT 211. Architectural World History II 3 cr. (2+2P)
A survey of the development of world architecture from the enlightenment in Europe to the present. Prerequisite(s): ARCT 111 or consent of instructor.

ARCT 224. Sustainable Design in Architecture 3 cr.
This course provides students with hands-on opportunity to increase their awareness in, and respond to the issues of responsible environmentally friendly building design by engaging in an integrated design process combining ‘Traditional Design Process’ with ‘Sustainable Environmental Design’ strategies. Students will expand their awareness of global environmental impacts due to design and construction, and gain knowledge in the industry’s leading design ‘tool’ LEED (Leadership in Energy and Environmental Design) green building design rating system. LEED strategies will be utilized in the design of individual projects apply LEED in practical, individual design development, and develop an integrated building model utilizing the concept of BIM (Building Information Modeling). Such project development will require learning a basic design process and specific sequence including conceptual design, schematic design, design development and BIM (utilizing a BIM software such as REVIT, or AutoCad Architecture). Prerequisite(s): DRFT 109 or DRFT 165 or consent of instructor.
ARCT 250. Construction Documents 3 cr. (2+2P)
Basic use of CAD to produce residential, commercial, and industrial architectural working drawings, including floor plans, sections, foundation plans and details, exterior and interior elevations, framing plans, and site plans. Use and application of building and zoning codes, typical construction methods and materials, and accessibility requirements. Basic 3-D modeling, AIA layering standards, sheet layout, and construction document coordination. Pre/Corequisites: DRFT 109.

ARCT 254. Architectural Design Studio II 5 cr. (1+4P)
Advanced graphic communication, design, and 3D physical model representation. Focus on site analysis, programming and fundamental design issues of context, environment, program development and space planning, 2D and 3D design and presentation techniques. Course is 'Studio/critique-based' with considerable amount of outside work/hours required. This course is designed to be taken during student's last year in the Pre-Architecture program at DACC. Prerequisite(s): Grade of C- or better in ARCT 204.

ARCT 255. Special Problems 1–6 cr.
Instructor-approved projects in architecture or related topics specific to student's areas of interest and relevant to pre-architecture curriculum. Prerequisite: consent of instructor. May be repeated for a maximum of 12 credits.

ARCT 260. Architectural Delineation 3 cr. (2+2P)
Continuation of ARCT 210 with an emphasis in color media. Prerequisites: ARCT 210.

ARCT 264. Portfolio Design in Architecture 3 cr.
This course is intended for Pre-Architecture students in their last semester of the program. Students develop a comprehensive portfolio that compiles, organizes, and showcases their most accomplished coursework produced in Architecture courses at DACC, in preparation for application to a 4 yr. Architecture program. Skills and techniques in architectural photography, scanning, and design layout using graphic software. Corequisite(s): ARCT 254 or consent of instructor.

ARCT 274. LEED Accreditation Exam Prep 3 cr.
This course is intended for anyone in the construction or architectural design fields who is interested in learning more about green building and the LEED (Leadership in Energy and Environmental Design) strategies, and are also interested in learning about how to become LEED accredited. Overview of the LEED rating systems utilized in the design and operation of buildings, the various LEED building certifications, and accreditation requirements for professionals. Highlights include interpretation of the LEED Reference Guides, accepted strategies for meeting LEED certification, sample practice exams, integrated project delivery methods, and a practical approach to problem solving through the use of design problems.

ARCT 290. Special Topics 1–6 cr.
Topics subtitled in the Schedule of Classes. Prerequisite: consent of instructor. May be repeated for a maximum of 12 credits.

ARCT 291. Cooperative Experience 1–6 cr.
Supervised cooperative work program. Student employed in approved occupation; supervised and evaluated by employer and instructor. Student meets weekly with instructor. Prerequisite: consent of instructor. Graded S/U.

ARCT 295. Professional Development and Leadership—AIAS 1–3 cr.
As members and/or officers of student professional organizations, architecture students gain experience through undertaking leadership roles, participating in team building, and becoming involved in service to the community. Students can also gain actual work experience involving skills related to their field of study. Graded S/U.

ART—Art

ART 101G. Orientation in Art 3 cr. (2+3P)
A multicultural examination of the principles and philosophies of the visual arts and the ideas expressed through them.

ART 110G. Visual Concepts 3 cr. (2+4P)
Introduction to the philosophies of art, visual thinking, and principles of visual organization. Designed to give students a broad view of aesthetic traditions, ideologies, and techniques basic to the creation and evaluation of art. Principles and concepts are taught in a common lecture and applied in parallel small studio sections. For non-art majors only.

ART 150. Drawing I 3 cr. (2+4P)
Introduction to the skill of seeing through exercises that emphasize careful drawing from the still life and utilize a range of drawing materials and techniques. Outside assignments required.

ART 155. 2-D Fundamentals 3 cr.
Introduction to two-dimensional space emphasizing visual elements and design principles as they apply to composition. A variety of materials are used in the studio projects and sketchbook exercises. Developing knowledge in vocabulary, color theory and skill in translating ideas into design are encouraged.

ART 156. 3-D Fundamentals 3 cr.
Compositional organization of three-dimensional space explored through a broad range of visual exercises. Resourceful and creative problem solving encouraged.

ART 260. Introduction to Painting 3 cr. (2+4P)
Introduction to basic skills of painting through various exercises that emphasize working from observation. Prerequisite(s): ART 250 or ART 150.

ART 275. Introduction to Ceramics 3 cr. (2+4P)
A concentrated examination of ceramic construction, clay and glaze materials, and use of equipment to produce ceramic sculpture. This course becomes a fast track into competent and independent use of the department for students new to ceramics. Students broaden their skills and gain a more thorough understanding of material characteristics and processes, develop their firing skills, and participate in dialogue about theory and content specific to ceramic sculpture. May be repeated up to 6 credits.

ART 276. Ceramics I, B 3 cr. (2+4P)
Beginning ceramics, complementary half to ART 275. (ART 275 and ART 276 do not need to be taken consecutively.) Basic building techniques of coil, slab, and throwing are introduced. High-fire and low-fire clays are used.

ART 280. Introduction to Printmaking 3 cr. (2+4P)
Introduction to the field of printmaking through projects that focus on specific processes, such as relief, intaglio, calligraphy, paper lithography, and a variety of transfer and stencil techniques. Students engage in several assignments that are collaborative, as well as individual projects designed for development of personal aesthetics.

ART 294. Special Topics in Studio 1–3 cr.
Specific subjects and credits to be announced in the Schedule of Classes. No more than 9 credits toward a degree. Prerequisite: consent of instructor.

ART 295G. Introduction to Art History I 3 cr.
An introduction to the principles of art history within a chronological framework of the art of the Western World. All media will be discussed. From prehistoric times to the fourteenth century.

ASTR—Astronomy

ASTR 105G. The Planets 4 cr. (3+2P)
Comparative study of the planets, moons, comets, and asteroids which comprise the solar system. Emphasis on geological and physical processes which shape the surfaces and atmospheres of the planets. Laboratory exercises include analysis of images returned by spacecraft. Intended for non-science majors, but some basic math required. This lecture/lab course satisfies the New Mexico Common Core Area III: Lab Sciences requirement.

ASTR 110G. Introduction to Astronomy 4 cr. (3+2P)
A survey of the universe. Observations, theories, and methods of modern astronomy. Topics include planets, stars and stellar systems, black holes and neutron stars, supernovas and gaseous nebulae, galaxies and quasars, and cosmology. Emphasis on physical principles involving gravity, light and optics (telescopes). Generally non-mathematical. Laboratory involves use of the campus observatory and exercises designed to experimentally illustrate principles of astronomy. This lecture/lab course satisfies the New Mexico Common Core Area III: Lab Sciences requirement.

AUTO—Automotive Technology

AUTO 103. Auto Mechanics Fundamentals 4 cr. (2+4P)
Theory and operation of all areas of auto mechanics. Basic repair and maintenance operations.

AUTO 112. Basic Gasoline Engines 5 cr. (2+6P)
Principles of gasoline engine operation. Identification, design, function of engine components; engine disassembly and reassembly; trouble shooting, and rebuilding heads.

AUTO 117. Electronic Analysis and Tune-Up of Gasoline Engines 5 cr. (2+6P)
Theory and operation of ignition and emission control systems and fuel system. Use of troubleshooting equipment and diagnostic equipment. Prerequisite: AUTO 120 or consent of instructor.

AUTO 118. Technical Math for Mechanics 3 cr. (2+3P)
Mathematical applications for the automotive trade.

AUTO 119. Manual Transmission/Clutch 5 cr. (2+6P)
Manual transmission, transfer cases, and clutch operating principles. Students will diagnose problems, remove and replace, disassemble, repair, and assemble units.
AUTO 120. Electrical Systems 4 cr. (2+4P)
Troubleshooting and repair of starters, alternators, and associated circuits. Reading electrical diagrams, diagnosis and repair of electrical accessories. Prerequisite: consent of instructor.

AUTO 125. Brakes 5 cr. (2+6P)
Theory of operation, diagnosis, repair, and maintenance of disc and drum brakes; safety and use of special tools.

AUTO 126. Suspension, Steering, and Alignment 5 cr. (2+6P)
types of steering systems, suspension maintenance and repair, four-wheel alignment procedures.

AUTO 127. Basic Automatic Transmission 4 cr. (2+4P)
Theory and operation of the automatic transmission; maintenance, troubleshooting, diagnosis, and repair of components.

AUTO 130. Introduction to Transportation Industry 3 cr.
State and national traffic statistics that relate to the trucking industry. A Commercial Driver’s License Learner’s Permit will be obtained through successful completion of the course. Prerequisites: Must be 18 years of age, have a current driver’s license and consent of instructor.

AUTO 131. Class A CDL 3 cr. (1+4P)
Instruction in how to perform proper pre-trip inspection; hands-on training with a tractor-trailer unit on the backing range and street driving to develop skills necessary to pass Class A CDL exam. Prerequisite(s): Class A CDL restricted license (permit) and either restriction of D.O.T.

AUTO 132. Automotive Air-Conditioning and Heating Systems 4 cr. (2+4P)
Theory and operation, reading schematic diagrams, troubleshooting, repair, and replacement operations performed.

AUTO 137. Fuel Systems and Emission Controls 4 cr. (2+4P)
Covers theory and operation of fuel system and emission control. Troubleshooting, vacuum diagrams, overhaul, repair and adjustment of carburetion and fuel injection. Prerequisites: AUTO 117 or consent of instructor.

AUTO 221. Cooperative Experience I 1–6 cr.
Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U. Prerequisite: consent of instructor.

AUTO 255. Special Problems in Automotive Technology 1–5 cr.
Individual studies in areas directly related to automotive technologies. Prerequisite: consent of instructor. May be repeated for a maximum of 12 credits.

AUTO 295. Special Topics 1–6 cr.
Topics to be announced in the Schedule of Classes.

BCIS—Business Computer Information Systems

BCIS 110. Introduction to Computerized Information Systems 3 cr.
Computerized information systems, their economic, and social implications. Introduction to microcomputer hardware, personal productivity software, and communications.

BCT—Building Construction Technology

BCT 101. Introduction to Construction I 2 cr. (2+1P)
Basic safety, including personal protective equipment, how to perform basic construction tasks safely, and what to do if an accident occurs. Includes basic construction methods.

BCT 102. Introduction to Construction II 2 cr. (2+1P)
Introduction to power and hand tools, blueprints, and basic rigging hardware and techniques.

BCT 103. Introduction to Construction Laboratory 3 cr.
Provides students the opportunity to practice skills they have acquired in BCT 101 and BCT 102. It includes task-oriented projects in which students can apply many of the skills and knowledge that have been presented throughout the National Center for Construction and Education Research (NCCE) Carpentry Program. Corequisite(s): BCT 101 or BCT 102.

BCT 107. Painting I 4 cr. (2+4P)
Types and applications of paints and clear coatings. Use of fasteners, caulks, and sealants.

BCT 108. Painting Level II 4 cr. (2+4P)
Continuation of BCT 107: Painting failures and remedies, preparation, drywall patching and wood finishing. Prerequisite(s): BCT 107.

BCT 110. Blueprint Reading for Building Trades 4 cr. (2+4P)
Same as DRFT 151, OEET 101, OEPB 110.

BCT 111. Small Equipment Maintenance and Repair 4 cr. (2+4P)
Covers small engine theory, troubleshooting and repair, auto maintenance, hydraulic theory and repair lubricants, batteries and scheduled tool maintenance.

BCT 114. Basic Carpentry 3 cr. (1+4P)
Covers orientation to the trade; wood building materials, fasteners, and adhesives; detailed description and explanations of hand-operated and power tools, including safety; framing basics including laying out and constructing of wood floors, walls and ceilings and includes roughing in of door and window openings.

BCT 115. Carpentry Level I 3 cr. (1+4P)
Describes the various kinds of roofs and provides instructions for laying out of the different roofing systems. Describes the various types of windows, skylights, and exterior doors and provides instruction for installation.

BCT 116. Basic Carpentry Lab 2 cr.
Provides students the opportunity to practices skills they have acquired in BCT 114 and BCT 115. It includes task-oriented projects in which students can apply many of the skills and knowledge that have been presented throughout the National Center for Construction and Education Research (NCCE) Carpentry Program. Pre/ Corequisite(s): BCT 114 or BCT 115.

BCT 121. Construction Law 3 cr.
Using the New Mexico Contractors Reference manual, this course covers licensing requirements and regulations, business, law and other important aspects of owning and running a construction business.

BCT 130. Professional Development and Leadership 1 cr.
As members and/or officers of various student professional organizations, students gain experience in leadership, team building, and community service. Students competing or participating in SkillsUSA are required to register for the course. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: BCT majors. S/U Grading (S/U, Audit).

BCT 211. Small Equipment Maintenance & Repair II 4 cr. (2+4P)
Advanced, hands on work experience. Students will work on small engines, explore the various aspects of advanced 4 stroke engine and 2 stroke engine techniques and apply skills and theory taught in the classroom and shop. Along with tours and various shop technicians. Prerequisite(s): BCT 111.

BCT 214. Intermediate Carpentry I 3 cr.
Describes the properties, characteristics, procedures and uses of cement, aggregates, and other materials that, when mixed together, form different types of concrete. Covers procedures for estimating concrete volume and testing freshly mixed concrete, different types of reinforcing materials. Prepares students for working in and around excavations, preparing building foundations, capacities of soils; procedures used in shoring, sloping, and shielding trenches and excavations; trenching safety requirements, recognition of unsafe conditions; and mitigation of groundwater and rock when excavating foundations. Prerequisite(s): BCT 101, 102, 103, 114, 115 & 116. Corequisite(s): BCT 216.

BCT 215. Intermediate Carpentry II 3 cr.
Covers site layout tools and methods, Layout and construction of deep and shallow foundations, forming of slabs-on-grade, curbing and paving. The module also provides an overview of the assembly, erection, and stripping of gang forms. This module covers the types of elevated decks and the formwork systems and methods used in their construction. Advanced systems: flat slab systems, flying forms, shores and re-shoring systems, how tilt-up concrete construction is used, how tilt-up panels are formed, erected, and braced, installation of rebar and the types of embedments used to lift and brace the panels. Prerequisite(s): BCT 214. Corequisite(s): BCT 216.

BCT 216. Intermediate Carpentery Laboratory 2 cr.
Provides students the opportunity to practice skills they have acquired in BCT 214 and BCT 215. It includes task-oriented projects in which students can apply many of the skills and knowledge that have been presented throughout the National Center for Construction and Education Research (NCCE) Carpentry Program. Pre/ Corequisite(s): BCT 214 or BCT 215.

BCT 217. Building and the Environment 3 cr.
Introduction to LEED’s, and Green Building Fundamentals, sustainability, sustainable design and green building evaluating cost implication of green building. Describes site development; managing site water runoff, improving a project’s water use efficiency. Discusses renewable energy sources, and introduces student to generating power on-site using renewable energy sources, improving a building’s indoor environment quality, improving the building industries’ environmental performance and environmental aspects of building maintenance, re-use and conservation.
BCT 222. Alternative Building 3 cr. (2+2P)
Exploration of different types of building techniques and materials other than the traditional wood framed structures. Materials and techniques will include adobe, straw bale, insulated concrete forms, rammed earth and structural insulated panels with an emphasis on "green building" methods.

BCT 224. Advanced Carpentry I 3 cr.
Covers the equipment, principles, and methods used to perform distance measurement and leveling. In addition to layout for surveyors, field engineers, and carpenters; interpretation and use of site/plot plan drawings; and methods used for on-site communication. Covers the principles, equipment, and methods used to perform site layout. Covers commercial Construction: roofing materials and structures and describes the procedures for installing commercial. Covers installation of a variety of finishing materials, including paneling, and wainscoting. Also covers installation of curtain walls and fire-rated commercial construction. Also covers a variety of stair systems used in commercial construction.

BCT 226. Advanced Carpenter Laboratory 2 cr.
Provides practical task-oriented hands-on experience in which the student applies the skills and knowledge presented in the BCT 225 and BCT 226. Completion of BCT 225/226/227 will lead towards Certification under the National Center for Construction Education and Research (NCCER) Carpenter Program. Pre/Corequisite(s): BCT 224 or BCT 225.

BCT 255. Special Topics 1–6 cr.
Topics to be announced in the Schedule of Classes. May be repeated up to 6 credits. Consent of Instructor required.

BIOL — Biology

BIOL 101G. Human Biology 3 cr.
Introduction to modern biological concepts. Emphasis on relevance to humans and their relationships with their environment. Cannot be taken for credit after successful completion of BIOL 111G or BIOL 211G. Appropriate for non-science majors. Requires successful completion of BIOL 101GL in order to meet the NM Common Core Area III Laboratory Science requirements.

BIOL 101GL. Human Biology Laboratory 1 cr. (3P)
Laboratory for BIOL 101G. Laboratory experiences and activities exploring biological concepts and their relevance to humans and their relationship with their environment. Prerequisite(s)/Corequisite(s): BIOL 101G.

BIOL 111G. Natural History of Life 3 cr.
Survey of major processes and events in the genetics, evolution, and ecology of micro-organisms, plants and animals, and their interactions with the environment. Appropriate for non-sciences majors. Must be taken with BIOL 111GL to meet general education requirements.

BIOL 111GL. Natural History of Life Laboratory 1 cr. (3P)
Laboratory experiments, demonstrations and exercises on interrelationships among organisms, biodiversity, processes of evolution, and interaction of organisms and their environment. Prerequisite(s)/Corequisite(s): BIOL 111G.

BIOL 154. Introductory Anatomy and Physiology 4 cr. (3+3P)
Survey of human structure and function (does not replace BIOL 190, BIOL 111G, or BIOL 211G as a prerequisite for advanced courses in biology).

BIOL 211G. Cellular and Organismal Biology 3 cr.
Principles of cellular structure and function, genetics, and physiology of microbes, plants, and animals. Suitable for nonmajors with sufficient chemistry. Must be taken with BIOL 211GL to meet general education requirements. Pre/Corequisite(s): CHEM 110G or CHEM 111G or CHEM 115.

BIOL 211GL. Cellular and Organismal Biology Laboratory 1 cr. (3P)
Laboratory demonstrations, experiments and exercises on molecular and cellular biology and organismal physiology. Must have passed BIOL 211G or be concurrently enrolled in BIOL 211G and BIOL 211GL. Pre/Corequisite(s): CHEM 110G or CHEM 111G or CHEM 115.

BIOL 221. Introductory Microbiology 3 cr. (3P)
Principles of isolation, taxonomy, and physiology of microorganisms. Prerequisite: CHEM 112G, equivalent or consent of instructor. Corequisite: BIOL 221L.

BIOL 221L. Introductory Microbiology Laboratory 1 cr. (3P)
A laboratory course to accompany BIOL 221 or BIOL 219. Prerequisite: BIOL 221 or BIOL 219 or concurrent enrollment.

BIOL 225. Human Anatomy and Physiology I 4 cr. (3+3P)
The first in a two-course sequence that covers the structure and function of the human body, including terminology of the human gross anatomy, chemistry overview, cell structure, cell physiology (including DNA, protein synthesis and cell division). The organization of cells and tissues and their metabolic and homeostatic processes and regulation are also covered. Physical and chemical operation of organs and systems of the human body include the integumentary, skeletal, muscular, and nervous systems. Pre/Corequisite(s): CHEM 110G or CHEM 111G.

BIOL 226. Human Anatomy and Physiology II 4 cr. (3+3P)
The second in a two-course sequence that covers the structure and function of the human body. Includes the physical and chemical operation of the organs and systems of the human body, including endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary and reproduction system. Concepts of nutrition, metabolism, energy, fluid and electrolyte balance, heredity pregnancy and human embryonic and fetal development are also covered. Prerequisite(s): BIOL 225, CHEM 110G or CHEM 111G.

BIOL 227. Pathophysiology 3 cr.
A study of the structure and function of the human body with specialized emphasis on disease processes. Prerequisite(s): AHS 153 or BIOL 225 Corequisite(s): AHS 154 or BIOL 226.

BIOL 250. Special Topics 1–3 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 6 credits.

BMGT — Business Management

BMGT 110. Introduction to Business 3 cr.
Terminology and concepts of the business field. Role of accounting, computers, business management, finance, labor, and international business in our society.

BMGT 112. Principles of Banking 3 cr.
Banking in today's economy: language and documents of banking, check processing, teller functions, deposit function, trust services, bank bookkeeping, loans, and investments.

BMGT 126. Retail Management 3 cr.
Phases of retailing, including types of retail outlets and basic problems of organizing and operating a retail store.

BMGT 132. Principles of Selling 3 cr.
Analysis of customer behavior, persuasive communication, process of the sales interview.

BMGT 136. Fundamentals of Buying and Merchandising 3 cr.
Covers operational aspects of procuring and selling merchandise for the retail store. Procedures covered are buying, receiving, pricing strategies, sales promotions and operational controls.

BMGT 138. Advertising 3 cr.
Psychological approach to non-personal consumer persuasion; applied techniques in media selection, layout mechanics, production methods, and campaign structures.

BMGT 140. Principles of Supervision I 3 cr.
Principles of supervision emphasizing planning, organization, rating of employees and procedures to develop good morale. Introduction to interpretation of case studies.

BMGT 150. Income Taxation 3 cr.
Federal income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates with particular reference to CLU, life insurance and annuities.

BMGT 155. Special Topics I 1–3 cr.
Introductory special topics of lower division level work that provides a variety of timely subjects and content material. May be repeated up to 6 credits.

BMGT 175. Introduction to Business Finance 3 cr.
Understanding financial systems and the methods businesses use to acquire and use resources is an important tool for the managers. This course provides an overview of the financial inner workings of businesses and corporations.

BMGT 191. ENACTUS (Students in Free Enterprise) 1 cr.
ENACTUS is an international organization promoting and teaching business entrepreneurship. Students learn teamwork, leadership, and networking skills by participating in real businesses in our community.

BMGT 192. Principles of Entrepreneurship 3 cr.
Understanding the nature of small businesses and the entrepreneurial process. Students learn the importance of planning, market research, and operational controls. Includes the development of a business plan and the preparation of a business proposal.

BMGT 193. Principles of Management I 3 cr.
Principles and practice in management and leadership. Includes the role of management and leadership in organizations, the managerial decision-making process, the management process, planning, organizing, leading, and controlling.

BMGT 194. Principles of Management II 3 cr.
Understanding the nature of small businesses and the entrepreneurial process. Students learn the importance of planning, market research, and operational controls. Includes the development of a business plan and the preparation of a business proposal.

Principles and practice in management and leadership. Includes the role of management and leadership in organizations, the managerial decision-making process, the management process, planning, organizing, leading, and controlling.

BMGT 222. Alternative Building 3 cr. (2+2P)
Exploration of different types of building techniques and materials other than the traditional wood framed structures. Materials and techniques will include adobe, straw bale, insulated concrete forms, rammed earth and structural insulated panels with an emphasis on "green building" methods.

BCT 224. Advanced Carpentry I 3 cr.
Covers the equipment, principles, and methods used to perform distance measurement and leveling. In addition to layout for surveyors, field engineers, and carpenters; interpretation and use of site/plot plan drawings; and methods used for on-site communication. Covers the principles, equipment, and methods used to perform site layout. Covers commercial Construction: roofing materials and structures and describes the procedures for installing commercial. Covers installation of a variety of finishing materials, including paneling, and wainscoting. Also covers installation of curtain walls and fire-rated commercial construction. Also covers a variety of stair systems used in commercial construction.

BCT 226. Advanced Carpenter Laboratory 2 cr.
Provides practical task-oriented hands-on experience in which the student applies the skills and knowledge presented in the BCT 225 and BCT 226. Completion of BCT 225/226/227 will lead towards Certification under the National Center for Construction Education and Research (NCCER) Carpenter Program. Pre/Corequisite(s): BCT 224 or BCT 225.

BCT 255. Special Topics 1–6 cr.
Topics to be announced in the Schedule of Classes. May be repeated up to 6 credits. Consent of Instructor required.
BMGT 202. Career Management 1 cr.
Developing and implementing career plans through decision making framework to gain personal success and satisfaction within today's social and global workforce. Consent of instructor required.

BMGT 205. Customer Service in Business 3 cr.
Establishes concepts of service quality in relationship to business success and maximization of returns to the organization. Explores techniques for delivering quality and service in a variety of business settings.

BMGT 210. Marketing 3 cr.
Role of marketing in economy, types of markets, product development, distribution channels, pricing, promotion of goods, market research, consumer motivation, and management of marketing process. Prerequisite(s): BMGT 110.

BMGT 211. Marketing for Bankers 3 cr.
Concepts and philosophies of marketing; information, research, target, the marketing mix, and market planning. Prerequisite(s): BMGT 112.

BMGT 212. Supervisory and Leadership Trends 3 cr.
Current trends in marketing, merchandising, sales promotion and management; in manufacturing, merchandising and service types of businesses. Extensive use of practical student project. Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 213. Consumer Lending 3 cr.
Principles of credit evaluation, types of credit, marketing, collections, legal aspects, installment lending, leasing management, insurance, and rate structure and yields. Prerequisite(s): BMGT 112.

Practical application of the economics of money and banking. Required of all students electing the banking option.

BMGT 221. Internship I 1–3 cr.
Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and instructor. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: BMGT majors. S/U Grading (S/U, Audit).

BMGT 223. Supervision and Labor Relations 3 cr.
Federal acts affecting business and industry, supervisor's responsibility for effective labor relations, union contracts, grievance procedures, and job and safety instruction.

BMGT 225. Introduction to Commercial Lending 3 cr.
Commercial lending overview, the lending process, portfolio management, and regulation and business development. Prerequisite(s): BMGT 112.

BMGT 228. Small Business Finance, Regulations and Operations 3 cr.
Business start-ups are often unaware of the intricacies of financing, governmental regulations and operational details. This course prepares the student to seek and utilize the most opportune financing available and ensure that pertinent governmental and tax regulations are followed.

BMGT 229. Small Business Marketing for Success 3 cr.
This course teaches students the essentials of real world marketing as a means of ensuring the success of their business. Marketing plans, research and customer identification are covered as well as advertising methods that work to create sales.

BMGT 231. Legal Issues in Business 3 cr.
Application of fundamental legal principles to business transactions. Sources, functions, and objectives of law, including federal and New Mexico court systems and procedures, criminal law, torts, contracts, and sales, and Uniform Commercial Code.

BMGT 232. Personal Finance 3 cr.
Budgeting, saving, credit, installment buying, insurance, buying vs. renting a home, income tax statement preparation, investment, and estate disposal through will and trust.

BMGT 233. Law and Banking 3 cr.
Basic commercial law as it relates to banking and bank transactions. Prerequisite(s): BMGT 112.

BMGT 235. Credit Administration 3 cr.
Covers factors influencing and determining loan policy: methods of credit investigation and analysis, credit techniques, credit problems, and types of loans. Prerequisite(s): BMGT 112.

BMGT 239. Visual Marketing Techniques 3 cr.
Provides a basic understanding of visual marketing and merchandising techniques. The importance of effective presentation of a store and its merchandise is covered, as is line, balance and artistic display.

BMGT 240. Human Relations 3 cr.
Human interactions in business and industrial settings. Motivation and learning experiences as related to problems of the worker and supervisor. Practical applications of human behavior. Prerequisite(s): CCDE 105N or higher or BOT 105 or higher.

BMGT 242. Stock Market Fundamentals 3 cr.
Understanding the stock market and other financial markets is important for success as an individual investor. This course teaches the fundamentals of the stock market and how financial instruments are bought and sold.

BMGT 244. Personal Stock Portfolio Analysis 3 cr.
Analyzing stock portfolios to determine value, potential growth and worth is an important skill for entrepreneurs and investors. Various techniques are taught that assist in evaluating stock value and determining which meet individual investment goals.

BMGT 245. Bank Investments 3 cr.
Covers nature of bank investments, relationship of investment management to other functional areas of the bank, and factors that affect investment strategies and decisions. Prerequisite(s): BMGT 112 or consent of instructor.

BMGT 248. Introduction to Quality Management 3 cr.
Introductions of total quality management practices aimed at all levels of an organization to continually improve performance to include competitiveness in today's business world.

BMGT 250. Diversity in the Workplace 3 cr.
Concepts of culture, diversity, prejudice, and discrimination within the domestic workforce/society. Prerequisite(s): BMGT 110.

BMGT 255. Special Topics II 1–3 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

BMGT 258. Cash, Inventory, and Credit Control 3 cr.
Cash and inventory control and management; credit management.

BMGT 259. Budget and Cost Control 3 cr.
Standard costs, variable costing, absorption costing, formal budgeting process, responsibility accounting for cost and profit centers, inventory management techniques, risk adjusted capital budgeting, cash management, credit management, internal checks. Consent of instructor required. Prerequisite(s): Consent of instructor.

BMGT 260. Real Estate Practice 3 cr.
This course is a requirement for licensure in real estate for the state of New Mexico. Topics covered include: real estate finance, settlement, foreclosure, federal taxation, valuation and appraisal, land descriptions and math skills. These topics are requirements of the New Mexico Real Estate Commission.

BMGT 261. Real Estate Appraisal 3 cr.
Principles and techniques of residential real estate appraisal. Not designed to train individuals as independent fee appraisers.

BMGT 262. Commercial Property Management 3 cr.
Managing commercial property requires knowledge of marketing, advertising, regulatory controls, financial arrangements, and legal issues. This course addresses all aspects of managing commercial properties. Consent of instructor required.

BMGT 263. Real Estate Sales Techniques 3 cr.
Improvement of sales techniques; the selling process, negotiation skills, objection handling and closing, business planning, goal setting, and effective application of marketing techniques.

BMGT 264. Real Estate Law 3 cr.
This course is a requirement for licensure in real estate for the state of New Mexico. Topics covered include: ownership of real estate, real estate brokerage relationships, contracts, environmental concerns and federal laws that affect real estate. These topics are requirements of the New Mexico Real Estate Commission. Crosslisted with: PL S 264.

BMGT 265. Real Estate Finance 3 cr.
Financing real property, the money market, sources and cost determinants of mortgage money, financial leverage, value of existing mortgages in relation to the current market, and purchaser qualification.

BMGT 266. Commercial and Industrial Development 3 cr.
Managing commercial property requires knowledge of marketing, advertising, regulatory controls, financial arrangements, and legal issues. This course addresses all aspects of managing commercial properties. Consent of instructor required.

BMGT 267. Commercial Property Appraisal and Evaluation 3 cr.
Evaluation and financial appraisal of commercial real property preparatory to the sale process is an important skill for real estate developers and managers. Information concerning land and building evaluation will be covered. Standard Techniques for valuation and commercial sites will be presented. Consent of instructor required.
BMGT 268. Real Estate Broker's Basic Course 3 cr.
State of New Mexico specific criteria that apply to real estate licensure: purchase agreements, listing agreements, New Mexico Rules and Regulations, and landlord tenant legislation. Prerequisite(s): BMGT 260 & BMGT 264.

This course describes the functions of the global financial marketplace emphasizing their interactions and interconnectedness. Lending practices and their impact on development and growth are discussed. Consent of instructor required.

BMGT 270. Urban Development and Renewal 3 cr.
This course describes the basic functions and considerations for planners and developers when undertaking urban development and renewal projects. Attention is given to environmental, social, and economic factors. Consent of instructor required.

BMGT 271. Practical Applications for Microcomputers in Business 1–3 cr.
Owner/manager approach to use of microcomputers: systems design, software, business applications such as inventory, balance sheets, accounts receivable. Hands-on experience. May be repeated for a maximum of 6 credits under different subtitles. Preference given to BMGT majors. Prerequisite(s): C S 110, ACCT 222 and BMGT 216.

BMGT 272. E-Commerce Operations 3 cr.
Introduces the many forms of e-commerce and emerging technologies that will impact the businesses of tomorrow. Prerequisite(s): OECS 105, C S 110 or BCIS 110.

BMGT 273. International Hotel and Tourism Management 3 cr.
Managing hotel properties in the international arena. Developing and operating tourist venues and facilities catering to internal and external visitors. Challenges of property development in an international setting. Consent of instructor required.

BMGT 274. Small Business Planning and Development 3 cr.
Teaches the skills to effectively conceive, plan and open a business. Initial course in a series aimed at preparing individuals to start and run their own business.

BMGT 275. Small Business Advanced Plan Development 3 cr.
Preparing a detailed business plan as the first step in creating a successful business.

BMGT 276. Small Business Management 3 cr.
Study of the principles, advantages, and problems of owning or operating a small business. Location, capital, marketing, control, and sales promotion. Prerequisite(s): BMGT 216.

BMGT 277. Sustainable Real Estate Development 3 cr.
The awareness of environmental and economic sustainability in project development and planning is an important aspect of the developer's role in the 21st century. The ability to design projects that consider multiple stakeholders and address environmental concerns is addressed in this course.

BMGT 280. Introduction to Human Resources 3 cr.
Personnel functions encompassing job analysis, recruitment, selection, training, appraisals, discipline, and terminations. Prerequisite(s): BMGT 110.

BMGT 282. Introduction to International Business Management 3 cr.
Overview of the social, economic and cultural environment of international business transactions. Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 285. Introduction to Manufacturing Operations 3 cr.
Introduction to issues related to manufacturing, including an overview of the production function, product design and development, location, layout, forecasting, planning, purchasing, materials and inventory, and quality management. Prerequisite(s): BMGT 110 and BMGT 140.

BMGT 286. Introduction to Logistics 3 cr.
Overview on the planning, organizing, and controlling of transportation, inventory, maintenance, order processing, purchasing, warehousing, materials, handling, packaging, customer service standards, and product scheduling.

BMGT 287. Introduction to Export/Import 3 cr.
Procedures for exporting and importing products. Emphasis on NAFTA regulations and other U.S. border operations crossings. Prerequisite(s): BMGT 110 or BUSA 111.

BMGT 290. Applied Business Capstone 3 cr.
Refines skills and validates courses taken in BMGT program. Business simulations, case studies and projects used to test and improve business practices. Student must be within 25 credits of graduation. Prerequisite(s): BMGT 110, 140, and 240.

BMGT 298. Independent Study 1–3 cr.
Individual studies directed by consenting faculty with prior approval of department chair. Maximum of 6 credits may be earned. Prerequisite(s): Sophomore standing with 3.0 GPA.
BOT 207. Machine Transcription 3 cr. (2+2P)
Creating office documents using transcribing equipment and microcomputer software. Emphasis on proofreading, editing and grammar. Prerequisites: minimum keyboarding of 45 wpm and C or better in BOT 105 or BOT 109 or equivalent and BOT 211 or BOT 213.

BOT 208. Medical Office Procedures 3 cr. (2+2P)
Records and procedures as applicable to medical offices. Prerequisites: BOT 109, BOT 211, and AHS 120.

BOT 209. Business and Technical Communications 3 cr.
Effective written communication skills and techniques for career success in the workplace. Composition of letters, memos, short reports, forms, and proposals, and technical descriptions and directions. Prerequisites: ENGL 111G and computer keyboarding ability or consent of instructor.

BOT 211. Information Processing I 3 cr. (2+2P)
Defining and applying fundamental information processing concepts and techniques using the current version of leading software. Prerequisite(s): BOT 101 or consent of instructor.

BOT 213. Word Processing I 3 cr. (2+2P)
Operation and function of a word processor. Specific equipment to be announced in the Schedule of Classes. Prerequisite: BOT 101 or keyboarding proficiency as demonstrated through completion of BOT 122, BOT 123, BOT 124 or equivalent.

BOT 215. Spreadsheet Applications 1–3 cr.
Use of spreadsheets to include graphics and business applications. Same as OEC 215. May be repeated under different subtitles listed in the Schedule of Classes.

BOT 217. Powerpoint Presentation 3 cr.
Comprehensive, hands-on approach to learning and applying basic and advanced features of PowerPoint. These include text enhancements, objects, fills, colors, animation, charts, sound, video, and hyperlinks. Students demonstrate appropriate audience and communication tools to deliver presentations. Prerequisites: BOT 211 or ability to demonstrate keyboarding and Windows proficiency.

BOT 218. Information Processing II 3 cr. (2+2P)
Advanced information processing techniques using current version of leading software. Prerequisite: BOT 211 or consent of instructor. May be repeated for a maximum of 6 credits.

BOT 221. Internship I 1–3 cr.
Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 6 credits. Consent of Instructor required. Prerequisite(s): Consent of instructor. Restricted to: BOT & HIT majors. S/U Grading (S/U, Audit).

BOT 222. Internship II 1–3 cr.
Continuation of BOT 221. May be repeated up to 6 credits. Consent of Instructor required. Prerequisite(s): BOT 221 and consent of instructor. Restricted to: BOT & HIT majors. S/U Grading (S/U, Audit).

BOT 223. Medical Transcription I 3 cr. (2+2P)
Introductory machine transcription for the medical office using medical terminology. Prerequisite(s): BOT 150 or HIT 150 or AHS 120 and (BIOL 101G/L or AHS 100).

BOT 228. Medical Insurance Billing 3 cr.
Overview of the insurance specialists role and responsibilities. Emphasis on diagnostic and procedural coding and the claims processing cycle. Prerequisite: NURS 150 or AHS 150 or BOT 150 or AHS 150 or BOT 209 or consent of instructor. May be repeated for a maximum of 6 credits.

BOT 233. Advanced Medical Transcription 3 cr. (2+2P)
Builds upon the concepts introduced in Medical Transcription providing greater understanding of how to produce advanced reports of physician dictation with increasing speed and accuracy. Emphasis will be on proofreading and editing of operative reports, patient history and physicals, office notes, labor and delivery reports, consultation reports, discharge summaries, and other medical reports. Prerequisite(s): (AHS 120 or BOT 150 or HIT 150) and (BOT 211 or BOT 101G/L or AHS 100).

BOT 239. Personal Development 3 cr.
Development of a marketable, employable office systems person, to include interview, voice, manners, and apparel.

BOT 241. Auditing and Business Issues 3 cr.
Introduction to basic auditing concepts, the purpose for the auditing process, and requirements of persons assisting with the audit process. The course will also deal with issues of business law including contracts, sales, torts, strict liability, and business ethics. Prerequisite(s): BOT 120. Restricted to BOT majors.

BOT 244. Tax Preparation 3 cr.
Introduces basic federal and state tax codes for preparing individual income tax returns. Emphasis on use of tax software. Prerequisite: keyboarding proficiency.

BOT 247. Civic Involvement in Tax Preparation 1–3 cr.
Prepare individual tax returns applying current tax code. Each credit requires specific number of volunteer hours at a designated New Mexico Tax Coalition site. Prerequisite(s): BOT 246.

BOT 250. Electronic Office Systems 3 cr. (2+2P)
Management of the electronic office. Office use of computers, printers, fax machines, copiers, and scanner concepts will be covered. Prerequisite: BOT 211.

BOT 255. Special Topics 1–4 cr.
Specific subjects to be announced in the Schedule of Classes.

BOT 270. Business Office Technology Capstone 3 cr. (2+2P)
Refines professional skills learned in the BOT program and ties all BOT coursework together. Prerequisite(s): BOT 102 or BOT 129; and BOT 209 or ENGL 203G or ENGL 218G; and BOT 211 or OEC 211.

BOT 298. Independent Study 1–3 cr.
Individual studies directed by consenting faculty with prior approval of department head. Prerequisite: sophomore standing with 3.0 GPA. May be repeated for a maximum of 3 credits.

BUSA—Business Administration and Economics

BUSA 111. Business in a Global Society 3 cr.
Overview of the global environment of business and the development of business as an integrative, cross-disciplinary activity.

C EP—Counseling and Educational Psychology

C EP 110G. Human Growth and Behavior 3 cr.
Introduction to the principles of human growth and development throughout the life span.

Academic curriculum of excellence that includes the development of collaborative learning and student success environment, learning diverse learning styles and multiple intelligences, and developing multi-contextual academic communication styles.

C EP 210. Educational Psychology 3 cr.
Psychological foundations as they apply to the learner in the class room setting.

C J — Criminal Justice

C J 101G. Introduction to Criminal Justice 3 cr.
Examination of crime and justice within the broader social and cultural context of U.S. society from interdisciplinary social science perspectives. Includes critical analysis of criminal justice processes and the ethical, legal, and political factors affecting the exercise of discretion by criminal justice professionals.

C J 199. Special Topics in Criminal Justice I 1–3 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated under different topics for a maximum of 6 credits.

C J 201. Independent Study 3 cr.
Directed, individual studies and projects. Consent of instructor required.

C J 205. Criminal Law I 3 cr.
Directed, individual studies and projects. Consent of instructor required.

C J 209. Criminal Law II 3 cr.
Directed, individual studies and projects. Consent of instructor required.

C J 210. The American Law Enforcement System 3 cr.
Historical and philosophical foundations of law and order. An in-depth examination of the various local, state, and federal law enforcement agencies.

C J 221. Fundamentals of Criminal Investigation 3 cr.
Investigation procedures from crime scene searches, collection of evidence, and case preparation. (Note: students completing C J 221 may not take C J 321.)

C J 230. Introduction to Corrections 3 cr.
Development of correctional philosophy, theory, and practice. Instructional and non-institutional alternatives available in the corrections process.

C J 250. Courts and the Criminal Justice System 3 cr.
Structures and functions of American courts. Roles of attorneys, judges, and other court personnel; operation of petit and grand juries, trial and appellate courts.
C J 293. Field Experience in Criminal Justice 3–6 cr.
Field experience in a public criminal justice agency or equivalent private sector organization. Supervised internship experience, conferences, and observations. Prerequisites: C J 101G, prior arrangement and consent of instructor and a GPA of 2.0 or better in major. Restricted to majors.

C S — Computer Science

C S 110. Computer Literacy 3 cr.
Evolution and application of computers; economic and social implications; introduction to programming on microcomputers.

C S 167. C Programming 3 cr. (2+2P)
Programming in the C language. Prerequisite(s): MATH 120 or higher.

C S 171G. Introduction to Computer Science 4 cr. (3+2P)
Computers are now used widely in all area of modern life. This course provides understanding of the theoretical and practical foundations for how computers work, and provides practical application and programming experience in using computers to solve problems efficiently and effectively. The course covers broad aspects of the hardware, software, and mathematical basis of computers. Weekly labs stress using computers to investigate and report on data-intensive scientific problems. Practical experience in major software applications includes an introduction to programming, word processing, spreadsheets, databases, presentations, and Internet applications. Prerequisite(s): MATH 210G or MATH 120 or higher.

C S 177. C++ Programming 3 cr. (2+2P)
Introduction to object-oriented programming in the C++ language. Prerequisite(s): MATH 120 or higher.

C S 187. Java Programming 3 cr. (2+2P)
Programming in the Java language. Prerequisite(s): MATH 120 or higher.

C S 209. Special Topics 1–3 cr.
May be repeated for a maximum of 12 credits.

CCDE — Community College Developmental English

CCDE 105N. Effective Communication Skills 4 cr. (3+2P)
Instruction and practice in basic communication, to include written and oral presentations. Develops thinking, writing, speaking, reading, and listening skills necessary for successful entry to college and university classes. Provides laboratory. RR applicable.

CCDE 110N. General Composition 4 cr. (3+2P)
Instruction and practice in preparation for college-level writing. Students will develop and write short essays. Provides laboratory. Prerequisite: CCDE 105N (C or better) or equivalent. RR applicable.

CCDL — Community College Developmental Language

CCDL 101N. Basic Skills in English as a Second Language I 4 cr. (3+2P)
Developmental studies course for ESL students. Development of basic skills in speaking, listening, reading, and writing English as a second language with emphasis on speaking and listening. Pronunciation stressed. Course intended for U.S. citizens and residents who are nonnative speakers of English. Prerequisite: English language screening or consent of instructor.

CCDL 103N. Basic Skills in English as a Second Language II 4 cr. (3+2P)
Continuation of CCDL 101N for ESL students. Course intended for U.S. citizens and residents who are nonnative speakers of English. Prerequisite: English language screening or consent of instructor.

CCDL 105N. Intermediate Skills in English as a Second Language 14 cr. (3+2P)
Intermediate level with emphasis on reading and writing. Grammar and syntax stressed. Course intended for U.S. citizens and residents who are nonnative speakers of English. Prerequisite: English language screening or consent of instructor.

CCDL 107N. Intermediate Skills in English as a Second Language II 4 cr. (3+2P)
Continuation of CCDL 105N. Course intended for U.S. citizens and residents who are nonnative speakers of English. Prerequisite: English language screening or consent of instructor.

CCDM — Community College Developmental Mathematics

CCDM 100N. Mathematics Preparation for College Success 1–4 cr.
Mathematics skills course designed for college students with math skills insufficient for success in CCDM 103N. May be repeated for a maximum of 4 credits. RR applicable.

CCDM 103N. Pre-Algebra 4 cr. (3+2P)
Fundamental mathematics operations and arithmetic computations. Introduction to algebra and applied geometry. Provides laboratory and individualized instruction. RR applicable.

CCDM 105N. Mathematics Preparation and Pre-Algebra 5 cr. (4+2P)
A total immersion course that combines CCDM 100N and CCDM 103N using tutorials, manipulatives, and classroom instruction. Completion of this class is equivalent to the completion of CCDM 100N and CCDM 103N. Prerequisite(s): Math Placement Exam.

CCDM 112N. Developmental Algebra I 4 cr. (3+2P)
Fundamental algebra operations, algebraic expressions, solving linear equations, systems of equations and application of linear equations. Provides laboratory instruction. Completion of CCDM 112N and CCDM 113N is equivalent to completion of CCDM 114N. Graded: Traditional with RR. Prerequisite(s): Grade of C or better in CCDM 103N or equivalent.

CCDM 113N. Developmental Algebra II 4 cr. (3+2P)
Fundamental algebra operations, polynomials, factoring, solving quadratics by factoring, rational expressions, exponents and radical expressions (continuation of CCDM 112N). Provides laboratory instruction. Completion of CCDM 112N and CCDM 113N is equivalent to completion of CCDM 114N. Graded: Traditional with RR. Prerequisite(s): Grade of C or better in CCDM 112N or consent of instructor.

CCDM 114N. Algebra Skills 4 cr. (3+2P)
Fundamental algebra operations: algebraic expressions, solving linear equations, factoring, radicals, exponents. Provides laboratory and individualized instruction. Completion of CCDM 114N meets basic skills requirement. Graded: Traditional with RR. Prerequisite(s): C or better in CCDM 103N.

CCD — Community College Developmental Reading

CCDR 101N. Introduction to Basic Reading 4 cr. (3+2P)
Provides basic reading skills through comprehension and vocabulary development. Emphasis on oral language literacy and reading fluency. Course earns institutional credit but will not count toward degree requirements. Prerequisite: COMPASS score of below 42 on Reading section.

CCDR 103N. Comprehensive Reading Development 4 cr. (3+2P)
Provides integration of basic reading skills, including vocabulary development, text comprehension, and critical reading skills. Course earns institutional credit but will not count towards degree requirements. Prerequisite: COMPASS score of 43 to 59 on reading section.

CCDR 105N. Fundamentals of Academic Reading 3 cr. (2+2P)
Fundamentals of academic reading skills. Emphasis on vocabulary development and text comprehension through literature based instruction. Course earns institutional credit but will not count towards degree requirements. Graded: Traditional with RR. Prerequisite(s): COMPASS score 60 on reading section.

CCDR 110N. Effective College Reading 3 cr. (2+2P)
Provides a variety of strategies for effective reading and studying at the college level. Emphasis on reading across disciplines. Course earns institutional credit but will not count towards degree requirements. Graded: Traditional with RR. Prerequisite(s): COMPASS score 64 on reading section.

CHEF — Culinary Arts

CHEF 101. Culinary Arts Kitchen Orientation 3 cr.
Provides students with basic information and skills necessary for success in the Culinary Arts program. Students learn basic kitchen routines, safety and sanitation, professional conduct and deportment, standard kitchen calculations, knife handling, and are introduced to the laboratories for initial cooking experiences.

CHEF 125. Introductory Cake Decorating 1 cr.
Introduction to the professional cake decorating techniques used by pastry chefs. Basic skills of piping a variety of icings into different patterns are taught. Consent of Instructor required.

CHEF 126. Intermediate Cake Decorating 1 cr.
Introduction to more advanced professional cake decorating techniques used by pastry chefs. Fondant work and more complex decorating schemes are taught. Prerequisite(s): CHEF 125.

CHEF 127. Chocolate Work 1 cr.
Introduction to working with chocolate utilizing a variety of methods. Tempering, forming, molding, and other professional techniques will be taught.
CHEF 128. Advanced Chocolate Work 1 cr.
More advanced treatments of chocolate are explored and professional techniques for the chocolatier are developed. Prerequisite(s): CHEF 127.

CHEF 129. Wedding Cake Design and Construction 1 cr.
Basic skills in designing wedding (or other specialty event) cakes. Includes shaping, icing selection, decorating scheme, presentation, transportation, and remote set up. Prerequisite(s): CHEF 125 and CHEF 126.

CHEF 155. Special Topics 1–3 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated up to 6 credits.

CHEF 165. Math for Kitchen Operations 3 cr.
Fundamental mathematical concepts and computations, including measurement, recipe scaling and conversions, metric unit conversion, ingredient yield calculations, ratios and cost extensions are covered. Examples of basic mathematical calculations use kitchen and food service functions, as well as situations to demonstrate principles.

CHEF 211. Food Production Management I 3 cr. (2+2P)
Introduction to kitchen design, workflow, and commercial equipment. Techniques, methods, and application of basic food production principles. Practical experience in cooking processes from a managerial viewpoint. Crosslisted with: HOST 211.

CHEF 212. Food Production Management II 3 cr. (2+2P)
Selection and use of ingredients. Demonstration and application of classical and modern cooking and preparation techniques. Management techniques for kitchen personnel. Recipe design and analysis. Crosslisted with: HOST 212. Prerequisite(s): CHEF 211 or consent of instructor.

CHEF 213. Bakery Management I 3 cr. (2+2P)

CHEF 214. Bakery Management II 3 cr. (2+2P)
Advanced techniques and management of bakery operations are explored. Students learn classical forms and techniques. Modern methods of preparing traditional pastry and baked goods are introduced. Crosslisted with: HOST 218. Prerequisite(s): CHEF 213 or consent of instructor.

CHEF 233. Culinary Arts Fundamentals I 4 cr. (1+9P)
Introduction to the basics of culinary arts, including ingredients recognition, cooking methods and techniques, knife usage, preparation of basic stocks, mustard sauces, starchy and vegetables. Students will participate in laboratory work designed to create an understanding of the professional role of the culinarian. Preparation and production of food products integral to service to guests is incorporated in the course.

CHEF 234. Culinary Arts Fundamentals II 4 cr. (1+9P)
Continuation of introductory course focusing on meat cookery, daughter sauces, cold food preparation, poultry and seafood. Safe use of equipment is emphasized while experiencing differing methods of preparation and cooking. Preparation and production of food products integral to service of guests is incorporated in this course. Prerequisite(s): CHEF 233 with a grade of C– or better.

CHEF 235. Advanced Culinary Arts I 4 cr. (1+9P)
Exploration and experience in preparation techniques beyond the basic level. Nutritional components of food are discussed, as in the application of good nutrition practices in recipe design. Students are encouraged to use creative methods to expand the individual’s culinary expressions. Prepares food products for service to guests in both bulk feeding and individual service settings. Plans, prepares, serves and critiques meals provided for students, faculty and staff. Prerequisite(s): CHEF 234 with a grade of C– or better. Restricted to: Culinary Arts majors.

CHEF 236. Advanced Culinary Arts II 4 cr. (1+9P)
Advanced techniques and experimental use of food combinations to enhance the student’s repertoire of skills and abilities. Utilizes knowledge to develop recipes for unique products. Plans, prepares, serves and critiques meals provided for students, faculty and staff. Prerequisite(s): CHEF 235 with a grade of C– or better.

CHEF 237. Banquet/Catering Production 3 cr. (1+6P)
Planning and implementation of the culinary aspects of catered functions. Development of time schedules, work assignments and service plans for catered events and banquet functions. Production of food items in appropriate quantities for catered events. Costing and control functions are covered. Prerequisite(s): CHEF 234. May be repeated for up to 6 credits. Restricted to: CHEF majors.

CHEF 240. Baking Fundamentals I 4 cr. (1+9P)
Introduction to baking techniques, measurement and use of ingredients; equipment use and chemical reactions inherent in the baking process. Production of simple desserts and baked goods. Introduction to working with bread doughs. Corequisite(s): CHEF 233. Restricted to: HOST, CHEF majors.

CHEF 241. Baking Fundamentals II 4 cr. (1+9P)
More advanced baking and bread making techniques are covered in this course with emphasis on the more advanced elements of quantity production. Students work with a variety of products and ingredients. Prerequisite(s): grade of C or above in CHEF 240. Restricted to: HOST, CHEF majors.

CHEF 242. Intermediate Baking I 4 cr. (1+9P)
More advanced baking and pastry techniques are covered in this course with emphasis on the basic elements of patisserie production. Focus is on preparing students to work in a pastry kitchen. Prerequisite(s): Grade of C or above in CHEF 241. Restricted to: HOST, CHEF majors.

CHEF 243. Intermediate Baking II 3 cr. (1+6P)
Continuation of work with basic elements of patisserie products including laminated doughs and filled products. Students prepare creams, custards, fillings and are introduced to cake assembly procedures. Prerequisite(s): Grade of C or above in CHEF 242. Restricted to: HOST, CHEF majors.

CHEF 244. Advanced Baking I 4 cr. (1+9P)
Students focus on production of variety cakes, centerpieces, wedding cakes and other products found in commercial bakeries and patisserie shops. Prerequisite(s): Grade of C or above in CHEF 243. Restricted to: HOST, CHEF majors.

CHEF 245. Pastry Art and Techniques 3 cr. (1+6P)
Advanced skills for the pastry chef including pulled sugar work, spun sugar, chocolate art, pastillage, marzipan molding, butter carving and advanced decorating techniques are explored. Students prepare specialty items for display and competition.

CHEF 255. Special Topics 3 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated up to 6 credits. Restricted to: CHEF and HOST majors.

CHEF 256. International Cuisine 3 cr. (1+6P)
Exploration into a variety of international cuisines is undertaken, including the cultural and historical backgrounds of the foods being prepared. Students work on developing themed menus and production plans for meals utilizing a single international cuisine.

CHEF 257. Garde Manger 3 cr. (1+6P)
Traditional garde manger skills are taught, including plated salads, cold foods, entremets, pastes, forcemeat, terrines, charcuterie and charioit food work. The art and craft of food design, preparation and service are emphasized. Prerequisite(s): CHEF 234. Restricted to: CHEF & HOST majors.

CHEF 260. Nutrition for Chefs 3 cr.
Aspects of basic human nutritional requirements are covered as are the applications of the standards to the cooking and baking. Meeting the USDA nutrient guidelines while preparing good tasting food is discussed, calorie, fat and sodium reduction techniques are explored.

CHEM—Chemistry

CHEM 101. General Supplemental Instruction I 1 cr.
Collaborative workshop for students in General Chemistry I. Course does not count toward departmental degree requirements. Corequisite: CHEM 111G. May be repeat for a maximum of 2 credits.

CHEM 102. General Supplemental Instruction II 1 cr.
Collaborative workshop for students in General Chemistry II. Course does not count toward departmental degree requirements. Corequisite: CHEM 112G. May be repeated for a maximum of 2 credits.

CHEM 110G. Principles and Applications of Chemistry 4 cr. (3+3P)
A survey of the properties and uses of the elements and their compounds. In addition to classical chemistry, attention is paid to the materials from which consumer products are made, to the production of energy, and to environmental considerations. Prerequisite: 3 years of high school math or CCDM 114N.

CHEM 111G. General Chemistry I 4 cr. (3+3P)
Descriptive and theoretical chemistry. Prerequisite: (1) grade of C or better in MATH 120 or a Mathematics Placement Exam Score adequate to enroll in mathematics courses beyond MATH 120; and (2) one of the following: B or better in a second semester high school chemistry course, or grade of at least C in CHEM 100, or an enhanced ACT score of at least 22. CHEM 111G/112G are General Education alternative to CHEM 110G.

CHEM 112G. General Chemistry II 4 cr. (3+3P)
Descriptive and theoretical chemistry. CHEM 111G/112G are General Education alternative to CHEM 110G. Prerequisite(s): CHEM 111G.
CHMT 110. Introduction to Web Design 3 cr. (2+2P)

Overview of the process of crafting a digital product from conception to final. Incorporates basic principles of art and design, typography, layout, color and imagery, logos and advertising basics. Same as OEGR 105.

CHMT 115. Digital Photography and Imaging I 3 cr. (2+2P)

Principles and techniques of photography using digital equipment with an emphasis on lighting, focus, and composition.

CHMT 120. Introduction to Creative Media 3 cr. (2+2P)

Exploration and discovery of the creative processes through art, music, theater, narrative, and other avenues.

CHMT 126. Film Crew Training I 9 cr.

This course was designed in collaboration with the NM IATSE Local 480 union and the NM Film Office and focuses on providing hands-on training for students wishing to work on film crews. The course will offer an overview of the primary below-the-line craft areas of film production.

CHMT 130. Introduction to Web Design 3 cr. (2+2P)

Introduction to web development techniques, theory, and design. Incorporates HTML and industry-standard web editing software in developing various web sites.

CHMT 133. Introduction to 3D Computer Animation 3 cr. (2+4P)

Learning to work in a 3D environment. Introduction to the basics of modeling, animation, dynamics, and rendering. Working with polygons, NURBS and subdivisions, and editing in multiple interfaces. May be repeated for a maximum of 6 credits.

CHMT 140. Print Media I 3 cr. (2+2P)

Creation and design of publications and presentation materials using page layout software. May be repeated for a maximum of 6 credits.

CHMT 142. Computer Illustration 3 cr. (2+2P)

Preparation of digital graphics with a vector or draw program for use in print, web, video, animations, and multimedia. May be repeated for a maximum of 6 credits.

CHMT 145. Image Processing I 3 cr. (2+2P)

Design and creation of digital graphics using a raster or bitmap program for use in print, multimedia, video, animation and web. May be repeated for a maximum of 6 credits.

CHMT 146. Digital Foundations 4 cr. (2+4P)

Accelerated course covering concepts and techniques of industry-standard raster and vector graphics programs with focus on design and application. May be repeated for a maximum of 8 credits.

CHMT 150. 2D Animation 3 cr. (2+2P)

Concepts and techniques in storyboarding and creating interactive 2D animations for web, multimedia and video. Prerequisites: CMT 142 or CMT 146.

CHMT 151. Evolution of Electronic Games 3 cr. (2+2P)

Focus on the evolution of video games and how they have shaped mainstream entertainment. May be repeated up to 6 credits.

CHMT 155. Selected Topics 1–4 cr.

Specific titles to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits. Same as OEGR 155.

CHMT 156. Film Crew Training II 9 cr.

The purpose of this course is to provide applied training in a specific film production crew craft area, in which a student has decided to specialize. The various craft areas include but are not limited to, Art Dept., Grip., Electric, Sound, Production Office, Script Supervision, Props, Set Dressing, Locations, Special Effects, Hair/Makeup, Wardrobe, Production Assistant/ Set Operations. Prerequisite(s): CMT 126.

CHMT 160. Modeling and Animation 3 cr. (2+2P)

Building on student’s knowledge of 2D animation, covers modeling, animating objects and scenes in a 3D environment using various camera and lighting effects. May be repeated for a maximum of 6 credits.

CHMT 170. History of Film: A Global Perspective 3 cr.

Explores the history of cinema from the earliest 19th century developments to the present digital video revolution. Offers students a broader base of understanding of the tools and methodologies used in the craft.

CHMT 175. 3D Character Design 3 cr. (2+4P)

Focus on designing a character and then taking that design and building it in 3D using intermediate modeling techniques. Prerequisite: CMT 135 or CMT 160. May be repeated for a maximum of 6 credits.

CHMT 180. Design Principles 3 cr. (2+2P)

Techniques and theories of design principles, including layout foundations, logo building, type, color, and storyboarding and their application to print, web, animation and video. Prerequisite(s): CMT 142 or CMT 146.

CHMT 185. 3D Shading and Lighting Techniques 3 cr. (2+4P)

Study of various global, scene and character lighting techniques, shading and shadowing, and creating atmospheres and reflections that bring computer generated 3D scenes to life. Examines environmental and studio lighting to bring real-life experience into the digital production process. Prerequisite: CMT 135 or CMT 160.

CHMT 190. Digital Video Production I 3 cr. (2+4P)

A hands-on study of the tools and techniques used to produce the independent video. Through the production of various short projects, the student explores how the ideas of the writer/director are translated into a visual story. May be repeated for a maximum of 6 credits.

CHMT 192. Acting for the Camera 3 cr. (2+2P)

Covers acting techniques, body movement, monologues and auditioning. Students will gain professional acting experience on camera as well as learn what is expected on a film or video set.

CHMT 195. Digital Video Editing I 3 cr. (2+2P)

A study of the basic tools and techniques of non-linear digital video editing. May be repeated for a maximum of 6 credits.

CHMT 200. Critical Game Studies 3 cr. (2+2P)

Focus on understanding game design and the role it plays in the development of the gaming industry. May be repeated for a maximum of 6 credits.

CHMT 204. Principles of Sound 3 cr. (2+2P)

Study of soundtrack design theory, and the use of audio editing software that is compatible with media editing software to create soundtracks for different visual media. Prerequisites: CMT 180 and CMT 190.

CHMT 206. Principles of Sound 3 cr. (2+2P)

Study of soundtrack design theory, and the use of audio editing software that is compatible with media editing software to create soundtracks for different visual media. Prerequisites: CMT 180 and CMT 190.

CHMT 210. Digital Video Production II 3 cr. (2+2P)

Advanced techniques of the tools and application of professional film making. Prerequisite: CMT 190. May be repeated for a maximum of 6 credits.

CHMT 213. Digital Video Editing II 3 cr. (2+2P)

Advanced features of digital video, audio/music, and titling production software. Included are color correction, vector scopes, motion effects, and advanced editing techniques used by filmmakers. Prerequisite: CMT 195 or OEGR 210. May be repeated for a maximum of 6 credits. Same as OEGR 215.

CHMT 216. Digital Photography and Imaging II 3 cr. (2+2P)

Provide understanding and skills needed for advanced digital capture, editing, optimizing and manipulating photographic images for print, web and multimedia applications. The course will prepare students to make more advanced technical and more refined aesthetic decisions relative to specific photographic applications. Prerequisites: CMT 115.
CMT 217. Layer Animation & 3D Applications in Photoshop  1 cr. This is an advanced course in Photoshop 2D techniques and motion graphic applications pertaining to the animation of Photoshop Layers juxtaposed over time and space relationships. Prerequisite(s): CMT 145. Restricted to: CMT majors.

CMT 218. Video for Social Interaction and Informal Commerce  3 cr. The use of DSLR video has opened the way for photographers to be able to add video as a component of expression. This course shows the ways that this tool can be used for on-line instructional videos, demonstrations and presentations. As more and more commercial entities become involved in YouTube and other social media, this becomes a vocationally viable form of visual communication. May be repeated up to 6 credits. Consent of Instructor required.

CMT 220. Environmental Scene Design  3 cr. (2+4P) Modeling design techniques used to create environments and scenes for use in animated films and games. Investigation of both natural and architectural environments to be recreated in the virtual world. Prerequisite: CMT 135 or CMT 160.

CMT 221. Internship  1–3 cr. Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 9 credits. Consent of Instructor required. Prerequisite(s): Consent of instructor. S/U Grading (S/U, Audit).

CMT 222. Pre-production Management  3 cr. (2+2P) Pre-production planning paperwork breakdowns, budgeting, and scheduling taking a project from start to finish from a producers standpoint. Prerequisite: CMT 190.

CMT 223. Media Production Services  1–3 cr. A design studio environment in which students obtain real-world experience while providing service to college and non-profit associations with faculty supervision using a variety of media. Can be used with permission to fulfill cooperative requirement. Prerequisite: CMT 180 or ART 163. May be repeated for a maximum of 6 credits.

CMT 225. Anatomical Character Design  3 cr. (2+4P) Focus on building anatomy-based 3D characters. Advanced study in NURBS, subdivisions, and polygon modeling techniques used to create fully functional and realistic models. Prerequisite: CMT 175. May be repeated for a maximum of 6 credits.

CMT 226. Film Crew Cooperative Experience  3-6 cr. Industry production experience in specific craft areas for film crew technicians who have successfully completed two semesters of FTTP. Prerequisite(s): CMT 156.

CMT 227. Advanced Character Animation  3 cr. (2+2P) Focus on complex rigging techniques as well as utilizing advanced animation functions to blend multiple animations into complex animations. May be repeated for a maximum of 6 credits. Prerequisite(s): CMT 160.

CMT 228. Level Design Concepts  3 cr. (2+2P) Focus on the design and creation of video game levels. Dealing with the challenges and pitfalls of different video game genres. May be repeated for a maximum of 6 credits. Prerequisite: CMT 200.

CMT 229. 3D Digital Sculpting  3 cr. Introduce students to the 3D Sculpting programs which are the industry standard sculpting programs. Students will learn how to create complex high polygon sculptures and normal maps and transfer the models into 3D studio Max and Autodesk Maya. May be repeated up to 6 credits. Prerequisite(s): CMT 160.

CMT 230. Web Design II  3 cr. (2+2P) Creating and managing well-designed, organized web sites using HTML and web development software. May be repeated for a maximum of 6 credits. Prerequisite(s): CMT 130. Cross-listed: OEGR 230.

CMT 232. Script Development & Storyboarding  3 cr. Examines effective writing principles for creating storyboards that communicate the overall picture of a project, timing, scene complexity, emotion and resource requirements. Same as ENGL 232 and CMT 232.

CMT 235. Web Design for Small Businesses  3 cr. (2+2P) Technology and techniques for designing and building a web presence for small business. May be repeated for a maximum of 6 credits. Prerequisite(s): CMT 130. Cross-listed: OEGR 235.

CMT 236. Digital Audio Fundamentals  3 cr. (2+2P) Advanced digital audio post production and recording techniques using current entertainment industry-standard software and hardware.

CMT 240. Print Media II  3 cr. (2+2P) Refining of technical design skills using advanced features of page layout software in preparing a variety of business-related documents. Prerequisite: CMT 140 or OEGR 140. May be repeated for a maximum of 6 credits.

CMT 241. Game Animation I  3 cr. (2+2P) Introduction to basic game play theory of 3D game design, including levels, character development and game playing concepts. Prerequisite: CMT 160.

CMT 242. Advanced Computer Illustration  3 cr. (2+2P) Advanced techniques in 2D vector drawing and fundamentals of 3D illustration for use in print, web, and multimedia applications. Prerequisite: CMT 142. May be repeated for a maximum of 6 credits. Same as OEGR 270.

CMT 245. Image Processing II  3 cr. (2+2P) Advanced techniques in editing and manipulation of raster images for digital graphics for print, multimedia and web. Prerequisite: CMT 145. May be repeated for a maximum of 6 credits. Same as OEGR 260.

CMT 249. Layer Animation and 3D Applications in Photoshop  3 cr. This is an advanced course in Photoshop 3D techniques and motion graphic applications pertaining to the animation of Photoshop Layers juxtaposed over time and space relationships. May be repeated up to 6 credits. Prerequisite(s): CMT 245.

CMT 250. Advanced Graphics for Digital Media  3 cr. (2+2P) Advanced techniques in design and creation of high-level 2D animations and interactive interfaces for web, multimedia, and video. Prerequisite: CMT 150. May be repeated for a maximum of 6 credits.

CMT 251. Gaming Platform and Standards  3 cr. (2+2P) Focus on the different gaming platforms and their corresponding gaming demographics and standards. May be repeated for a maximum of 6 credits. Prerequisite: CMT 200.

CMT 252. Game Tools and Techniques  3 cr. (2+2P) Focus on the different engines and gaming technologies that power the games of today. May be repeated for a maximum of 6 credits. Prerequisite: CMT 200.

CMT 254. History of Media Design  3 cr. An introduction to the principles of design history and theory within a chronological framework of historical and emerging media.

CMT 255. Special Topics  1–4 cr. Specific topics to be announced in the Schedule of Classes. May be repeated for a maximum of 18 credits.

CMT 256. Typography  3 cr. Foundation in typography with an emphasis on history of typography and the practical application and impact of font choices for print, web, animation and video. Deals with studies in font or letter construction and font choices focusing on design, application, incorporation, and visual impact. Prerequisite(s): CMT 142.

CMT 258. Advanced Camera Techniques  3 cr. (2+2P) Professional camera techniques and training for electronic news gathering, and studio filmmaking. Utilizes high-end handheld shooting techniques, cranes, dollies, and steadicam training. May be repeated for a maximum of 6 credits. Prerequisite: CMT 190.

CMT 260. 3D Special Effects  3 cr. (2+4P) Creating advanced virtual special effects for both rigid and soft bodies. Using MEL, dynamic principles, mixing nodes, and advanced particle systems. How to drive particles over surfaces, add texture to flow, create surface tensions, and use collision events to drive texture. Study of integrating computer-generated images with real-life video and audio. Prerequisite: CMT 160 or CMT 225.

CMT 265. Personal Character Development  3 cr. (2+4P) Focus on the development of personal character(s), from sketch to render. Develop complete biographies of character, then build, skin and animate with as many personal attributes as possible. Prerequisite: CMT 225.

CMT 266. Audio Postproduction  3 cr. (2+2P) Application of techniques for the final postproduction phase of audio track editing, mixing and mastering for film, music, and animation; including Automated Dialog Replacement (ADR) and Foley. Prerequisite(s): CMT 206, 236, 237, 247, and 248.

ARCT 274. LEED Accreditation Exam Prep  3 cr. This course is intended for anyone in the construction or architectural design fields who is interested in learning more about green building and the LEED (Leadership in Energy and Environmental Design) strategies, and are also interested in learning about how to become LEED accredited. Overview of the LEED rating systems utilized in the design and operation of buildings, the various LEED building certifications, and accreditation requirements for professionals. Highlights include interpretation of the LEED Reference Guides, accepted strategies for meeting LEED certification, sample practice exams, integrated project delivery methods, and a practical approach to problem solving through the use of design problems.
CMT 275. Advanced Web Techniques 3 cr. (2+2P)
Creating and managing complex web sites using advanced techniques and tools. Prerequisites: CMT 145 and CMT 230. May be repeated for a maximum of 6 credits.

CMT 276. Advanced Photography Workshops 1 cr.
This is a series of 1-credit workshops offering specialized and intense advanced skill training and upgrading applications of photography for commercial purposes and training in photographic skills and styles presented by a variety of professional lecturers. May be repeated up to 7 credits. Prerequisite(s): CMT 115.

CMT 285. Print Media III 3 cr. (2+2P)
Refinement of skills needed to prepare a variety of documents for print and the service bureau. Prerequisite: CMT 140 or CMT 240. May be repeated for a maximum of 6 credits.

CMT 292. Creative Media Studio 3 cr. (2+2P)
A studio environment where students specialize in creating film-festival quality and portfolio-ready projects under the supervision of faculty. Prerequisites: CMT 190 and CMT 195 or CMT 160. May be repeated for a maximum of 6 credits.

CMT 295. Professional Portfolio Design and Development 1–3 cr.
Personalized design and creation of the student's professional portfolio including hard-copy, demo reel, and online. Prerequisite: consent of instructor. May be repeated for a maximum of 6 credits. Same as OEGR 280.

CMT 298. Independent Study 1–3 cr.
Individual studies directed by consenting faculty with prior approval of department head. Prerequisite: minimum GPA of 3.0 and sophomore standing. May be repeated for a maximum of 6 credits. Same as OEGR 298.

COLL—College Studies

COLL 101. College/Life Success 1–3 cr.
Provides students with an opportunity to cultivate the skills, values, and attitudes necessary to become confident, capable students, and contributing community members. Topics include time management, memory techniques, relationships, health issues, money management, and college and community resources.

COLL 103. Managing Your Money 1 cr.
Principles and strategies for effective money management. Includes financial goal setting, both short and long term. Explores the relationship between career and income earning potential. Explores issues of credit and debt management and prevention of identity theft.

COLL 108. Academic Reading and Study Skills 1–4 cr.
Introduction to and practice with strategies for effective reading and studying at the college level. Provides laboratory.

COLL 120. Career Exploration 1 cr.
Survey of careers possible with community college associate degrees. Information on how to make a career choice.

COLL 155. Special Topics 1–4 cr.
Covers specific study skills and critical thinking topics. Specific sub-titles to be listed in the Schedule of Classes. May be repeated for a maximum of 8 credits.

COLL 185. Prior Learning: Professional Portfolio 1–6 cr.
Creating a portfolio that outlines professional and educational experiences. Prerequisites: CMT 145 or CMT 230. May be repeated for a maximum of 7 credits. Prerequisite: CMT 115.

COMM—Communication Studies

COMM 253G. Public Speaking 3 cr.
Principles of effective public speaking, with emphasis on preparing and delivering well-organized, logical, and persuasive arguments adapted to different audiences.

COMM 265G. Principles of Human Communication 3 cr.
Study and practice of interpersonal, small group, and presentational skills essential to effective social, business, and professional interaction.

COMM 285. Survey of Communication Theory 3 cr.
Exploration of major theories, concepts and methods of research in the study of human communication. Primarily for majors.

DAS—Dental Assistant

NOTE: All DAS courses are restricted to Dental Assistant majors, except DAS 101, DAS 131, and DAS 133.

DAS 101. Introduction to Dental Assisting 2 cr.
An introduction to the duties and responsibilities of a dental assistant. Includes brief lessons on head and neck anatomy, chair side assisting, sterilization techniques, dental office emergencies, and dental office management.

DAS 111. Bio-Dental Science 4 cr. (3+3P)
Introduction to biomedical and dental sciences with emphasis on head and neck anatomy and tooth morphology. Includes microbiology, general anatomy and physiology, histology and embryology of the oral cavity, pathology and pharmacology as they relate to dentistry. Prerequisites: ENGL 111G, Oecs 101 or Oecs 105 or C S 110, PSY 201G or SOC 101G, COMM 253G or COMM 265G or AHS 101, HNDS 163 or BIOL 225. Corequisites: DAS 113, DAS 115, DAS 117.

DAS 113. Dental Assisting I 4 cr. (2+6P)
Introduction to chair side assisting procedures, instrumentation, infection control, equipment safety and maintenance, dental office emergencies, and management of pain and anxieties. Prerequisites: ENGL 111G, Oecs 101 or Oecs 105 or C S 110, PSY 201G or SOC 101G, COMM 253G or COMM 265G or AHS 101, HNDS 163 or BIOL 225. Corequisites: DAS 111, DAS 115, DAS 117.

DAS 115. Dental Radiology 3 cr. (2+3P)
Radiation physics, hygiene, and safety theories. Emphasis on the fundamentals of oral radiographic techniques and interpretation of radiographs. Includes exposure of intra-oral radiographs, quality assurance, radiographic interpretation, patient selection criteria, and other ancillary radiographic techniques. Prerequisites: ENGL 111G, Oecs 101 or Oecs 105 or C S 110, PSY 201G or SOC 101G, COMM 253G or COMM 265G or AHS 101, HNDS 163 or BIOL 225. Corequisites: DAS 111, DAS 113, DAS 117.

DAS 117. Dental Materials 3 cr. (2+3P)
Composition, chemical and physical properties, manipulation and uses of dental materials. Laboratory experiences include the application and manipulation of various materials used in dentistry. Prerequisites: ENGL 111G, Oecs 101 or Oecs 105 or C S 110, PSY 201G or SOC 101G, COMM 253G or COMM 265G or AHS 101, HNDS 163 or BIOL 225. Corequisites: DAS 111, DAS 113, DAS 117.

DAS 121. Dental Assisting II 4 cr. (2+6P)
Continuation of chair side assisting skill techniques with a major emphasis on four-handened dentistry performance procedures in the specialties of dentistry and expanded chair side functions. Prerequisites: DAS 111, DAS 113, DAS 115, DAS 117. Corequisites: DAS 123, DAS 125, DAS 127, DAS 129.

DAS 123. Dental Assisting Practicum 6 cr. (1+15P)
This course is the clinical component of the program that combines general practice and experiences in the work place. Seminar topics focus on the practicum experiences and critique of performance. Prerequisites: DAS 111, DAS 113, DAS 115, and DAS 117. Corequisites: DAS 121, DAS 123, DAS 125, DAS 127, DAS 129.

DAS 125. Professional Concepts 3 cr.
Emphasis on the development of professionalism for the dental office. Includes oral communication, psychology, patient relations, problem-solving skills, stress management, and employability in addition to dental jurisprudence and ethics. Prerequisites: DAS 111, DAS 113, DAS 115, and DAS 117. Corequisites: DAS 121, DAS 123, DAS 125, DAS 127, DAS 129.

DAS 127. Dental Office Management 2 cr.
This capstone course is an introduction to business office procedures, including telephone management, appointment control, accounts payable, completion of third party reimbursement forms, inventory control data entry for charges and payments, management recall, basic dental computer software and operating basic business equipment. Prerequisites: DAS 111, DAS 113, DAS 115, and DAS 117. Corequisites: DAS 121, DAS 123, DAS 125, DAS 127, DAS 129.

DAS 129. Preventive Dentistry 2 cr.
DAS 131. Dental Office Management I 3 cr.
Introduction to the field of dental office management with emphasis placed on professional verbal and written communication skills utilized within the dental office. Content includes dental terminology, charting, and back office experience as they relate to dental reception and management. Corequisites: BOT 101, ENGL 111G, OFCS 105, or CS 110. Corequisites: DAS 133 and DAS 101.

DAS 133. Dental Office Management II 3 cr.
Places emphasis on computer programs specifically designed for dental office management (Dentrix, Sof Dent, etc.) Expanded course content on oral communication and telephone skills, appointment scheduling, patient relations, stress management solutions, and comprehensive critical thinking/problem solving skills.

DAS 155. Special Topics 1–6 cr.
Specific subjects to be announced in the Schedule of Classes. Prerequisite: consent of instructor. May be repeated for a maximum of 12 credits.

DAS 156. Independent Study 1–6 cr.
Individual studies/research on topics related to dental assisting. Prerequisite: consent of instructor. May be repeated for a maximum of 8 credits.

**DHYG—Dental Hygiene**

NOTE: All DHYG courses are restricted to Dental Hygiene majors.

**DHYG 110. Preclinical Dental Hygiene** 3 cr.
Basic scientific principles and current theory, prevention of disease transmission, ethical and professional treatment of patients, clinical learning preparation, and introduction to comprehensive patient care. Offered concurrently with DHYG 112 to provide dental hygiene students with introductory knowledge, skills and attitudes to function in the clinical setting. Corequisites: DHYG 112, DHYG 114, DHYG 116, DHYG 117, & DHYG 118. Prerequisite(s): ENGL 111G, MATH 120, CHEM 210, BIOL 225, BIOL 226, BIOL 221 and BIOL 221L. Restricted to: DHYG majors.

**DHYG 112. Preclinical Dental Hygiene Lab** 3 cr. (9P)
Clinical application to basic theories and procedures used in dental hygiene practice. Techniques of instrumentation used in performing diagnostic, preventive and therapeutic services utilized when providing comprehensive patient care. Student will practice these techniques on manikins and student partners in the clinic. Corequisites: DHYG 110, DHYG 114, DHYG 116, DHYG 117, & DHYG 118. Prerequisite(s): ENGL 111G, MATH 120, CHEM 210, BIOL 225, BIOL 226, BIOL 221 AND BIOL 221L, OEOH 225. Restricted to: DHYG majors.

**DHYG 114. Oral Histology and Embryology** 2 cr.
Introduction and description of general histology and embryology with emphasis on the microscopic structures of enamel, dentin, pulp, cementum, periodontal ligament, bone, oral mucosa, epithelial attachment and development of orofacial structures. Corequisites: DHYG 110, DHYG 112, DHYG 116, DHYG 117 & DHYG 118. Prerequisite(s): ENGL 111G, MATH 120, CHEM 210, BIOL 225, BIOL 226, BIOL 221 AND BIOL 221L, OEOH 225. Restricted to: DHYG majors.

**DHYG 116. Head and Neck Anatomy** 3 cr.
Comprehensive study of the anatomy of the head and neck regions, including skeletal, nervous, circulatory, lymphatic, and muscular systems. Corequisites: DHYG 110, DHYG 112, DHYG 114, DHYG 117 & DHYG 118. Prerequisite(s): ENGL 111G, MATH 120, CHEM 210, BIOL 225, BIOL 226, BIOL 221 AND BIOL 221L, HNDS 251. Restricted to: DHYG majors.

**DHYG 117. Dental Anatomy** 1 cr. (1+2P)
A detailed study of nomenclature, morphologic characteristics, and physiologic relationships of human primary and permanent teeth as related to the clinical practice of dental hygiene. Laboratory activities develop observation and dexterity skills. Corequisites: DHYG 110, DHYG 112, DHYG 114, DHYG 116, and DHYG 118. Prerequisite(s): ENGL 111G, MATH 120, CHEM 210, BIOL 225, BIOL 226, BIOL 221 AND BIOL 221L, HNDS 251. Restricted to: DHYG majors.

**DHYG 120. Dental Hygiene Theory I** 3 cr.
Continuation of the theoretical basis for dental hygiene clinical practice. Emphasis on emergency care, planning dental hygiene care, health promotion and disease prevention, oral rehabilitation and care of appliances, modifications of dental hygiene care through the life-span, and an introduction to medically comprised patients. Corequisites: DHYG 122, DHYG 124, DHYG 126. Prerequisite(s): C or above in DHYG 110, DHYG 112, DHYG 114, DHYG 116, DHYG 117, & DHYG 118. Restricted to: DHYG majors.

**DHYG 122. Clinical Dental Hygiene I** 3 cr. (12P)
Application of dental hygiene procedures on a variety of clinical patients under direct supervision of faculty. Emphasis on patient assessment and diagnosis, treatment procedures, appointment planning and prevention techniques. Theory is simultaneously related to practical experience. Offered concurrently with DHYG 120. Corequisites: DHYG 120, DHYG 124, DHYG 126. Prerequisite(s): C or above in DHYG 110, DHYG 112, DHYG 114, DHYG 116, DHYG 117, & DHYG 118. Restricted to: DHYG majors.

**DHYG 124. General and Oral Pathology** 3 cr.
Introduction to general pathology with focused study of diseases and disorders of the oral cavity and their interrelationship with body systems; developmental anomalies of the teeth and jaws; manifestations of disease in the oral cavity, head and neck. Corequisites: DHYG 120, DHYG 122, DHYG 126. Prerequisite(s): C or above in DHYG 110, DHYG 112, DHYG 114, DHYG 116, DHYG 117, & DHYG 118. Restricted to: DHYG majors.

**DHYG 126. Periodontology** 3 cr.
Study of normal and diseased periodontium to include the structural, functional and environmental factors. Emphasis on etiology, pathology, evaluation of disease, treatment modalities, and therapeutic and preventive periodontics relative to the hygienist's role as a co-therapist in a contemporary practice setting. Corequisites: DHYG 120, DHYG 122, DHYG 124. Prerequisite(s): C or above in DHYG 110, DHYG 112, DHYG 114, DHYG 116, DHYG 117, & DHYG 118. Restricted to: DHYG majors.

**DHYG 127. Clinical Dental Hygiene II** 1 cr. (0.5+3.5P)
Continuation of clinical skills, patient assessment and diagnosis, treatment and appointment planning, preventive techniques and application of dental hygiene procedures at an intermediate level under the direct supervision of faculty. Clinical-based instruction helps students synthesize new knowledge, apply previous knowledge, and gain experience managing the workflow. Theory is simultaneously related to practical experience. Prerequisites: C or above in DHYG 120, DHYG 122, DHYG 124, DHYG 126.

**DHYG 134. Dental Materials** 3 cr. (2+3P)
Study of the composition, chemical and physical properties, manipulations, and uses of dental materials. Emphasis on materials and procedures for which the dental hygienist is directly responsible. Laboratory experiences include application and manipulation of various materials used in dentistry. Prerequisites: C or above in DHYG 120, DHYG 122, DHYG 124, DHYG 126.

**DHYG 155. Special Topics in Dental Hygiene** 1–6 cr.
Study of special topics related to the practice of dental hygiene. May include educational methodology as well as applications in clinical practice, research, or community service. Consent of instructor required. Restricted to DHYG majors.

**DHYG 210. Dental Hygiene Theory III** 2 cr.
Advanced theory of dental hygiene and information on periodontal therapies relative to the hygienist's role as a co-therapist in clinical practice. Continuation of the study of dental hygiene care for medically comprised patients and an introduction to special needs patients. Restricted to DHYG majors. Offered concurrently with DHYG 212. Corequisites: DHYG 212, DHYG 214, DHYG 216, DHYG 218. Prerequisites: C or above in DHYG 132, DHYG 134, and SOC 101G (or equivalent).

**DHYG 212. Clinical Dental Hygiene III** 4 cr. (16P)
Continuation of clinical skills, patient assessment and diagnosis, treatment and appointment planning, preventive techniques and applications of dental hygiene procedures at the intermediate to competent level under supervision of faculty. Emphasis on dental hygiene treatment for the medically compromised and periodontally involved patients. Theory is simultaneously related to practical experience. Offered concurrently with DHYG 210. Restricted to DHYG majors. Corequisites: DHYG 210, DHYG 214, DHYG 216, DHYG 218. Prerequisite: C or above in DHYG 132, DHYG 134, and SOC 101G (or equivalent).

**DHYG 214. Dental Pharmacology** 3 cr.
Study of the pharmacologic aspects of drugs and drug groups with which the dentist and dental hygienist are directly and indirectly concerned. Emphasis is placed on nomenclature, origin, physical and chemical properties, preparation, modes of administration and effects of drugs upon the body systems. Restricted to DHYG majors. Corequisites: DHYG 210, DHYG 212, DHYG 216 and DHYG 218. Prerequisites: C or above in DHYG 132 and DHYG 134.
DHYG 216. Dental Public Health Education 3 cr.
Study of principles and concepts of community public health and dental health education. Emphasis on dental epidemiology and statistical methods, community assessment, educational planning, implementation, and evaluation, scientific review of literature, and classroom presentation. Restricted to DHYG majors. Corequisites: DHYG 210, DHYG 212, DHYG 214 and DHYG 216. Prerequisites: C or above in DHYG 132 and DHYG 134.

DHYG 218. Pain and Anxiety Management 3 cr. (2+4P)
Study of the application of various physical, chemical, and psychological modalities to the prevention and treatment of preoperative and postoperative patient anxiety and pain. Emphasis on administration of local anesthesia and nitrous oxide. Restricted to DHYG majors. Corequisites: DHYG 210, DHYG 212, DHYG 214 and DHYG 216. Prerequisites: C or above in DHYG 132 and DHYG 134.

DHYG 220. Dental Hygiene Theory IV 3 cr.
Theoretical preparation for advanced clinical practice. In-depth study of dental hygiene care for patients with special needs. Case Study presentations and a Board Review are utilized to demonstrate the synthesis of comprehensive dental hygiene knowledge, skills and attitudes. The most current dental and dental hygiene technology will be reviewed as it related to clinical practice. Prerequisite(s): C or above in DHYG 210, DHYG 212, DHYG 214, DHYG 216, and DHYG 218. Corequisite(s): DHYG 222, DHYG 224, DHYG 226. Restricted to DHYG majors.

DHYG 222. Clinical Dental Hygiene IV 4 cr. (16P)
Clinical sessions combine basic and advanced dental hygiene skills with time management techniques essential for private practice. Comprehensive patient care to include assessment, dental hygiene diagnosis, treatment planning, implementation and evaluation of dental care, nonsurgical periodontal therapy, adjunct clinical procedures, ultrasonic instrumentation, patient management, sealants, and comprehensive programs for control of oral diseases will be emphasized. Theory is simultaneously related to practical experience. Students are encouraged to develop independent decision-making with minimal faculty supervision. Prerequisite(s): C or above in DHYG 210, DHYG 212, DHYG 214, DHYG 216, and DHYG 218. Corequisite(s): DHYG 220, DHYG 224, DHYG 226. Restricted to DHYG majors.

DHYG 224. Principles of Practice 2 cr.
Examination of the dental hygienist’s role in both traditional and non-traditional employment settings. Career planning, resume preparation and interviewing are practiced. An understanding of the law, professional ethics of dental hygiene and the need for lifelong learning are emphasized. Future roles of the dental hygienist and emerging issues in dental hygiene will be explored. Prerequisite(s): C or above in DHYG 210, DHYG 212, DHYG 214, DHYG 216, and DHYG 218. Corequisite(s): DHYG 220, DHYG 224, DHYG 226. Restricted to DHYG majors.

DHYG 226. Community Oral Health 2 cr. (1+3P)
Students assess, plan, implement, and evaluate a community oral health project. Dental specialties and the dental hygienist’s role in referrals and interdisciplinary patient care are presented. Students participate in a variety of community health projects and practicum and observe in dental specialty practices. Prerequisite(s): C or above in DHYG 210, DHYG 212, DHYG 214, DHYG 216, and DHYG 218. Corequisite(s): DHYG 220, DHYG 222, DHYG 226. Restricted to DHYG majors.

DHYG 255. Special Topics in Dental Hygiene 1-6 cr.
Study of special topics related to the advanced practice of dental hygiene. May include educational methodology as well as applications in clinical practice, research, or community service. Consent of instructor required. Restricted to DHYG majors.

DHYG 298. Independent Study in Dental Hygiene 1-9 cr.
Individual study related to the dental hygiene profession. Prior approval of both the Program Chairperson and the supervising instructor are required. Consent of instructor required. Restricted to DHYG majors.

DMS—Diagnostic Medical Sonography

NOTE: All DMS courses are restricted to Diagnostic Medical Sonography majors.

DMS 101. Introduction to Sonography 2 cr.
Introduction to the principles of ultrasound, terminology, scanning planes and applications of ultrasound. Includes observation in an ultrasound facility. All DMS courses are restricted to students who have been accepted into the Diagnostic Medical Sonography Program. Corequisite(s): DMS 112, 113. Restricted to DMS majors.

DMS 110. Ultrasound Physics 4 cr.
Properties of sound and its use in diagnostic imaging; technical components involved in ultrasound imaging; how to use ultrasound equipment during lab sessions; the bioeffects of high-frequency sound; and artifacts created during imaging. Restricted to: DMS majors.

DMS 112. Abdominal Sonography 4 cr. (3+3P)
Includes anatomy, physiology, and pathology of the abdominal organ systems; scanning techniques, ultrasound appearance of normal structures, and changes seen with pathologic conditions. Corequisite(s): DMS 116, DMS 101, DMS 113. Restricted to: DMS majors.

DMS 113. GYN Sonography 3 cr. (2+2P)

DMS 114. OB Sonography 4 cr. (3+2P)
Includes review of human embryology, normal fetal anatomy, obstetrical scanning techniques, fetal biometry, fetal abnormalities, fetal Doppler, the role of ultrasound in genetic testing and chromosome abnormalities, fetal echocardiography, and congenital heart abnormalities. Restricted to: DMS majors.

DMS 115. Abdominal Sonography II 3 cr. (2+2P)
Includes anatomy, physiology, and pathology of superficial structures, including female breast, thyroid, and neck structures, male pelvis, and musculoskeletal system; scanning techniques, ultrasound appearance of normal structures, and changes seen with pathologic conditions; abdominal Doppler principles of applications and organ transplant sonography. Pre/ Corequisite(s): DMS 110. Restricted to: DMS majors.

DMS 116. Introduction to Vascular Technology 3 cr. (2+2P)
Basic ultrasound physics and principles, peripheral vascular anatomy, hemodynamics, Doppler evaluation, peripheral vascular scanning techniques, physiologic testing and the more common pathologies of the carotid arteries, and the peripheral vascular system. Corequisite(s): DMS 101, DMS 112, DMS 113. Restricted to DMS majors.

DMS 117. Advanced Sonographic Procedures 2 cr.
This course will focus on the anatomy, pathology, laboratory values and sonographic appearances of organ transplants, the musculoskeletal system and the breast. Students will also demonstrate knowledge in age related competency (i.e. neonates, pediatric patients, adolescents, adults, and Obstetric patients) and be able to respond appropriately to parental needs. Restricted to: DMS majors.

DMS 118. Neurosonography 2 cr. (1+3P)
This course will cover detailed anatomy of neonatal brain and central nervous system. This course includes scanning techniques and indications for performing sonograms of the newborn; as well as common pathologies seen in the fetal and newborn brain and central nervous system. Restricted to: DMS majors.

DMS 120. Clinical Internship I 4 cr. (32P)
Provides the practical, hands-on experience required for both the national registry exam and for quality patient care. Students will spend approximately 32 hours per week at their assigned clinical site performing ultrasound exams under the supervision of the clinical staff. Students return to campus periodically to participate in advanced seminars. Six-week course. Restricted to: DMS majors.

DMS 122. Clinical Internship II 4 cr. (32P)
Provides the practical, hands-on experience required for both the national registry exam and for quality patient care. Students will spend approximately 32 hours per week at their assigned clinical site performing ultrasound exams under the supervision of the clinical staff. Students return to campus periodically to participate in advanced seminars. Six-week course. Restricted to: DMS majors.

DMS 124. Clinical Internship III 8 cr. (32P)
Provides the practical, hands-on experience required for both the national registry exam and for quality patient care. Students will spend approximately 32 hours per week at their assigned clinical site performing ultrasound exams under the supervision of the clinical staff. Students return to campus periodically to participate in advanced seminars. Prerequisite(s): DMS 122 or consent of Instructor. Restricted to: DMS majors.

DMS 126. Clinical Internship IV 8 cr. (32P)
Provides the practical, hands-on experience required both for national certification and for quality patient care. Students will spend approximately 32 hours per week at their assigned clinical site performing ultrasound exams under the supervision of the clinical staff. Students return to campus periodically to participate in advanced seminars. Prerequisite(s): DMS 124 or consent of Instructor. Restricted to: DMS majors.

DMS 155. Special Topics 1-6 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits. Consent of instructor required. Restricted to DMS majors.

DMS 200. Independent Study 1-6 cr.
Individual study/research on topics related to diagnostic medical sonography. Consent of instructor required. Restricted to DMS majors.
**DRFT — Drafting and Design Technologies**

**DRFT 101. Introduction to Drafting and Design Technologies** 1 cr.
Professional and student organizations associated with the Drafting and Design Technologies program, degree requirements, employment skills and work habits, and university and college policies and procedures will be explored. Students will be introduced to the current learning management system and career-readiness certification.

**DRFT 105. Technical Drawing for Industry** 3 cr. (2+2P)
Technical sketching, basic CAD, and interpretation of drawings with visualization, speed and accuracy highly emphasized. Areas of focus include various trades such as machine parts, welding, heating and cooling, and general building sketches/plan interpretation.

**DRFT 108. Drafting Concepts/Descriptive Geometry** 2 cr. (1+2P)
Basic manual drafting skills, sketching, terminology and visualization. Graphical solutions utilizing applied concepts of space, planar, linear and point analyses. Metric and S.I. units introduced.

**DRFT 109. Computer Drafting Fundamentals** 3 cr. (2+2P)

**DRFT 114. Introduction to Solid Modeling** 3 cr. (2+2P)
Students will learn 3-D visualization, mechanical drafting, and dimensioning skills as solid modeling skills are developed. Working drawings, assembly models, and assembly drawings will be introduced. May be repeated for a maximum of 6 credits.

**DRFT 115. General Construction Safety** 3 cr. (2+2P)
Overview of general construction safety related to building, highway and road construction, and surveying field work for entry-level individuals. Students will also have the opportunity to earn a 10-hour construction industry OSHA card. Crosslisted with: ARCT 115.

**DRFT 118. Geometry for Drafting** 3 cr.
Analysis and problem solving of related technical problems using measuring instruments and techniques with geometry and trigonometry. Prerequisite: CCDM 103N or CCDM 104N.

**DRFT 120. Survey Equipment Fundamentals** 2 cr.
Introduces the application and the setup to the following surveying equipment: Automatic Level, Total Station, and Global Positioning Systems. Field safety knowledge is required.

**DRFT 123. Introduction to Civil/Architectural Technology** 4 cr. (2+4P)
Introduction to beginning civil/architecture drafting and its applications. Drawings, projects and terminologies are related to both fields of civil engineering and architectural technology.

**DRFT 130. General Building Codes** 3 cr. (2+2P)
Interpretation of the Building Code, local zoning codes, A.D.A. Standards and the Model Energy Code to study construction and design requirements and perform basic plan checking.

**DRFT 135. Electronics Drafting I** 3 cr. (2+2P)
Drafting as it relates to device symbols; wiring, cabling, harness diagrams and assembly drawings; integrated circuits and printed circuit boards; schematic, flow and logic diagrams; industrial controls and electric power fields. Drawings produced using various CAD software packages. Prerequisites: DRFT 108 and DRFT 109.

**DRFT 143. Civil Drafting Fundamentals** 3 cr. (2+2P)
Introduction to drafting in the field of Civil Engineering. Drawings, projects, and terminologies related to topographic, contour drawings, plan and profiles, and street/highway layout. Crosslisted with: E T 143. Prerequisite(s): DRFT 109.

**DRFT 151. Construction Principles and Print Reading** 3 cr. (2+2P)
Introduction to construction materials, methods, and basic cost estimating and print reading applicable in today’s residential, commercial, and public works industry. Instruction by print reading and interpretation, field trips, and actual job-site visits and progress evaluation.

**DRFT 153. Survey Drafting Applications** 3 cr. (2+2P)
Introduction to drafting in the field of survey engineering. Drawings, projects and terminologies related to Point Data, topography, land-boundary surveys, legal descriptions and plat surveys. Using the current Autodesk software. Crosslisted with: SUR 143. Prerequisite(s): DRFT 109.

**DRFT 154. GIS Technology** 3 cr. (2+2P)
Introduction to GIS and related data collecting and mapping techniques. National standards emphasized utilizing computer and web-based systems and peripherals. Prerequisite(s): DRFT 109.

**DRFT 156. Construction Take-Offs and Estimating** 3 cr. (2+2P)
Computing and compiling materials and labor estimates from working drawings using various techniques common in general building construction and in accordance with standard specifications and estimating formats. Use of spreadsheets and estimating software introduced. Prerequisite: DRFT 151.

**DRFT 161. Introduction to Construction Management** 3 cr.
Introduction to the construction industry and construction management; construction documents and contracts; project planning, scheduling and administration; construction site management; and the role of Building Information Modeling (BIM) in construction management. Corequisite(s): DRFT 151 or consent of instructor.

**DRFT 164. Intermediate Mechanical Drafting/Solid Modeling** 3 cr. (2+2P)
Students will learn advanced solid modeling techniques. Use of different file types and compatibility issues between different software packages will be studied. Drawing organization and presentation methods will be practiced. Projects requiring precision field measurements and sketches, as well as teamwork, will be assigned. Geometric Dimensioning and Tolerancing will be introduced. May be repeated for a maximum of 6 credits. Prerequisite: DRFT 114.

**DRFT 165. Introduction to Building Information Modeling** 3 cr.
Introduction to Building Information Modeling (BIM) in the development of virtual 3D building models, construction documents, renderings and basic animations related to architectural, structural, and mechanical/electrical/plumbing building components. Utilizes the latest BIM technologies in the integration one, parametric BIM.

**DRFT 176. Solid Modeling, Rendering and Animation I** 3 cr. (2+2P)
Introduction to three dimensional drafting and solid modeling, rendering and animation for architecture and engineering fields. Material application, mapping, and scene lighting will be introduced. Prerequisite(s): DRFT 109.

**DRFT 177. Computer Rendering and Animation I** 3 cr. (2+2P)
Introduction to technical applications of computer generated renderings and animations for the architecture and engineering fields. 3D models, photo-realistic renderings, and basic animation movie files will be produced utilizing Autodesk VIZ and Google Sketch-Up software. May be repeated for a maximum of 6 credits. Prerequisite: DRFT 109.

**DRFT 180. Residential Drafting** 3 cr. (2+2P)
Basic residential drafting, including floor plans, foundation plans, sections, roof plans, exterior and interior elevations, and site plans. Applicable residential building and zoning codes, construction methods and materials, adaptable residential design, and drafting and sheet layout for architectural drafting will be introduced.

**DRFT 181. Commercial Drafting** 3 cr. (2+2P)
Drafting principles, plan coordination, and code analysis applicable in the development of working drawings for commercial, public, and industrial building projects. Students will utilize National Cad Standards, A.D.A. Standards, and will be introduced to modern office practice. Prerequisite(s)/Corequisite(s): DRFT 109. Pre/Corequisite(s): DRFT 180.

**DRFT 190. Finding and Maintaining Employment** 2 cr.
Techniques in self-evaluations, resume writing, application completion, job interviewing, and job retention. Exposure to work ethics, employee attitudes, and employer expectations.

**DRFT 204. Geographic Information Systems Technology** 3 cr. (2+2P)
The use of digital information for which various digitized data creation methods are captured. Users will capture, store, analyze and manage spatially referenced data in a modeled mapping procedure. Prerequisite(s): DRFT 109.

**DRFT 214. Advanced Solid Modeling** 3 cr. (2+2P)
Advanced mechanical drafting/solid modeling techniques and topics will be studied using the student’s software(s) of choice. Students will use any of the 3-D solid modeling software packages that are available on campus as they develop these skills, as well as develop a thorough working knowledge of the use of CAD & in Mechanical Drafting/Solid Modeling. Detailed class projects will be assigned, and presentations will be required. May be repeated for a maximum of 6 credits. Prerequisite(s): DRFT 114 or DRFT 176.

**DRFT 215. Construction Site Safety Management** 3 cr.
Construction safety, compliance, documentation, and reporting requirements for individuals with construction site safety management responsibilities. Students will have the opportunity to earn a 30-hour construction industry OSHA card. Consent of Instructor required.

**DRFT 222. Surveying Fundamentals** 3 cr. (2+2P)
Elementary surveying and civil drafting theory and techniques for non engineering majors. Includes traverse plotting, site plans, mapping, cross sections, and development of plan and profile drawings. Actual basic field measurement/surveying as well as extensive manual and CAD projects will be assigned. Prerequisite(s): DRFT 108 and DRFT 109, and (DRFT 118 or MATH 180 or MATH 190).
DRFT 230. Building Systems Drafting 3 cr. (2+2P)
Development of working drawings for electrical, plumbing, and HVAC systems, for
domestic and commercial building through the applications of both 2D Drafting and
3D Building Information Modeling (BIM) techniques. Basics of project setup, National
CAD Standards, ADA Standards, modern office practice, code analysis, as well as
Sustainability and LEED for new construction. Prerequisite(s): DRFT 180 or DRFT 181.

DRFT 240. Structural Systems Drafting 3 cr. (2+2P)
Study of foundations, wall systems, floor systems and roof systems in residential,
commercial and industrial design/Construction. Produce structural drawings includ-
ing foundation plans, wall and building sections, floor and roof framing plans, shop
drawings and details; schedules, materials lists and specifications. Use of various
software. Prerequisite(s): DRFT 180 or DRFT 181.

DRFT 242. Roadway Development Drafting 3 cr. (2+2P)
Advanced civil/survey technology and drafting related to roadway development. Em-
phasis is on relevant terminology, codes/standards, and the production of complex
working drawings such as topographical/grading, drainage, master utilities, roadway P
P/details/etc., according to agency standards. Prerequisites: DRFT 143 and DRFT 173.

DRFT 243. Land Development Drafting 3 cr. (2+2P)
Advanced civil/survey technology and drafting related to land development. Empha-
sis is on relevant terminology codes/standards, and the production of complex work-
ing drawings such as subdivision plats, local utility and drainage plans, construction
detail roadways P,P,P etc. according to local development/agency standards. Prereq-
usite: DRFT 143 and DRFT 153.

DRFT 250. Principles of Detailing and Design 3 cr. (2+2P)
Advanced practice in construction documentation in the development and coor-
dination of working drawings & specifications. In particular, will utilize Architect-
cural Graphic Standards, National CAD Standards, and ADA standards to develop
detail drawings related to Architectural, Civil, Structural and Building Mechanical
systems. Will also be introduced to basic principles, factors, and process of building
design such as space planning, site analysis, and basic architectural programming.
Prerequisite(s): DRFT 180 or DRFT 181.

DRFT 253. Geodatabase Design 3 cr. (2+2P)
Study of geodatabase design using techniques learned in GIS I and more advanced
methods. Will be using real-world ESRI models for design, including the architecture,
design, building, management, implementation and use of working geodatabase.
Prerequisite(s): DRFT 204.

DRFT 254. Spatial Data Processing 3 cr. (2+2P)
Utilizes the tools and technologies of GIS, processing volumes of geodata identifying
a numerical, coded or listed map. Involves the analysis of spatial data from vari-
ous diverse applications and place in a descriptive mapping process. Prerequisite(s):
DRFT 109 or DRFT 204.

DRFT 255. Independent Study 1–3 cr.
Instructor-approved projects in drafting or related topics specific to the student’s in-
dividual areas of interest and relevant to the drafting and graphics technology cur-
iculum. Consent of instructor required. May be repeated for a maximum of 6 credits.

DRFT 265. Advanced Building Information Modeling Applications 3 cr. (2+2P)
Advanced applications of Building Information Modeling (BIM) including the cre-
atIon of, and practice in collaborative work sets, data and design analyses, energy
modeling and analysis, preliminary LEED analysis, construction take-offs & estima-
tion, and construction animation, through use of various BIM and related software.
Prerequisite(s): DRFT 165.

DRFT 274. GIS Theory and Analysis 3 cr. (2+2P)
Analyzes the hypothesis in which location and spatial data sufficiently quantifies the
appropriate statistical methodology. Prerequisite(s): DRFT 109 and DRFT 204.

DRFT 276. Computer Rendering and Animation I 3 cr. (2+2P)
Introduction to technical applications of computer generated renderings and anima-
tions for the architecture and engineering fields. 3D models, photo-realistic render-
ings, and basic animation movie files will be produced utilizing industry standard
modeling and animation software.

DRFT 277. Computer Rendering and Animation II 3 cr. (2+2P)
Continuation of DRFT 276. Covers advanced modeling and animation techniques
using 3-D animation software. Prerequisite: DRFT 276.

DRFT 278. Advanced CAD Applications 3 cr. (2+2P)
Introduction to advanced CAD commands, applications, usage techniques, and user
customization. The latest version of the National CAD Standards will also be explored.
Prerequisite(s): DRFT 109.

DRFT 288. Portfolio Development 3 cr.
Production of a portfolio consisting of previously produced student work related to
the student’s individualized degree option. Process shall include the compilation and
organization of working and presentation drawings, construction documents, BIM
Models, and renderings/Animations. Students will learn the basics of design layout
and online portfolio documentation. Job search and resume preparation activities
will also be required. Production of new material and content may also be required.
This course is designed as a last semester course in the Drafting and Design curriculum.
Crosslisted with: ARCT 288.

DRFT 290. Special Topics 1–4 cr.
Topics subtitled in the Schedule of Classes. May be repeated for a maximum of 12
credits.

DRFT 291. Cooperative Experience 1–6 cr.
Supervised cooperative work program. Student is employed in an approved occupa-
tion and supervised and rated by the employer and instructor. Student meets with
advisor weekly. Prerequisite: consent of instructor. Graded S/U.

DRFT 295. Professional Development and Leadership DAGA 1 cr.
As members and/or officers of student professional organizations, drafting and graph-
ics students gain experience in leadership, team building, and community services.
This course is required for 2 credits. However, it may only be taken 1 credit at a time.
May be repeated up to 6 credits.

ECED—Early Childhood Education

ECED 115. Child Growth, Development, and Learning 3 cr.
This basic course in the growth, development, and learning of young children, prena-
tal through age eight, provides students with the theoretical foundation for becoming
competent early childhood professionals.

ECED 125. Health, Safety, and Nutrition 2 cr.
This course provides information related to standards and practices that promote chil-
ren’s physical and mental well being sound nutritional practices, and maintenance of
safe learning environments.

ECED 135. Family and Community Collaboration 3 cr.
This beginning course examines the involvement of families and communities from
diverse cultural and linguistic backgrounds in early childhood programs. Ways to
establish collaborative relationships with families in early childhood settings is dis-
cussed. Prerequisite(s): ECED 115 and ENGL 111G.

The beginning curriculum course places plays at the center of curriculum in develop-
mentally appropriate early childhood programs. It addresses content that is relevant
for children birth through age four and developmentally and culturally sensitive ways
of integrating content into teaching and learning experiences. Information on adapt-
ing content areas to meet the needs of children with diverse abilities and the develop-
ment of IFSP’s and IEP’s is included. Consent of instructor required. Prerequisite(s):
ECED 115 and ENGL 111G, Corequisite(s): ECED 220.

ECED 220. Early Childhood Education Practicum I 2 cr.
The beginning practicum course will provide experiences that address curriculum
content that is relevant for children birth through age four in developmentally and
culturally sensitive ways. Consent of instructor required. Prerequisite(s): ECED 115
and ENGL 111G. Corequisite(s): ECED 225.

ECED 225. Curriculum Development and Implementation II 3 cr.
The second curriculum course focuses on developmentally appropriate curriculum
content in early childhood programs, age 3 through third grade. Development and
implementation of curriculum in all content areas, including literacy, numeracy, the
arts, health and emotional wellness, science, motor and social skills, is emphasized.
Information on adapting content areas to meet the needs of children with diverse
abilities and the development of IEP’s is included. Consent of instructor required.
Prerequisite(s): ECED 115, ENGL 111G, Corequisite(s): ECED 230.

ECED 230. Early Childhood Education Practicum II 2 cr.
The second field-based curriculum course focuses on practicing developmentally
appropriate curriculum content in early childhood programs, age 3 through third
grade. Consent of instructor required. Prerequisite(s): ECED 115, ENGL 111G,
Corequisite(s): ECED 225.

ECED 235. Introduction to Language, Literacy and Reading 3 cr.
This course is designed to prepare early childhood professionals for promoting
children’s emergent literacy and reading development. Through a developmental
approach, the course addresses ways in which early childhood professionals can
foster young children’s oral language development, phonemic awareness, and liter-
acy problem solving skills, fluency, vocabulary, and comprehension. Prerequisite(s):
ECED 115 and ENGL 111G.
ECED 245. Professionalism  2 cr.
This course provides a broad-based orientation to the field of early care and education. Early childhood history, philosophy, ethics and advocacy are introduced. Basic principles of early childhood systems are explored. Multiple perspectives on early care and education are introduced. Professional responsibilities such as cultural responsiveness and reflective practice are examined.

ECED 255. Assessment of Children and Evaluation of Programs  3 cr.
This basic course familiarizes students with a variety of culturally appropriate assessment methods and instruments, including systematic observation of typically and non-typically developing children. Prerequisite(s): ECED 115 and ENGL 111G. Crosslisted with: SPED 255.

ECED 265. Guiding Young Children  3 cr.
This course explores various theories of child guidance and the practical applications of each. It provides developmentally appropriate methods for guiding children and effective strategies and suggestions for facilitating positive social interactions. Strategies for preventing challenging behaviors through the use of environment, routines and schedule will be presented.

ECED 270. Program Management  3 cr.
Technical knowledge necessary to develop and maintain a quality early care and education program. The course will focus on sound financial management and vision, laws and legal issues that affect programs and state and national standards including accreditation requirements. Prerequisite: consent of instructor.

ECED 275. Curriculum for Diverse Learners and Their Families  3 cr.
Implementation of family-centered programming that includes developmentally appropriate and culturally responsive curriculum. The course will also cover the establishment and maintenance of healthy and safe learning environments. Consent of instructor required.

ECED 276. Effective Program Development for Diverse Learners and Their Families  2 cr.
Practical experience in observing and carrying out the role of the director/administrator in the implementation of family-centered programming that includes developmentally appropriate and culturally responsive curriculum in a healthy and safe learning environment. Consent of instructor required. Corequisite(s): ECED 275. Restricted to ECED majors.

ECED 280. Professional Relationships  3 cr.
Development of staff relationships that will foster strong professional relationships with and among families, communities and advisory boards. Issues of staff recruitment, retention, support and supervision will lay a foundation for positive personnel management. Working effectively with board, advisory groups and community members and agencies will be addressed. Consent of instructor required. Corequisite(s): ECED 275. Restricted to ECED majors.

ECED 281. Professional Relationships Practicum  2 cr.
Practical experience in the development of staff relationship that will foster professional relationships with families, communities and boards. Issues of staff recruitment, retention, support and supervision will lay a foundation for positive personnel management. Consent of instructor required. Corequisite(s): ECED 275. Restricted to ECED majors.

ECON—Economics

ECON 201G. Introduction to Economics  3 cr.
Economic institutions and current issues with special emphasis on the American economy.

ECON 251G. Principles of Macroeconomics  3 cr.
Macroeconomic theory and public policy: national income concepts, unemployment, inflation, economic growth, and international payment problems. Prerequisite(s): Satisfaction of NMSU's mathematics basic skill requirement.

ECON 252G. Principles of Microeconomics  3 cr.
Microeconomic theory and public policy: supply and demand, theory of the firm, market allocation of resources, income distribution, competition and monopoly, governmental regulation of businesses and unions. Prerequisite(s): Satisfaction of NMSU's mathematics basic skill requirement.

EDUC—Education

EDUC 103. Internship in Bilingual Education/ESL  1-4 cr.
Supervised experience in bilingual education/ESL elementary or secondary classroom settings for prospective bilingual education/ESL teachers.

EDUC 150. Math for Paraprofessionals  3 cr.
Applied math skills for paraprofessionals working with children. Prerequisite: CCDM 103N.

EDUC 151. Math for Paraprofessionals II  3 cr.
Applied math skills for paraprofessionals working under the direction of a teacher. Prerequisite: EDUC 150.

EDUC 181. Field Experience I  1 cr.
Introduction to public school teaching, school visits, classroom observations and discussion seminar.

EDUC 204. Foundations of Bilingual/ESL Education  3 cr.
Explore and review the historical, legal, philosophical, theoretical and pedagogical paradigms of bilingual/ESL education.

ELA—Educational Management and Development

ELA 101. Freshman Orientation  1 cr.
Introductions to the university and to the College of Education. Discussion of planning for individualized education program and field experience. Graded S/U.

ELA 250. Introduction to Education  2 cr.
An overview of the American education system with emphasis on organization, governance, law, demographics, and professional practice.

ELT—Electronics Technology

ELT 103. Math Study Skills for Electronics  1 cr.
Covers specific math study skills and critical thinking processes to reinforce practical applications of math and its use with electronics. The student will be introduced to electronic mathematical formulas during the problem-solving steps required for circuit analysis. May be repeated up to 4 credits. Prerequisite(s)/Corequisite(s): ELT 183 or ELT 184.

ELT 105 Basic Electricity and Electronics  3 cr. (2+2P)
Fundamentals of electronics, electronic circuit devices, meters, transistors, integrated circuits and other solid state devices, computers, fiber optics, and industrial application topics. Minimum math proficiency of CCDM 103N or CCDM 104N required or math placement into CCDM 114N or higher. Crosslisted with: AERT 111

ELT 110. Electronics I  4 cr. (3+3P)
Fundamentals of electronics including: components, schematics, Ohm's law, Thévenin's and Norton's theorems, and series/parallel circuits incorporating passive, active and magnetic elements. Introduction to AC circuits. Crosslisted with: AERT 123.

ELT 120. Mathematics for Electronics  4 cr.
Includes fundamental mathematics, algebra, sine, cosine, and other elementary functions as they specifically apply to the operation, manipulation, and evaluation of direct current (DC) and alternating current (AC) circuits. Minimum math proficiency of CCDM 114N required or math placement into MATH 120 or higher. Crosslisted with: AERT 124.

ELT 135. Electronics II  4 cr. (3+3P)
Analysis of AC circuits, filters, and resonance. Introduction to solid state fundamentals including diodes and rectifier circuits, voltage regulators, various transistors and transistor characteristics, amplification and amplifiers, photovoltaic effects, gates and timing circuits. Prerequisite(s) ELT 110 and ELT 120.

ELT 153. Electronics CAD and PCB Design  3 cr. (2+2P)
Introduction to and the use of commercially available CAD software covering schematic representation of electronic components and circuits. Printed circuit board layout-out techniques including proper schematic capture, netlist generation, design rule checking and manual routing covered.

ELT 160. Digital Electronics I  4 cr. (3+3P)
Number systems, codes, Boolean algebra, logic gates, Karnaugh maps, combination circuits, flip-flops, and digital troubleshooting techniques. Prerequisite(s): ELT 110 and (ELT 120 or MATH 120).

ELT 175. Soldering Practices  3 cr. (2+2P)
Methods and techniques of hand soldering in the production of high quality and reliable soldering connections.

ELT 201. Television Theory  3 cr. (2+2P)
Origin and development of color television, video-audio characteristics, digital television, VITS and VIRS channels, broadcast antennas, and transmission lines.

ELT 205. Semiconductor Devices  4 cr. (3+3P)
Analysis and trouble shooting of linear electronic circuits including amplifiers, op-amps, power supplies, and oscillators. Prerequisite(s): ELT 110 and ELT 135.
ELT 210. Electronics Laboratory III 2 cr. (4P)
Circuit breadboards, circuit parameter measurements; emphasis on troubleshooting, fault analysis.

ELT 215. Microprocessor Applications I 4 cr. (3+2P)
Fundamentals of microprocessor architecture and assembly language with an emphasis on hardware interface applications. Prerequisites: ELT 235. Prerequisites: ELT 160.

ELT 220. Electronic Communication Systems 4 cr. (3+2P)
Principles and applications of circuits and devices used in the transmission, reception, and processing of RF, microwave, digital and telecommunications systems. Prerequisites: ELT 205. Prerequisites: ELT 135.

ELT 221. Cooperative Experience I 1–6 cr.
Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U. Prerequisite: consent of instructor.

ELT 222. Cooperative Experience II 1–6 cr.
Continuation of ELT 221. Maximum of 6 credits. Graded S/U. Prerequisite: consent of instructor.

ELT 225. Computer Applications for Technicians 3 cr. (2+2P)
An overview of computer hardware, software applications, operating systems, high level programming languages and networking systems.

ELT 230. Microprocessor Applications II 4 cr. (3+2P)
Advanced microprocessor interfacing techniques. Topics in A/D and D/A conversion, I/O port address decoding, direct memory accessing, and peripheral device interfacing applications. Prerequisite: ELT 215.

ELT 235. Digital Electronics II 3 cr. (2+2P)
Sequental logic circuits, latches, counters, shift-registers, fault analysis and troubleshooting of digital IC’s, multiplexers, timers, encoders/decoders, arithmetic circuits, pulse shaping, and memory devices. Prerequisites: ELT 160.

ELT 240. Introduction to Photonics 4 cr. (3+2P)
Nature of light, light emitters, lasers, detectors, fiber optics communications systems, and other applications of light to electronics. Prerequisite: ELT 135 or consent of instructor.

ELT 250. Electronics Systems Analysis 2 cr. (1+3P)
Capstone course emphasizing a systems approach to troubleshooting and maintaining complex electronics systems. Includes program review in preparation for technician certification. Prerequisite: consent of instructor.

ELT 255. Special Problems in Electronics 1–6 cr.
Individual studies in areas directly related to electronics. Prerequisites: ELT 110 and consent of instructor. May be repeated for a maximum of 6 credits.

ELT 260. Instrumentation Control and Signal Conditioning 4 cr. (3+2P)
Introduction to sensors and transducers, signal conditioning and transmission for measuring and process control systems. Includes AD, DA converter, small servos and actuators. Prerequisite: ELT 205.

ELT 265. Special Topics 1–6 cr.
Topic to be announced in the Schedule of Classes.

ELT 270. Biomedical Equipment Instrumentation 4 cr. (3+2P)
Principles and applications of electronic circuits and devices used in biomedical equipment. Skills taught to include evaluating, troubleshooting and repairing various types of medical equipment. Prerequisites: ELT 260. Prerequisites: ELT 205.

ELT 295. Professional Development/Leadership 1 cr.
As members and/or officers of student professional organizations, electronics technology students gain experience in leadership, team building, and community service. May be repeated for a maximum of 6 credit. Restricted to ELT and ET E majors.

ENGL—English

NOTE: Credit for ENGL 111G is prerequisite for every course numbered 200 or above.

ENGL 111G. Rhetoric and Composition 4 cr.
Skills and methods used in writing university-level essays. Prerequisite(s): ACT standard score in English of 16 or higher or a Compass score 76 or higher; for those scoring 13-15 in English on the ACT or 35-75 on the Compass, successful completion of a developmental writing course; for those scoring 12 or below on the ACT standard score in English or 34 or below on the Compass, successful completion of two developmental writing courses.

ENGL 112. Rhetoric and Composition II 2 cr.
A continuation of English 111G for those desiring more work in composition. Weekly themes based on outside reading. Prerequisite: successful completion of ENGL 111G or the equivalent.

ENGL 116G. Perspectives on Film 3 cr. (3+3P)
Explores narrative and documentary film and examines significant developments in the history of cinema. Criticism of film as an art form, technical enterprise, business venture, and cultural phenomenon.

ENGL 203G. Business and Professional Communication 3 cr.
Effective writing for courses and careers in business, law, government, and other professions. Strategies for researching and writing correspondence and reports, with an emphasis on understanding and responding to a variety of communication tasks with a strong purpose, clear organization, and vigorous professional style.

ENGL 211G. Writing in the Humanities and Social Sciences 3 cr.
Theory and practice in interpreting texts from various disciplines in the humanities and social sciences. Strategies for researching, evaluating, constructing, and writing researched arguments. Course subtitled in the Schedule of Classes.

ENGL 218G. Technical and Scientific Communication 3 cr.
Effective writing for courses and careers in science, engineering, and agriculture. Strategies for understanding and presenting technical information for various purposes to various audiences.

ENGL 220G. Introduction to Creative Writing 3 cr.
Examines classic and contemporary literature in three genres. Various forms, terminologies, methods and technical aspects of each genre, and the art and processes of creative writing.

ENGL 232. Script Development and Storyboarding 3 cr.
Examines effective writing principles for creating storyboards that communicate the overall picture of a project, timing, scene complexity, emotion and resource requirements. Crosslisted with: CMI 232.

ENGL 235. Narrative: Principles of Story Across the Media 3 cr.
Examines the various strategies of written and visual storytelling, narrative structure and its principal components (plot, theme, character, imagery, symbolism, point of view) with an attempt to connect them to elements of contemporary forms of media expression, including screenwriting, playwriting, writing for documentaries and animation, etc. Crosslisted with: CMI 235.

ENGL 244G. Literature and Culture 3 cr.
Intensive reading of and discussion and writing about selected masterpieces of world literature. Emphasizes cultural and historical contexts of readings to help students appreciate literary traditions. Core texts include works by Homer, Dante, and Shakespeare, a classic novel, an important non-Western work, and modern literature.

FIN—Finance

FIN 206. Introduction to Finance 3 cr.
Theory and techniques of financial management for business firms. Includes application of financial analysis tools and techniques needed for business financial administration and decision making. Prerequisites: either ACCT 202 and ECON 251G, or ECON 252G and MATH 120, or consent of instructor.

FIRE—Fire Science Technology

FIRE 101. Basic Firefighter 8 cr. (6+6P)
Basic concepts and methodologies of fire suppression. Meets or exceeds NFPA standards.

FIRE 104. Firefighter II 8 cr. (6+6P)
Advances concepts and methodologies of fire suppression. Meets or exceeds NFPA standards. Prerequisites: FIRE 101, 114, 115, 126, 202, 216, 223, 224, 251, 252, OEEM 115 or 120/121; Basic Firefighter Certification and approval of instructor.

FIRE 112. Principles of Emergency Services 3 cr.
This course provides an overview to fire protection and emergency services; career opportunities in fire protection and related fields; culture and history of emergency services; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics; life safety initiatives.

FIRE 114. Fire Behavior and Combustion 3 cr.
This course explores the theories and fundamentals of how and why fires start, spread, and are controlled.
Training for personnel expected to respond to and handle defensively, emergencies involving hazardous materials in order to protect people, property and the environment from as much exposure as possible. Preparation for Awareness Level I and Operations Level II. Meets or exceeds NFPA 471, 472, 473, OSHA 1910.120 part Q, HMER plan.

FIRE 120. Fire Protection Hydraulics and Water Supply 3 cr.
This course provides a foundation of theoretical knowledge in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems.

FIRE 126. Fire Prevention 3 cr.
This course provides fundamental knowledge relating to the field of fire prevention. Topics include: history and philosophy of fire prevention; organization and operation of a fire prevention bureau; use and application of codes and standards; plans review; fire inspection; fire and life safety education; and fire investigation.

FIRE 130. Principles of Fire and Emergency Services Safety and Survival 3 cr.
This course introduces the basic principles and history related to the national firefighter life safety initiatives, focusing on the need for cultural and behavior change throughout the emergency services. Consent of instructor required.

FIRE 201. Independent Study 1–3 cr.
Research on an approved topic to meet graduation requirements. Meets or exceeds NFPA standards. Prerequisite: consent of instructor. May be repeated for total of 9 credits.

FIRE 202. Wildland Fire Control 1–3 cr.
Focuses on factors affecting wildland fire control and prevention, fire behavior, control techniques, command structure and other operations including Standards for Survival I-100, S-130 and S-190. Meets or exceeds NWCG Training Curriculum and NFPA 1051 standards.

FIRE 203. Fire and Emergency Services Administration 3 cr.
This course introduces the student to the organization and management of a fire and emergency services department and the relationship of government agencies to the fire services department and the relationship of government agencies to the fire service. Emphasis is placed on fire and emergency service, ethics, and leadership from the perspective of the company officer.

This course provides the components of building construction related to firefighter and life safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at emergencies.

Knowledge and skills about hazardous materials mitigation needed to certify as a Hazardous Materials Technician Level III. Meets or exceeds NFPA 471, 472, 473 standards, and OSHA 1910.120 part Q, and New Mexico HMER plan. Prerequisite(s): FIRE 115.

This course provides basic chemistry relating to the categories of hazardous materials including recognition, identification, reactivity, and health hazards encountered by emergency services.

FIRE 220. Cooperative Experience I 1–3 cr.
Supervised cooperative work program. Student is employed in an approved occupation and rated by the employer and instructor. Prerequisite: consent of instructor. May be repeated for a maximum of 6 credits. Graded S/U.

FIRE 221. Cooperative Experience II 3 cr.
Apply advanced firefighting knowledge and skills while working with fire protection agencies. Meets or exceeds NFPA standards. Consent of instructor required. Graded: S/U. Prerequisite(s): FIRE 220.

FIRE 222. Aircraft Fire Control 3 cr.
Provides a broad understanding of airport operations required to effectively perform aircraft firefighting and other emergencies. Meets or exceeds NFPA 402, 403, 405 standards.

FIRE 223. Fire Investigations I 3 cr.
This course is intended to provide the student with the fundamentals and technical knowledge needed for proper fire scene interpretation, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firefighter, and types of fire causes.

FIRE 224. Strategy and Tactics 3 cr.
This course provides the principles of fire ground control through utilization of personnel, equipment, and extinguishing agents.

FIRE 225. Fire Protection Systems 3 cr.
This course provides information relating to the features and design and operation of fire alarm systems, water-based fire suppression systems, special hazard fire suppression systems, water supply for fire protection and portable fire extinguishers.

FIRE 226. Fire Investigations II 3 cr.
This course is intended to provide the student with advanced technical knowledge on the rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and court-room testimony. Meets and exceeds NFPA 1041 Level I standards.

FIRE 230. Fire Service Instructor 3 cr.
Provides the instructor candidate with methods and techniques of instruction including oral communications, preparing lesson plans, writing performance objectives, use of audio and other training aids, and the selection, evaluation and preparation of performance tests. Meets and exceeds NFPA 1041 Level I standards.

FIRE 232. Firefighter Internship 3 cr.
Application of knowledge, skills and abilities in a fire service department, as a firefighter intern and integrated member of a fire affiliated agency. Prerequisites: FIRE 101, FIRE 102, FIRE 115, FIRE 202 and EMT-B and consent of instructor. Restricted to majors.

FIRE 233. Practical Approach to Terrorism 3 cr.
Gives responder an overall safety approach in recognizing and responding to incidents involving terrorism. Presents an overview in types of harm, explosive weapons, chemical weapons, biological weapons and radiological weapons. Crosslisted: LAWV 233.

FIRE 251. Incident Command System–NIMS 700 3 cr.
NIMS provides a consistent nationwide Homeland Security template to enable all government, private-sector, and nongovernmental organizations to work together during domestic incidents.

FIRE 252. Vehicle Extrication 2 cr. (1+2P)
Course provides students with information on the newest types of air bags, restraint systems and latest tools and techniques used in vehicle extrication; course meets or exceeds NFPA standards.

GEOG—Geography

GEOG 111G. Geography of the Natural Environment 4 cr. (3+3P)
Introduction to the physical processes that shape the human environment: climate and weather, vegetation dynamics and distribution, soil development and classification, and geomorphic processes and landform development.

GEOG 112G. World Regional Geography 3 cr.
Overview of the physical geography, natural resources, cultural landscapes, and current problems of the world’s major regions. Students will also examine current events at a variety of geographic scales.

GEOL—Geology

GEOL 111G. Survey of Geology 4 cr. (3+3P)
Covers the fundamental principles of physical geology, including the origin of minerals and rocks, geologic time, rock deformation, and plate tectonics.

GOVT—Government

GOVT 100G. American National Government 3 cr.
U.S. constitutional system; legislative, executive and judicial processes; popular and group influence.

GOVT 110G. Introduction to Political Science 3 cr.
This class covers fundamental concepts such as justice, sovereignty and power; political theories and ideologies; and government systems that range from democratic to authoritarian.

GOVT 150G. American Political Issues 3 cr.
Major contemporary problems of American society and their political implications.

HIST—History

HIST 101G. Roots of Modern Europe 3 cr.
Economic, social, political, and cultural development from earliest times to about 1700.

HIST 102G. Modern Europe 3 cr.
Economic, social, political, and cultural development from 1700 to the present.
HIST 201G. Introduction to Early American History 3 cr.
History of the United States to 1877, with varying emphasis on social, political, economic, diplomatic, and cultural development.

HIST 202G. Introduction to Recent American History 3 cr.
History of the United States since 1877, with varying emphasis on social, political, economic, diplomatic, and cultural development.

HIST 261. New Mexico History 3 cr.
Economic, political, and social development of New Mexico from exploration to modern times.

HIST 269. Special Topics 1–3 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

HIT—Health Information Technology

HIT 101. Introduction to Medical Terminology 3 cr.
The study and understanding of medical terminology as it relates to diseases, their causes and effects, and the terminology used in various medical specialties. Emphasis will be placed on learning the basic elements of medical words, appropriate spelling and use of medical terms, and use of medical abbreviations.

HIT 110. Electronic Health Records 3 cr.
Current electronic health record principles, methods and procedures, and computerized medical record concepts and software applications will be introduced. Prerequisite(s): C S 110 or O ECS 105.

HIT 120. Health Information Technology I 3 cr.
An introductory course in the basics of human structure and function. Body systems are examined as to how they relate to proper code selection and as part of the functioning of the body as a whole. Restricted to: HIT majors.

HIT 130. Health Information Technology Anatomy & Physiology 3 cr.
Introduction to the principles of pharmacology, including drug terminology; drug origins, forms, and actions; routes of administration; as well as the use of generic name drugs, trade name drugs and categories of drugs to treat multiple and specific body systems.

HIT 140. Health Information Technology I 3 cr.
Introduction to the nature of disease and its effect on body systems. Disease processes affecting the human body via an integrated approach to specific disease entities will be presented including a review of normal functions of the appropriate body systems. Diseases will be studied in relation to their etiology, pathology, physical signs and symptoms, diagnostic procedures, complications, treatment modalities and prognosis.

HIT 150. Introduction to Medical Terminology 3 cr.
Principles of normal nutrition. Relation of nutrition to health. Course contains greater amounts of chemistry and biology than HNDS 163. Open to nonmajors.

HIT 201. Introduction to Hospitality Industry 3 cr.
Overview of hospitality industry; organization and operation of lodging, food and beverage, and travel and tourism segments; focus on career opportunities and future trends of hospitality industry.

HIT 202. Front Office Operations 3 cr.
Hotel/motel front office procedures detailing flow of business, beginning with reservations and extending to the night audit process.

HIT 203. Hospitality Operations Cost Control 3 cr.
Management of Food & Beverage facilities using cost control techniques. Functional training in menu analysis and development with all phases of product flow through a Food & Beverage organization explored.

HIT 204. Promotion of Hospitality Services 3 cr.
Organization of hotel marketing functions; developing a marketing plan to sell the varied services of the hotel/motel property.

HIT 205. Housekeeping, Maintenance, and Security 3 cr.
Function of housekeeping departments, including personnel, sanitation, maintenance, and materials. A survey of security procedures to include guest protection and internal security of hotel/motel assets.

HIT 206. Travel and Tourism Operations 3 cr.
Transportation, wholesale and retail operations, attractions, the traveler, tourism development, and operational characteristics of tourism business.

HIT 207. Customer Service for the Hospitality Industry 3 cr.
Concepts of service and the customer, integrating the need for service quality, and the continuing efforts to maximize returns for the operation. Classic service styles as well as more modern service techniques are covered. Students gain in-depth managerial knowledge, planning skills, and hands-on techniques for consistently delivering quality and service in a variety of operations.

HIT 208. Hospitality Supervision 3 cr.
Strategies for directing, leading, managing change and resolving conflict. Prepares students to meet expectations of management, guests, employees, and governmental agencies.

HIT 209. Managerial Accounting for Hospitality 3 cr.
Prepares students to make effective business decisions based on financial report information; forecasting, budgeting, cost analysis. Prerequisite(s): BOT 120 or ACCT 221.

HIT 210. Catering and Banquet Operations 3 cr.
Teaches the basics of catering and banquet operations, including computer coordination, planning, set up, service, and completion.

HIT 214. Purchasing and Kitchen Management 3 cr.
Technical purchasing concepts, product selection, and specifications. Safety and sanitation as they relate to food service establishments. Prepares student for work with HACCP programs.

HIT 215. Special Topics 1–3 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

HIT 221. Internship I 1–3 cr.
Work experience that directly relates to a student’s major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: HIT & BOT majors. S/U Grading (S/U, Audit).

HIT 222. Internship II 1–3 cr.
Continuation of HIT 221. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: HIT & BOT majors. S/U Grading (S/U, Audit).

HIT 224. Health Information Quality Management 3 cr.
Introduction to basic concepts of quality improvement and performance improvement as they apply to health record systems and the health care industry. Quality assessment and improvement standards and requirements of licensing, accrediting and other regulatory agencies will be presented.

HIT 248. Medical Coding I 3 cr. (2+2P)
Comprehensive overview of the fundamentals, coding conventions, and principles of selecting the most appropriate ICD-9-CM and future ICD-10-CM diagnostic and procedure codes. The most recent version of ICD-9-CM and an in depth study of the current Official Coding Guidelines for coding and reporting will be emphasized. Prerequisite(s): BOT 228.

HIT 258. Medical Coding II 3 cr. (2+2P)
Continuation of Medical Coding I. Comprehensive overview of the coding and reporting guidelines, fundamentals, coding conventions, and principles of selecting the most appropriate CPT and HCPCS procedural codes for all medical specialties. The most recent version of CPT and a continued study of the ICD-9-CM coding conventions and principles will be emphasized. Designed as a medical coding capstone course. Prerequisite(s): HIT 248.

HIT 268. Health Information Systems 3 cr.
Overview of health data management, work planning, and organization principles; an introduction to health care information systems; and review of the fundamentals of information systems for managerial, clinical support, and information systems.

HNDS—Human Nutrition and Dietetic Sciences

HNDS 251. Human Nutrition 3 cr.
Principles of normal nutrition. Relation of nutrition to health. Course contains greater amounts of chemistry and biology than HNDS 163. Open to nonmajors.

HOST—Hospitality and Tourism

HOST 155. Special Topics 1–3 cr.
Specific subjects to be announced in the Schedule of Classes.

HOST 201. Introduction to Hospitality Industry 3 cr.
Overview of hospitality industry; organization and operation of lodging, food and beverage, and travel and tourism segments; focus on career opportunities and future trends of hospitality industry.

HOST 202. Front Office Operations 3 cr.
Hotel/motel front office procedures detailing flow of business, beginning with reservations and extending to the night audit process.

HOST 203. Hospitality Operations Cost Control 3 cr.
Management of Food & Beverage facilities using cost control techniques. Functional training in menu analysis and development with all phases of product flow through a Food & Beverage organization explored.

HOST 204. Promotion of Hospitality Services 3 cr.
Organization of hotel marketing functions; developing a marketing plan to sell the varied services of the hotel/motel property.

HOST 205. Housekeeping, Maintenance, and Security 3 cr.
Function of housekeeping departments, including personnel, sanitation, maintenance, and materials. A survey of security procedures to include guest protection and internal security of hotel/motel assets.

HOST 206. Travel and Tourism Operations 3 cr.
Transportation, wholesale and retail operations, attractions, the traveler, tourism development, and operational characteristics of tourism business.

HOST 207. Customer Service for the Hospitality Industry 3 cr.
Concepts of service and the customer, integrating the need for service quality, and the continuing efforts to maximize returns for the operation. Classic service styles as well as more modern service techniques are covered. Students gain in-depth managerial knowledge, planning skills, and hands-on techniques for consistently delivering quality and service in a variety of operations.

HOST 208. Hospitality Supervision 3 cr.
Strategies for directing, leading, managing change and resolving conflict. Prepares students to meet expectations of management, guests, employees, and governmental agencies.

HOST 209. Managerial Accounting for Hospitality 3 cr.
Prepares students to make effective business decisions based on financial report information; forecasting, budgeting, cost analysis. Prerequisite(s): BOT 120 or ACCT 221.

HOST 210. Catering and Banquet Operations 3 cr.
Teaches the basics of catering and banquet operations, including computer coordination, planning, set up, service, and completion.

HOST 214. Purchasing and Kitchen Management 3 cr.
Technical purchasing concepts, product selection, and specifications. Safety and sanitation as they relate to food service establishments. Prepares student for work with HACCP programs.
HOST 216. Event, Conference and Convention Operations 3 cr.
The ability to successfully plan, organize, and execute special events is critical to the success of many hospitality organizations. This course gives the student a grounding in the skills necessary to achieve success in this area. A variety of events are discussed and the similarities and differences with conventions and conferences are explored. Students are taught to organize and plan events of varying type and duration. Sales, logistics, and organizing skills are emphasized.

It is the responsibility of the manager to provide appropriate security, sanitation, and safety precautions in hospitality operations. Preparation for internal and external disasters is an important task for the Hospitality Manager. This course uses the National Restaurant Association ServSafe® training material.

HOST 220. Experiential Travel 3 cr.
Course provides an opportunity for students to plan, prepare for and experience travel to destinations they might not otherwise have visited. Students experience local culture and peoples. May be repeated up to 9 credits. Prerequisite(s): HOST 201 or consent of instructor.

HOST 221. Internship I 1–3 cr.
Work experience that directly relates to a student’s major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. May be repeated up to 3 credits. Consent of Instructor required. Restricted to: OEHS, HOST majors. S/U Grading (S/U, Audit).

HOST 222. Travel Agency Principles 3 cr.
Travel agents are called upon to exhibit broad knowledge about many different tourism products. This course prepares students to undertake the challenging job of an agent in a travel agency. Restricted to: Dona Ana campus, Carlsbad campus.

HOST 224. Travel Agency Booking & Operations 3 cr.
Course trains students to use the common electronic booking software that is found in travel agencies. Familiarization with operational procedures of travel agencies. Prerequisite(s): HOST 223.

HOST 230. Wedding Events Management 3 cr.
This course will address various issues that could potentially arise in the preparation and management of a wedding or related event. All aspects of planning and attention to details that will ensure that students are prepared to provide services as a professional wedding planner.

HOST 239. Introduction to Hotel Management 3 cr.
This course covers basic management functions in hotels, resorts, Boutique Hotels, Bed & Breakfast establishments, and other lodging operations. All aspects of the operation are covered including guest management, operations, and sales and marketing.

HOST 255. Special Topics 3 cr.
Specific subjects to be announced in the Schedule of Classes.

HOST 266. Group Travel Systems 3 cr.
The course provides students with the basic skills necessary for developing and packaging tours and itineraries for large and small groups. Methods of marketing the specialized tour packages are explored.

HOST 268. Regional Tour Operations 3 cr.
Inbound tourists depend on regional tour operators to develop, market, operate and lead tours and activities. The specific skills for receptive tour operators, step-on guides, business agents and tour developers are explored and taught.

HOST 290. Hospitality Service Capstone 3 cr.
Refines skills and validates courses the student has taken in hospitality program Business simulations, case studies and projects used to test and improve hospitality business practices. Prerequisite(s): HOST 201, HOST 203, HOST 207, HOST 208, HOST 209 and HOST 221. Restricted to HOST majors.

HOST 298. Independent Study 1–3 cr.
Individual studies directed by consenting faculty with prior approval of department chair. May be repeated for a maximum of 3 credits. Prerequisite(s): Minimum 3.0 GPA and sophomore standing.

HVAC — Heating, Ventilation, Air Conditioning & Refrigeration

HVAC 100. EPA Clean Air Act: Section 608 1 cr.
Refrigerant certification preparation to include basics of refrigerant bearing equipment, ozone depletion and the new legislation, technician categories covered and the certification examination.

HVAC 101. Fundamentals of Refrigeration 4 cr. (3+2P)
Refrigeration cycle and the various mechanical components. Use of special tools, equipment, and safety precautions.

HVAC 102. Fundamentals of Electricity 4 cr. (3+2P)
Introduction to electricity theory, OEH’s Law, circuits, AC/DC, and practical applications.

HVAC 103. Electrical and Mechanical Controls I 4 cr. (3+2P)
Applications of basic electrical and mechanical controls. Reading and drawing diagrams of simple refrigerating equipment. Safe use of testing equipment. Prerequisites: HVAC 101 and HVAC 102, or consent of instructor.

HVAC 110. Professional Development and Leadership 1 cr.
As members and/or officers of various student professional organizations, students gain experience in leadership, team building, and community service. Students competing in SkillsUSA are required to register for the course. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: HVAC majors. S/U Grading (S/U, Audit).

HVAC 113. Job Shadowing 1 cr.
Course will expose students to actual HVAC/R field work and provide them knowledge of the expectations of field work as they shadow an HVAC/R technician. Consent of instructor required.

HVAC 205. Commercial Refrigeration Systems 4 cr. (3+2P)
Service and maintenance of commercial refrigeration equipment to include evacuation and charging procedures, electrical diagrams, and compressors and accessories. Prerequisites: HVAC 103 or consent of instructor.

HVAC 207. Residential Air Conditioning Systems 4 cr. (3+2P)
Applications and types of equipment used in comfort cooling. Preventive maintenance, service, and repairs common to evaporative coolers and refrigerated air conditioning systems. Air properties and psychrometrics. Prerequisite: HVAC 103 or consent of instructor.

HVAC 209. Residential Heating Systems 4 cr. (3+3P)
Gas and electric systems used in comfort heating. Maintenance procedures, safety, troubleshooting, and servicing malfunctions in equipment. Prerequisite: HVAC 103 or consent of instructor.

HVAC 210. Commercial Air Conditioning and Heating Systems 4 cr. (2+3P)
Covers troubleshooting mechanical and electrical problems associated with HVAC equipment in commercial buildings. Includes gas, electric, and heat pump systems. Prerequisite(s): HVAC 103 or consent of instructor.

HVAC 211. Heat Pump Systems 4 cr. (3+2P)
Reverse cycle refrigeration systems utilized in comfort heating and cooling. Troubleshooting mechanical electrical problems associated with heat pumps. HVAC 103 or consent of instructor.

HVAC 213. Practicum 3 cr.
Working in the field with journeymen service technicians. Develop and apply job skills. Consent of instructor required. Prerequisite(s): Consent of instructor.

HVAC 220. Introduction to Sheet Metal Fabrication 4 cr. (3+2P)
Introduction to sheet metal fabrication to include hands-on practical laboratory applications, cutting and forming procedures, identifying types and gauges. Design and layout techniques. Prerequisite: OETS 118 or equivalent math or consent of instructor.

HVAC 225. New Mexico Mechanical Codes: HVAC 1–4 cr.
Principles and regulations developed for HVAC, sheet metal, and plumbing occupations to include terminology, ventilation air supply, exhaust systems, duct systems, combustion air, chimneys and vents, boilers/water heaters, refrigeration, panel and hydronic panel heating, fuel gas piping, storage systems, solar systems, and workmanship standards. May be repeated for a maximum of 12 credits.

HVAC 255. Special Topics 1–6 cr.
Topics to be announced in the Schedule of Classes. Prerequisite: consent of instructor. May be repeated for a maximum of 12 credits.

HVAC 290. Special Problems 1–4 cr.
Individual studies related to heating, air conditioning, and refrigeration. Prerequisites: HVAC 101, HVAC 102, and consent of instructor.

JOUR — Journalism and Mass Communication

JOUR 105G. Media and Society 3 cr.
Functions and organization of the mass media system in the United States; power of the mass media to affect knowledge, opinions, and social values; and the impact of new technologies.
L SC—Library Science

L SC 100. Introduction to Libraries 3 cr.
Overview of libraries, including history and development, responsibilities of library personnel, types of libraries and services, and technology and trends.

L SC 110. Reference and Information Resources I 3 cr.
Overview of reference services. Introduction to, and evaluation of, basic types of information resources (both print and electronic) and their application in libraries.

L SC 111. Introduction to Information Literacy in an Electronic Environment 3 cr.
Introduction to the basics of the research process; the organization, location and evaluation of information using print, non-print and electronic resources.

L SC 112. Introduction to Consumer Health Information Literacy in an Electronic Environment 3 cr.
Introduction to consumer health information literacy; the process and organization, location, and evaluation of online information.

L SC 120. Cataloging Basics I: Descriptive Cataloging 3 cr.
Introduction to descriptive cataloging.

L SC 125. Cataloging Basics II: Classification and MARC Cataloging 3 cr.
Continuation of descriptive cataloging basics. Introduction to subject analysis, classification and MARC coding.

L SC 130. Introduction to Technical Services in Libraries 3 cr.
Introduction to technical services in libraries, including acquisitions, binding, cataloging, gifts, and serials.

L SC 140. Multimedia Materials and Presentations in Libraries 3 cr.
Overview of media formats and equipment. Introduction to desktop publishing, presentations, and web-page creation applications in libraries.

L SC 145. Marketing Your Library 1 cr.
The process of creating and implementing a marketing plan that focuses on the needs of library patrons.

L SC 150. Library Services for Children and Young Adults 3 cr.
Library services for children and young adults with an overview of materials, programs, and services for this population.

L SC 153. Picture Books and Young Children 1 cr.
If children are to enjoy reading they need to be exposed to books at an early age. This course will provide information to help guide librarians, preschool teachers, parents, and care givers in choosing appropriate books for those younger than six, and how to use books with this age group.

L SC 154. State Children's Book Awards 1 cr.
Students will explore the state book award offered by their state. Students will read some of the books and plan library programs to promote the award.

L SC 155. Award Winning Books for Children 1 cr.
A review of book awards and how to integrate award winning books into school curriculum or public school programming.

L SC 156. Boys and Books 1 cr.
This course looks at why, in general, boys are less interested in books than girls. Students will discover ways libraries can encourage boys to read and develop activities and programs which entice them to do so. Students will also be reading some books recommended for boy readers.

L SC 160. Introduction to Public Services in Libraries 3 cr.
Introduction to public services in libraries, including circulation, inter-library loan, reference, media services, special collections, and government documents.

Skills for interacting with library patrons from diverse backgrounds and in challenging environments.

L SC 168. Managing Library Volunteers 1 cr.
Covers recruitment, training and development, and management of library volunteers.

L SC 173. Library Conference Internship 1 cr.
Student will volunteer at an approved library conference. Graded: S/U.

L SC 175. Civic Involvement in Library Science 1–3 cr.
Involvement in an organized community service project or group with a library or information technology component. Promotes awareness of volunteer and community service opportunities. May be repeated for a maximum of 6 credits. Graded: S/U.

L SC 191. Children's Books and their Movie Adaptations 1 cr.
For almost as long as there have been popular books for children in the United States, there have been dramatic adaptations of them. What is gained, and lost, when children’s books are adapted for the big screen? What is the relationship—or what should the connection be—between works of children’s literature and their seemingly inevitable film adaptations? Students will be expected to read several children’s books and view the movies based on them and make comparisons.

L SC 192. Myths and Legends in Children's Literature 1 cr.
The student will explore myths and legends from diverse cultures; from European and Asian to those who have their roots in Africa and the Americas. Myths which are similar across several cultures will be compared.

L SC 193. Poetry for Children 1 cr.
This course will explore the genre of poetry for children. In this class, participants will focus on reading and reviewing poetry for kids, exploring poetry on the Web, and trying interactive approaches for sharing poetry with children. Topics include: study and analysis of poetry, ways to use poetry in the classroom, writing poetry with children.

L SC 194. The Art of Picture Books 1 cr.
Students will develop an understanding and appreciation of the processes of the creation of the visual aspects of children's books, including the development process from preliminary sketches and/or storyboard to the published book; various media and techniques; case studies of individual artists and works.

L SC 195. Mysteries for Children 1 cr.
In this course the student will become familiar with a wide variety of mysteries for children. Ways to use mysteries in the classroom and school library will also be covered.

L SC 196. Historical Fiction for Children 1 cr.
This course looks at historical fiction as a genre. Topics include: fiction vs. history, American history in children's literature, world history in children's literature, activities for using historical fiction in a school setting.

L SC 197. Fantasy and Speculative Fiction 1 cr.
This course offers professionals serving school students the opportunity to increase your appreciation and knowledge of fantasy and speculative fiction through intense reading and discussion of representative works. The course will also investigate and consider options using fantasy and speculative fiction in a school setting.

Principles of identifying, selecting, acquiring, managing, and evaluating resources for libraries.

L SC 201. Public Libraries 3 cr.
A study of the American public library and its place in communities. Topics may include history, philosophy, and standards, operations and procedures, governance, funding, personnel materials, user services, outreach and advocacy.

An examination of the functions of the library within the higher education environment. Topics may include history, philosophy, and organization, operations and procedures, governance, funding, personnel, materials, outreach, and user services.

L SC 203. School Library Media Specialist 3 cr.
Principles and practice of managing the school library media center, with an emphasis on its specific educational mission. Topics may include collection development, classes and lesson plans, public relations, administrative procedures, and use of technology.

L SC 204. Special Libraries 3 cr.
An examination of special libraries. Topics may include management, user services, technical services, facilities, and types of collections.

L SC 205. Preservation Basics for Libraries 1 cr.
Basic preservation tools and techniques for library resources.

Overview of computer applications in libraries. Topics may include automated systems and electronic resources, introduction to evaluation of technology, and writing a technology plan.

L SC 211. Electronic Privacy 1 cr.
An Introduction to the potential dangers of revealing personal information electronically and how libraries can inform and alert to protect the privacy of library computer users.

L SC 220. Innovative Technology Applications for Libraries 3 cr.
A look at uses for innovative technologies in libraries. Topics may include blogs, wikis, podcasting and virtual reality libraries.

L SC 221. Experiential Learning I 1–3 cr.
Student is employed (paid or non-paid) in an approved work site and evaluated by their supervisor. Each credit requires a specified number of hours of on-the-job work experience. Consent of Instructor required. Prerequisite(s): Consent of instructor. S/U Grading (S/U, Audit).
L SC 223. Library Privacy and Confidentiality 1 cr.
Covers the USA Patriot Act and other laws that apply to library user privacy.

Philosophical and practical information related to library policies about access to library materials.

L SC 235. Library Security and Safety 1 cr.
Strategies for safety and security planning in libraries.

L SC 236. Banned Books 1 cr.
Banned books, selection policies, and responding to challenges.

L SC 240. Internet Resources and Research Strategies 3 cr.
Introduction to retrieving and evaluating information found on the Internet and in selected Internet-accessible databases.

L SC 250. Reference and Information Resources II 3 cr.
Evaluation and use of specialized information resources to offer reference services. Emphasis is on virtual reference and other innovative techniques.

L SC 255. Special Topics 1–3 cr.
Special topics to be announced in Schedule of Classes. May be repeated for a maximum of 12 credits.

L SC 260. Cataloging Non-Book Formats 3 cr.
Introduction to cataloging of various non-book formats and MARC coding.


L SC 262. State and Local Documents 1 cr.
An introduction to state and local documents in library collections.

L SC 265. Cataloging Music Materials 3 cr.
Overview of the basics of cataloging music materials including scores, CD’s, videos, and DVD’s using AACR2 and MARC coding. Designed for the cataloger with little or no music cataloging experience.

L SC 270. Library Science Capstone 3 cr.
A culmination of all technical courses that are required to receive an Associate of Applied Science from the program centering around the completion of a library related project. Discussions on the role of paraprofessionals in libraries.

L SC 275. Fundamentals of Library Supervision 3 cr.
An introduction to supervision of library employees, including student assistants, to create a productive workspace.

L SC 276. Building Specialized Collections for Latinos 1 cr.
Building a library collection to serve Latino populations.

L SC 277. Building Specialized Collections for Native Americans 1 cr.
Building a library collection to serve Native American populations.

L SC 280. World Libraries and Exchange Programs 3 cr.
Students will study about libraries outside the United States. Students will also be introduced to exchange and volunteer program opportunities around the world.

L SC 281. Grant Writing for Libraries 1 cr.
Introduction to grant writing for libraries.

L SC 286. Children's Literature and the Primary Curriculum 3 cr.
The student will research the use of picture books and other children’s literature across the curriculum with students in kindergarten through second grade. Topics include: using literature to teach writing, using literature to teach science, using literature to teach math, using literature to teach social studies.

The student will research the use of picture books and other children’s literature across the curriculum with students in grades three through five. Topics include: using literature to teach writing, using literature to teach science, using literature to teach math, using literature to teach social studies.

L SC 288. Children's Literature and the Middle School Curriculum 3 cr.
The student will research the use of picture books and other children’s literature across the curriculum in grades six through eight. Topics include: using literature to teach writing, using literature to teach science, using literature to teach math, using literature to teach social studies.

L SC 290. Introduction to Children's Literature for Libraries 3 cr.
This course introduces students to some children's and young adult books written by and about Native Americans.

L SC 291. Southwestern Children's Literature 1 cr.
This course focuses on building an appreciation of literature, encouraging student reading, developing life-long readers, and developing activities for critical thinking.

L SC 296. Multicultural Books for Children and Youth 3 cr.
This course explores a wide range of multicultural children’s literature including: African American, Native American, Latino, Asian, Jewish, and Middle Eastern. Topics covered include: nonfiction of the cultures, historical fiction of the cultures, and contemporary literature of the cultures.

L SC 298. Independent Study 1–3 cr.
Individual studies directed by consenting faculty with prior approval of department chair. May be repeated for a maximum of 12 credits.

LAWE—Law Enforcement

LAWE 201. Introduction to Juvenile Delinquency 3 cr.
An introductory overview of the juvenile justice system of due process, custody, detention and release. (NOTE: Course does not meet upper division requirements toward completion of Bachelor of Science in Criminal Justice.)

LAWE 202. Police Patrol Procedures 3 cr.
A critical review of police procedures and the influences on police behavior; policy development, including the police role; discretion; police community interaction and arrest, search and seizure.

LAWE 203. Introduction to Police Supervision 3 cr.
An introductory overview of police supervision and concerns as it applies to law enforcement. (NOTE: Course does not meet upper division requirements toward completion of Bachelor of Science in Criminal Justice.)

LAWE 204. Introduction to Homeland Security 3 cr.
A historical perspective of international and domestic terrorist threats and the need to develop cohesive response policies and practices in the interest of National Security. (NOTE: Course does not meet upper division requirements toward completion of Bachelor of Science in Criminal Justice.)

LAWE 205. Practical Field Investigations 4 (3+3P) cr.
Incorporates the current methods and techniques for the management of the crime scene, includes documentation, collection and preservation of evidence and case presentations. (NOTE: Course does not meet upper division requirements toward completion of Bachelor of Science in Criminal Justice.)

LAWE 206. Traffic Enforcement and Crash Investigations 3 cr.
History and development of traffic laws and regulations, including basic elements of traffic violations, detection, apprehension, impaired drivers and guidelines and procedures for effective crash investigations and reporting.

LAWE 207. Legal Aspects of Law Enforcement 3 cr.
An evaluation of police authority including responsibilities, civil liability, liability implications, legal obligations, legal restraints, laws of arrest, and search and seizure.

LAWE 208. Security Protection Officer Level I 3 cr.
This course is designed to provide basic security protection officer training conforming to the New Mexico Regulation and Licensing Department - Level I SPO training standards. Graded: S/U. Prerequisite(s): LAWE 208
LAWE 209. Security Protection Officer Level II 2 cr. (1+3P)
This course combines with the Level I SPO training is designed to provide basic security protection officer training conformance to the New Mexico Regulation and Licensing Department - Level II SPO training standards. Graded: S/U. Prerequisite(s): LAWE 208.

LAWE 210. Introduction to Law Enforcement 3 cr.
An introduction to Criminal Justice System in our democratic society with emphasis on Law Enforcement, Criminal Justice Administration and application. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 211, 212, 213, 214, 215, 216, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 211. Policing in America 3 cr.
The study of Law Enforcement concepts in an American society with emphasis on law and order at the federal, state and local agencies. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 212, 213, 214, 215, 216, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 212. Patrol Procedures 3 cr.
Basic patrol concepts with emphasis on police patrol activities including the practices and procedures necessary to perform the patrol functions and report writing. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 213, 214, 215, 216, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 213. Criminal Investigations 3 cr.
Fundamentals of criminal investigations including scene security, evidence collection, traffic accidents, case preparation and report writing. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 212, 214, 215, 216, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 214. Criminal Law & Court Procedures 3 cr.
Concepts on the rule of law, substantive and procedural law including liability, crimes against persons and property. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 212, 213, 215, 216, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 215. Emergency Vehicle Operations 1 cr. (1P)
Instruction on operating a patrol vehicle, procedures for emergency driving including legal issues related to emergency vehicle operations. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 212, 213, 214, 216, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 216. Traffic Law and Procedures 3 cr. (2+3P)
Instruction on law of motor vehicles including traffic enforcement operations and law enforcement officer’s role in report writing, hazardous materials incidents and accident investigations. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 212, 213, 214, 215, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 217. Custody and Defensive Tactics 3 cr. (9P)
Instruction on the mechanics of arrest, custodial procedures, use of force, transporting prisoners and defensive tactics for officer protection. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 218. Basic Firearms 3 cr. (1+6P)
Familiarization on the operation and maintenance of firearms, safety, use of deadly force, body armor and marksmanship. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 219. Law Enforcement Report Writing 4 cr.
Cover police, corrections, security and pre-sentence reports, including writing and use of forms. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 212, 213, 214, 215, 216, 217, 218, 222 & OEEM 155. Restricted to LAWE majors.

LAWE 220. Cooperative Experience 3 cr.
Supervised cooperative work program. Student is employed in an approved law enforcement occupation and rated by the employer and instructor. Prerequisite: consent of instructor.

LAWE 221. Law Enforcement Internship 3 cr.
Application of knowledge, skills and abilities, in an agency as an intern and integrat ed member of a law enforcement affiliated agency. Prerequisite: consent of instructor.

LAWE 222. Law Enforcement Physical Fitness 2 cr. (6P)
Instruction on health and physical fitness concepts, flexibility, strength, body composition and cardiovascular endurance. This is a Law Enforcement Academy Certification course. Consent of instructor required. Corequisite(s): LAWE 210, 211, 212, 213, 214, 215, 216, 217, 218, 219 & OEEM 155. Restricted to LAWE majors.

LAWE 233. Practical Approach to Terrorism 3 cr.
Gives responders an overall safety approach in recognizing and responding to incidents involving terrorism. Presents and overview in types of harm, explosive weapons, chemical weapons, biological weapons and radiological weapons. (NOTE: Course does not meet upper division requirements toward completion of Bachelor of Science in Criminal Justice.) Crosslisted with: FIRE 233.

LING—Linguistics

LING 200G. Introduction to Language 3 cr.
Traditional fields of language study (sound, grammar, meaning) and newer ones (language as social behavior, language and cognition, language variation, animal communication).

MAT—Automation & Manufacturing Technology

MAT 102. Print Reading for Industry 3 cr. (2+2P)
Reading, interpretation, and revisions of industrial technical drawings common to manufacturing, Aerospace, machine parts, electrical, hydraulic, and Pneumatic drawings. Interpretation of engineering drawings and related shop calculations. Introduction Crosslisted with: AERT 113.

MAT 105. Introduction to Manufacturing 3 cr. (2P)
Introduction to manufacturing evolution from basic assembly process to modern automation processes. Covers history, employability, soft skills, quality measurements, teamwork concept, production requirements, and considerations in plan layout and design. Minimum math proficiency of CCDM 114N required or math placement into MATH 120 or higher. Crosslisted with: AERT 112.

MAT 106. Applied Manufacturing Practices 3 cr. (2+2P)
Course will illustrate how various products are manufactured along with associated process. Mechanical behavior such as bending, cold worked, strained, work hardened, and heat transfer will be emphasized as well. In lab, students will learn how to make selected products starting from prints to complete projects including quality control. Crosslisted with: AERT 114.

MAT 107. Computer Integrated Manufacturing PLTW 3 cr. (2+2P)
Applies principles of robotics and automation to Computer Aided Design (CAD) design. The course builds on computer solid modeling skills developed in Introduction to Engineering Design, Design and Drawing Production. Students use Computer Numerical Control (CNC) equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing, and design analysis are included.

MAT 108. Metrology, Safety and Quality Control for Manufacturing 3 cr. (2+2P)
Use of measuring tools in manufacturing process and quality control. These tools include: vernier and digital micrometers, calipers, height gauges, hole gauges, pin gauges, electrical pressure/flow, temperature measuring, stress/strain measurements, and non-destructive testing (eddy currents, magnetic particle, ultrasonic, bubble emission, x-ray, Gamma ray, radiography, visual inspection, ring test, tapping & Zygo). Instruction to use of coordinate machine while covering the safety issues that pertains to these types of tools and equipment.

MAT 110. Machine Operation and Safety 3 cr. (2+2P)
Introduction to the operation and safety aspects of various types of machinery and equipment, including both mechanical and electrical machines, Rigid Tubing, and Flexible Lines. Maintenance and safety operation of industrial equipment will also be covered. Crosslisted with: AERT 115.

MAT 149. Industrial Mechanical Elements 3 cr. (2+2P)
Introduction to mechanical systems, theory, characteristics and uses for the different types of mechanical power transmission systems used in the industry, and related industrial safety practices. Topics include: safety, drives, shafts, maintenance and lubrication.

MAT 151. Introduction to Metalworking I 3 cr. (2+2P)
Measuring instruments, including steel rules, combination and transfer tools, micrometers, vernier instruments, bevel instruments, and indicators. Shop safety and first aid, introduction to cutting fluids, saws and sawing, and drill presses.
MAT 152. Introduction to Metalworking II 3 cr. (2+2P)
Gage blocks and sine bars, cutting and noncutting hand tools, engine lathes, grinding machines, and concepts of numerical control. Prerequisite(s): MAT 151.

MAT 205. Statistical Controls for Manufacturing Technicians 3 cr. (2+2P)
Use of hardware and software for quality assurance to include the design of experiments, sampling techniques, SPC, control chart application and development, and process reliability. Prerequisite(s): ELT 120 or MATH 120.

MAT 221. Cooperative Experience I 1–6 cr.
Supervised cooperative work program. Student is employed in an approved occupation and rated by employer and instructor. Student meets in a weekly class. Prerequisite: consent of instructor. Graded S/U.

MAT 222. Cooperative Experience II 1–6 cr.
Continuation of MAT 221. Maximum of 6 credits. Prerequisite: consent of instructor. Graded S/U.

MAT 234. Industrial Electricity Maintenance 3 cr. (2+2P)
Introduction into electrical systems, theory and uses for the different types of motors used in the industry and related industrial safety practices. DC, AC stepper and servo motors, motor speed and torque, motor performance, and efficiency, motor control fundamentals using variable frequency drives, vector controls, servo and stepper drives.

MAT 235. Programmable Logic Controllers Pneumatics 2 cr. (1+2P)
Introduction to theory and application of pneumatic power transfer and control. Programmable logic controllers (PLCs) introduced as controlling elements for electro-pneumatic systems.

MAT 240. Electromechanical Devices 4 cr. (2+4P)
Theory and application of electromechanical devices and digital control circuits. Includes AC and DA converters, pneumatics, hydraulics, programmable logic controllers, DC, AC, and stepper motors, and servomechanisms. Prerequisite(s): MAT 160 and [MAT 105 or (MAT 110 & MAT 135)]. Crosslisted with: AERT 221

MAT 245. Electromechanical Systems 3 cr. (2+2P)
Electromechanical system interfacing. Principles and applications of preventive and corrective maintenance procedures on industrial production machines using system technical and maintenance manuals to develop troubleshooting procedures using systems block and schematic diagrams. Crosslisted with: AERT 222. Prerequisite(s)/Corequisite(s): AERT 211 or MAT 240. Prerequisite(s): ELT 135 and ELT 160.

MAT 265. Special Topics 1–6 cr.
Course subtitled in the Schedule of Classes. Prerequisite: consent of instructor. May be repeated for a maximum of 12 credits.

MATH—Mathematics

MATH 101. General Supplemental Instruction I 1 cr.
Collaborative workshop for students enrolled in Intermediate Algebra. Corequisite: MATH 120. May be repeated for a maximum of 2 credits. Graded S/U.

MATH 102. General Supplemental Instruction II 1 cr.
Collaborative workshop for students enrolled in College Algebra. Corequisite: MATH 121G. May be repeated for a maximum of 2 credits. Graded S/U.

MATH 107. Topics in Mathematics 1–3 cr.
Topics to be announced in the Schedule of Classes. Maximum of 3 credits per semester. Total credit not to exceed 6 credits. Prerequisite: consent of instructor.

MATH 111. Fundamentals of Elementary Mathematics I 3 cr.
Numbers and the four operations of arithmetic. Understanding and comparing multiple representations of numbers and operations, in particular how these representations build from whole numbers to integers to fractions and decimals. Applying properties of numbers and operations in contextual situations, including measurement, and making reasonable estimates. Reasoning, communicating, and problem solving with numbers and operations. Applications to ratio, and connections with algebra. Taught primarily through student activities and investigations. Prerequisite(s): ENGL 111G and grade of C or better in MATH 120.

MATH 112G. Fundamentals of Elementary Math II 3 cr.
Geometry and measurement. Multiple approaches to solving problems and understanding concepts in geometry. Analyzing and constructing two- and three-dimensional shapes. Measurable attributes, including angle, length, area, and volume. Understanding and applying units and unit conversions. Transformations, congruence, and symmetry. Scale factor and similarity. Coordinate geometry and connections with algebra. Reasoning and communicating about geometric concepts. Taught primarily through student activities and investigations. Prerequisite(s): C or better in MATH 111.

MATH 120. Intermediate Algebra 3 cr.
Linear and algebraic functions as they arise in real world problems. Exponential and logarithmic functions. Equations and inequalities and their solutions considered symbolically, graphically and numerically. Prerequisite: adequate score on the Mathematics Placement Examination.

MATH 121G. College Algebra 3 cr.
Fundamental concepts of functions, including algebraic and graphical properties. Fitting functions to data. Finding zeroes and extreme values. Solving systems of equations. Prerequisites: Adequate math placement score or C or better in MATH 120.

MATH 142G. Calculus for the Biological and Management Sciences 3 cr. (2+2P)
Review of functions. Derivatives, exponential and logarithmic functions, antiderivatives and indefinite integrals, basic ordinary differential equations and growth models, with an emphasis on applications. Includes a significant writing component. Prerequisite(s): C or better in MATH 121G.

MATH 175. Trigonometry 3 cr.
Trigonometric functions, graphs, identities, inverse functions, polar coordinates and applications. Complex numbers, curve fitting, roots of polynomials, exponential and logarithmic functions, conics, systems of equations and matrices. May not be taken for credit by students having credit for MATH 136. Prerequisite: C or better in MATH 121G.

MATH 190G. Trigonometry and Precalculus 4 cr. (3+2P)
Elementary functions used in the sciences with emphasis on trigonometric functions and their inverses. Polar coordinates. Complex numbers and Euler’s formula. Analytic geometry and vectors. Prerequisite: adequate score on Mathematics placement exam or a C or better in MATH 121G (see note at beginning of this section).

MATH 191G. Calculus and Analytic Geometry I 4 cr.
Limits and continuity, theory and computation of derivatives, applications of derivatives, extreme values, critical points, derivative tests, L’Hopital’s Rule. Prerequisite(s): C or better in MATH 190G.

MATH 192G. Calculus and Analytic Geometry II 4 cr.
Riemann sums, the definite integral, antiderivatives, fundamental theorems, techniques of integration, applications of integrals, improper integrals, Taylor polynomials, sequences and series, power series and Taylor series. Prerequisite(s): C or better in MATH 191G.

MATH 210G. Mathematics Appreciation 3 cr.
Mathematics and its role in the development and maintenance of civilization. Prerequisites: High school algebra, and an adequate score on the Mathematics Placement Examination.

MATH 291G. Calculus and Analytic Geometry III 3 cr.
Vector algebra, directional derivatives, approximation, max-min problems, multiple integrals, applications, cylindrical and spherical coordinates, change of variables. Prerequisite: grade of C or better in MATH 192G.

MGT—Management

MGT 201. Introduction to Management 3 cr.
Covers the functioning and administration of different types of complex organizations. Concepts and theories of management and organizational behavior.

MKTG—Marketing

MKTG 203. Introduction to Marketing 3 cr.
Covers processes, functions and principles in the current marketing system. Includes role of marketing in the economy, types of markets, product development, distribution channels, pricing and promotion strategies, market research and management of the processes.

MUS—Music

MUS 101G. An Introduction to Music 3 cr.
An introduction to music for the non-music major to encourage the enjoyment of listening to and understanding the world’s great music from the past to the present.

MUS 201G. History of Jazz in Popular Music: A Blending of Cultures 3 cr.
Jazz in popular music as it relates to music history and the development of world cultures.
NA—Health Care Assistant

NOTE: Minimum COMPASS scores stated in course descriptions with the “NA” prefix are subject to change at any time. Contact program director for current minimum scores.

NA 104. Nursing Assistant Fundamentals 3–4 cr.
This course prepares students for employment as a Nursing Assistant in a Long Term Care Facility. Theory and basic nursing care skills will be taught with an emphasis being placed on the psychosocial-cultural approach to client care. Students will learn communication skills, basic anatomy and physiology, growth and development, infection control, body mechanics, basic nutrition, client/resident elimination needs, the client/resident unit, vital signs, range of motion exercises, bed making, rehabilitation and rehabilitative care, client admission and discharge, common health problems, dealing with death and dying, and basic medical terminology. NA 104 and NA 104L (laboratory) must be successfully completed in order to continue to NA 105. NA 105 must also be successfully completed to be eligible to take the state certification competency examination. Theory and basic nursing care skills will be taught with an emphasis being placed on the psychosocial-cultural approach to patient care. NA 105 must be completed to be eligible to take the certified Nursing Assistant Examination. Corequisite(s): NA 104L. Prerequisite(s): (English Compass score of 35 or greater or CCDE 110N and reading Compass score of 35 or greater or CCDR 105N).

NA 104L. Nursing Assistant Fundamentals Lab 1 cr. (3P)
This course prepares students for employment as a Nursing Assistant in a Long Term Care Facility. Students will learn and demonstrate personal care skills including bathing, grooming, dressing, toileting, assisting with eating and hydration, skin care, transfers and positioning. Students will also learn and demonstrate the use of assistive devices, and how to maintain resident safety, dignity and privacy. NA 104 & NA 104L must be successfully completed with a C– or greater in order to continue to NA 105 Clinical. NA 105 must be successfully completed with a C– or greater to be eligible to take the state certification competency examination. Prerequisite(s)/Corequisite(s): NA 104. Prerequisite(s): English COMPASS score of 35 or greater or CCDE 110N, and reading COMPASS score of 55 or greater or CCDR 105N.

NA 105. Nursing Assistant Clinicals 4 cr. (3+3P)
Extension of basic fundamentals of personal care, including theory, skills, and clinical experience leading to the certified Nursing Assistant Examination at the conclusion of the semester. Continuation of NA 104. Requires a C or better to pass. Prerequisite(s): C or better in NA 104 or consent of instructor.

NA 108. Disabilities Support Services 4 cr. (3+2P)
Beginning level preservice preparation for providing in-home care for individuals with disabilities. Crosslisted with: AHS 108. Prerequisite(s): NA 101 or NA 104 or Consent of Instructor.

NA 109. Phlebotomist Basic 4 cr. (2+4P)
This course provides the latest information, techniques, skills, and equipment for blood and specimen collection based on the standards of the Clinical and Laboratory Standards Institute, Needlestick Prevention Act, joint commission 2008 National Patient Safety Goals, OSHA and CDC. An advanced skills lab is included in the course to provide a hands-on practice experience and a 30-hour practicum in a supervised work environment collecting blood and specimens on actual patients for laboratory tests. Attendance is mandatory. Prepares students for employment as a phlebotomist in health care settings. Requires a C or better to pass. Upon successful completion of the course, the student has the opportunity to test for National HealthCareer Certification. Consent of instructor required. Prerequisite(s)/Corequisite(s): BIOL 154 or BIOL 226.

NA 110. Electrocardiogram Technician Basic 4 cr. (3+3P)
Prepares students for employment as an Electrocardiogram Technician. Includes basic theory of the cardiovascular system, cardiac rhythm interpretation, 12 lead ECG lead placement, and ECG equipment trouble shooting. The course includes an advanced skills laboratory for hands-on practice and 16 hours of supervised clinical in the work environment assisting with ECG testing. Attendance is mandatory. Course requires a grade of C or better to pass. Upon successful completion of course, the student has the opportunity to test for National HealthCareer Certification. Prerequisite(s): BIOL 154, or BIOL 225 and BIOL 226.

NA 111. Alzheimer/Dementia Care Focus 3 cr.
Students will learn respectful care of Alzheimer/Dementia persons while ensuring their dignity, maximizing safe independence focusing on strengths and abilities. Prereq: Prerequisite(s)/Corequisite(s): NA 104 or NA 101.

NA 204. Patient Care Technician 4 cr. (3+3P)
This course will prepare Certified Nursing Assistants (CNAs) to work in the acute care setting through an expansion of their existing basic skill set. Students will acquire expanded acute care skills, critical thinking skills, and knowledge in caring for patients of all ages. Must have C– or better to pass. Prerequisite(s): NA 205. Prerequisite(s): NA 104, 105, 109, 110; AHS 120; BIOL 154 or BIOL 225+226; and current CNA certification.

NA 205. Patient Care Technician Practicum 4 cr. (1+9P)
This course will prepare Certified Nursing Assistants (CNAs) to work in the acute care setting through an expansion of their existing basic skill set. Students will acquire expanded acute care skills, critical thinking skills, and knowledge in caring for patients of all ages. Students will go to acute care settings to practice newly acquired skills. Must have a C– or better to pass. Corequisite(s): NA 204. Prerequisite(s): NA 104, NA 105, NA 109, NA 110, AHS 120, BIOL 154 or BIOL 225+226; current CNA certification.

NA 212. Medical Assistant Fundamentals 4 cr. (3+3P)
This course provides the student with entry-level training and limited “hands-on” training in basic and routine clinical office tasks. The course will equip the Medical Assistant (MA) student with the competencies required to perform in a medical office under the direct supervision of a physician. The graduate will be able to assist the physician with physical exams, ECGs, phlebotomy, and minor surgical procedures. Prerequisite(s): NA 104, NA 105, NA 109, NA 110, AHS 120, BIOL 154 or BIOL 225+226.

NSC—Natural Science

NSC 131. General Sciences 3 cr. (2+2P)
Designed for allied health students to explore the fundamentals of physical and life sciences.

NURS—Nursing

NOTE: All NURS courses are restricted to Nursing majors who have already been admitted into the Nursing Program

NURS 130. Foundations of Pharmacology 3 cr.
This course provides the nursing student with an introduction to the foundations of pharmacology including: science of drug action, principles of medication administration, accurate calculation of drug doses, medication therapy across the lifespan, application of medications to treat health alterations, normal and adverse responses by the client to medication therapy, medication safety, medication regulation, national patient safety goals, and appropriate nursing interventions to achieve the desired goals of medication therapy. Only students who have been admitted to the nursing program may enroll in this course. Corequisite(s): NURS 147 & NURS 149. Prerequisite(s): Admission into the Nursing Program. Restricted to: NUR majors.

NURS 134. Foundation of Nursing Skills and Assessment 3 cr. (1+6P)
This course provides nursing students with introductory nursing knowledge related to performance of nursing skills and assessment including: techniques of fundamental nursing care, basic and intermediate nursing skills, and foundational physical assessment techniques associated with care across the lifespan. Open to students who have been accepted into the nursing program. Corequisite(s): NURS 136 & NURS 137 or permission of the Program Director. Prerequisite(s): Admission into the Nursing Program. Restricted to: NUR majors.

NURS 136. Foundations of Nursing Practice 6 cr. (4+6P)
This course will introduce the nursing student to foundational theoretical concepts of professional nursing practice, the nursing process, and foundational nursing skills. It includes developmental concepts related to clients across the lifespan. Clinical experiences in the simulation lab, long-term care, the community, and rehabilitation settings will provide the student with the opportunity to apply learned skills to provide total care to meet needs of one adult client and to develop care planning skills related to actual problems. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Corequisite(s): NURS 134, NURS 136 lab & NURS 137 or permission of the Program Director. Prerequisite(s): Admission into the Nursing Program. Restricted to: NUR majors.

NURS 137. Care of Geriatric Patient 3 cr.
This course will introduce the nursing student to foundational concepts of age-appropriate/specific care of the older adult who represents the largest population of individuals placing demands on the healthcare system. It includes basic and complex concepts and issues related to care of the older client across the care continuum, provision of cost-effective care in a resource sparse environment. Only students who have been admitted to the nursing program may enroll in this course. Corequisite(s): NURS 134 & NURS 136 or permission of the Program Director. Prerequisite(s): Admission into the nursing program. Restricted to: NURS majors.
NURS 147. Adult Health I 6 cr. (4+6P)
This course focuses on application of the nursing process and theoretical concepts of care for adults with commonly occurring health problems. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to continue development of: prioritization skills, proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, care planning skills related to patient actual, psychosocial, and potential problems in the delivery of total nursing care to meet needs of one adult client. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Corequisite(s): NURS 130, NURS 147 lab, & NURS 149, or permission of the Program Director. Prerequisite(s): Admission into the Nursing Program. Restricted to: NUR majors.

NURS 149. Mental Health Nursing 3 cr. (2+3P)
This course will allow the nursing student to develop skills necessary to provide nursing care for clients with mental health problems in various health care settings including: common mental health disorders, psychosocial dysfunction, psychosocial safety/substance abuse issues, violence, suicide, restraints, developmental age related pathophysiology, psychopharmacology, cultural/religious considerations, grief/loss, promotion of mental health, and therapeutic communication. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to develop ability to: develop: proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, care planning skills related to patient actual, psychosocial, and potential problems in the delivery of total nursing care to meet needs of one client across the life span with acute/chronic mental health needs. Students must be concurrently enrolled in both the lecture and lab sections of this course. Only students who have been admitted to the nursing program may enroll in this course. Corequisite(s): NURS 130, NURS 147, & NURS 149, or permission of the Program Director. Prerequisite(s): Admission into the Nursing Program. Restricted to: NUR majors.

NURS 152. Adult Health II 6 cr. (4+6P)
This course focuses on application of the nursing process and theoretical concepts of care for adults with complex health alterations. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to apply: prioritization skills, maintain proficiency in performance of nursing skills, collaborative skills with clients, families, peers and health care team members, and care planning skills related to patient actual, psychosocial, and potential problems in the delivery of nursing care to meet needs of one adult client. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program may enroll in this course. Corequisite(s): NURS 224, NURS 226 lab, & NURS 235 or permission of the Program Director. Prerequisite(s): Admission into the Nursing Program. Restricted to: NUR majors.

NURS 235. Nursing Leadership and Management 2 cr.
This course introduces the intermediate nursing student to professional practice principles of nursing leadership and management including: health policy and politics, fiscal management & budgeting, conflict management, decision making, interdisciplinary practice, working with teams, roles in disaster planning and management, application of standards of care to risk management, organization of care delivery, health care systems, processes, and practice environments. Corequisite(s): NURS 224 & NURS 226, or permission of the Program Director. Prerequisite(s): Admission into the Nursing Program. Restricted to: NUR majors.

NURS 236. Nursing Preceptorship - Adult Health III 6 cr. (2+12P)
This course is the final course involving care of the patient with acute or chronic illness. It focuses on care of patients with complex or multi-system problems allowing the graduating nursing student to discuss and apply all the skills learned in previous nursing courses. After successfully passing the HESI exam, students have clinical practice with preceptor in various health care settings. Selected clinical learning experiences in the simulation lab, acute care, and community settings will allow the student to: organize care of a group of clients, maintain proficiency in performance of nursing skills, collaborate with clients, families, peers and health care team members, and support care planning skills related to patient actual, psychosocial, and potential problems in the delivery of nursing care to meet needs of the preceptors group of clients. Students must be concurrently enrolled in both the lecture and lab sections of the course. Only students who have been admitted to the nursing program and have successfully completed all level 1, 2 and 3 nursing courses may enroll in this course. Clinical may include inpatient or outpatient care, days, evenings, nights, or weekend experiences. Students are required to work the preceptors assigned schedule. Corequisite(s): NURS 201, NCLEX Review or permission of the Program Director. Prerequisite(s): Admission into the Nursing Program. Restricted to: NUR majors.

OECS—Computer and Information Technology

OECS 101. Computer Basics 1 cr.
Hands-on instruction to introduce computer use and commonly used software. Graded S/U.

OECS 105. Introduction to Information Technology 3 cr.
Introduction and application of basic information technology skills using personal computers including operating systems, common office application software, and the impact of technology on the economy and society.

OECS 110. Introduction to Power Point 1 cr.
An introduction to Power Point software to develop business presentations. Includes concepts of basic presentation methods and graphic design principles. Students will create and deliver presentations using text, charts, digitized images, and sound. Prerequisites: BCIS 110, C S 110, or OECS 105.

OECS 125. Operating Systems 1–3 cr.
Installation, configuration and optimization of current operating systems.

OECS 128. Operating Systems Linux/Unix 3 cr.
Installation, configuration, and use of Linux/Unix operating system software and utilities including hardware management, file management, use of command line, and scripting.

OECS 140. Introduction to Game Production Industry 3 cr.
Students explore the business behind game production, understanding how game companies are organized and funded, positions within the game industry, and what skills game producers need. Prerequisites: Either BCIS 110, C S 110, or OECS 105.

OECS 141. Introduction to Interactive Game Programming 3 cr.
This introductory programming class reviews the basics of programming, including the object-oriented approach. Students will de-construct existing games, develop their own code, and gain an appreciation for coding strategies. May be repeated for a maximum of 6 credits. Prerequisites: C S 110, BCIS 110, or OECS 105.

OECS 145. Mobile Application Development 1–3 cr.
An in-depth review of concepts, design strategies, tools and APIs needed to create, test and deploy applications for mobile devices. Topics include: design of mobile user interfaces, application life-cycle, multi-threading, inter-process communication, data persistence, background services, geo-location/mapping, graphics/animation, performance, and security.

Introduction to desktop GIS programming with ArcObjects and web-based GIS programming with open-source library, API and public domain GIS services. Topics include GIS programming environment, programming syntax/styles, interface customization, GIS functions and subroutines that can be assembled through programming, open-source GIS package, library, API and services.

OECS 150. Introduction to Programming Using Visual Basic 4 cr.
Introduction to algorithmic problem-solving concepts, structured programming design-oriented application programming interface development. Solutions to problems are implemented using the Visual Basic programming language in the Windows environment, with connection to Access databases as applicable. Prerequisite(s): C S 110, OECS 220, and MATH 120.

OECS 155. Special Topics - Introductory Computer Technology .5–4 cr.
Topics to be announced in the Schedule of Classes. May be repeated up to 8 credits.
OECS 159. Information Technology Ethics 1–3 cr.
This course explores the interaction of technology and ethics from both a personal and a professional point of view. Real life case studies are analyzed to identify how people and organizations do or do not act ethically. This course helps better prepare individuals to act ethically when similar situations occur.

OECS 185. PC Maintenance and Selection I 1–3 cr.
Selecting, installing, configuring, troubleshooting, and maintaining microcomputers and peripheral devices. Prerequisites: BCIS 110, C S 110 or OECS 105.

OECS 192. C++ Programming I 3 cr.
Development of skills in programming using the C++ programming language.

OECS 195. Java Programming I 1–3 cr.
Developing of skills in programming using the Java programming language.

OECS 196. Java Programming II 1–3 cr.
Continuation of OECS 195. Prerequisite: OECS 195. May be repeated for a maximum of 9 credits.

OECS 200. Accounting on Microcomputers 3 cr.
Fundamental accounting principles using popular microcomputer soft ware to include G/L, A/R, A/P, purchase order, billing, inventory, and forecasting modules. Prerequisite: ACCT 221 or BOT 121.

OECS 203. UNIX Operating System 1–3 cr.
Introduction to the UNIX operating system using Telnet to access a remote UNIX system. Basic UNIX commands and file system concepts. Prerequisite: C S 110, BCIS 110G or OECS 105.

OECS 204. Linux Operating System 1–3 cr.
Install and configure the Linux operating system on X86 systems. Covers issues involved in maintaining operating system, networking, creating and managing users, and installing and updating software. General procedures for working with operating system includes maintaining disk space, preserving system security, and other related topics. Prerequisite: C S 110, B CS 110G or OECS 105.

OECS 205. Advanced Operating Systems: Administration 3 cr.
Examines operating systems designed for PC, minicomputers and mainframes. Covers maintaining operating systems, creating and managing users, and installing and updating software. General procedures for working with operating systems will include maintaining disk space, preserving system security, providing mail services, among other topics. Prerequisite: OECS 128. May be repeated for a maximum of 6 credits.

OECS 207. Windows 0.5–3 cr.
Installation, configuration, and maintenance of Windows. May be repeated for a maximum of 6 credits under different subtitles listed in the Schedule of Classes. May be repeated up to 6 credits. Prerequisite(s): OECS 105 or BCS 110G or C S 110G or consent of instructor.

OECS 208. Internet Applications 1–3 cr.
Survey of the Internet to include e-mail, file transfer, current search techniques, the World Wide Web and basic Web page development. Prerequisite: C S 110G, BCIS 110 or OECS 105. May be repeated for a maximum of 6 credits.

OECS 211. Word Processing Applications 1–3 cr.
Basic word processing to include composing, editing, formatting, and printing of documents. Prerequisites: C S 110, BCIS 110 or OECS 105. May be repeated under different subtitles listed in the Schedule of Classes for a maximum of 6 credits.

OECS 213. Image Processing 1 cr.
Introduction to digital imaging acquisition and editing. Use of digital cameras and computer graphic software for business and personal use. Prerequisites: C S 110, BCIS 110 or OECS 105. Graded S/U.

OECS 214. Creating a Web Page 1 cr.
Introduction to creating Web pages for business and personal use. Prerequisites: C S 110, BCIS 110 or OECS 105. Graded S/U.

OECS 215. Spreadsheet Applications 1–3 cr.
Use of spreadsheets to include graphics and business applications. Prerequisites: C S 110, BCIS 110 or OECS 105. May be repeated for a maximum of 6 credits.

OECS 216. Programming for the Web 3 cr.
Designing web-based applications using appropriate programming language(s) such as, but not limited to HTML, PHP, MySQL, SQL, Java, Perl, C or C++. May be repeated up to 6 credits. Prerequisite(s): One semester of any programming course.

OECS 218. Web Page Programming Support 3 cr.
Languages that support Web page development including HTML, Active X and Java Script. Implementation of forms and style sheets in Web pages also presented. Prerequisites: C S 110, BCIS 110 or OECS 105.

OECS 220. Database Application and Design 1–3 cr.
Creating, sorting, and searching of single and multitable databases to include report generation and programming database commands. May be repeated for a maximum of 6 credits under different subtitles listed in the Schedule of Classes. Prerequisite(s): C S 110 OR BCIS 110 OR ET 120 OR ET 122 OR OECS 105.

OECS 221. Internship I 1–3 cr.
Work experience that directly relates to a student’s major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships may be paid or unpaid. Students are supervised/ evaluated by both the employer and the instructor. May be repeated up to 3 credits. Consent of Instructor required. Prerequisite(s): Consent of instructor. Restricted to: OECS majors. S/U Grading (S/U, Audit).

OECS 222. Internship II 1–3 cr.
Continuation of OECS 221. Each credit requires specified number of hours of on-the-job work experience. May be repeated up to 3 credits. Consent of Instructor required. Prerequisite(s): OECS 221 and consent of instructor. Restricted to: OECS majors. S/U Grading (S/U, Audit).

OECS 227. Computer Applications for Technicians 3 cr.
Computer applications for service technicians in various disciplines. Hardware and software applications explored. Includes operating systems, high level programming, and networking hardware and software.

OECS 230. Data Communications and Networks I 1–3 cr.
Definition of data communication; survey of hardware applications and teleprocessor software; examination and design of networks. Prerequisite: OECS 185. May be repeated for a maximum of 6 credits.

OECS 231. Data Communications and Networks II 1–3 cr.
Installation and application of popular microcomputer network software. Prerequisite: OECS 230. May be repeated for a maximum of 6 credits.

OECS 232. Implementing and Supporting Networks I 3 cr.
Knowledge and skills relating to post-installation and day-to-day administration tasks in a single-domain or multiple-domain network. Prerequisite: OECS 230 or OECS 261.

OECS 233. Implementing and Supporting Networks II 1–3 cr.
Implementation, administration, and troubleshooting networks in an enterprise computing environment to include multiple servers, domain and sophisticated server applications. Prerequisite: OECS 232.

OECS 235. Structured Query Language (SQL) 1–3 cr.
Installation, configuration, administration, and troubleshooting of SQL client/server database management system. Prerequisite: OECS 185, 207, 230 or 261.

OECS 237. Windows Server 3 cr.
This course addresses the implementation and support needs of IT professionals that are planning to deploy and support Microsoft Windows Server Active Directory Domain Services in medium to large businesses. It provides in-depth, hands-on training for Information Technology (IT) professionals responsible for the planning, implementation, management, and support of Windows Active Directory services. Prerequisite(s): OECS 207.

OECS 238. Configuring Windows Server Network Infrastructure 3 cr.
This course addresses the knowledge and skills related to configuration of the network infrastructure in medium to large sized companies. Among the knowledge/skill areas covered are: DHCP, DNS, network access, file & print services and windows server update services. Prerequisite(s): OECS 237.

OECS 245. Game Programming I 3 cr.
Development of programming skills for games and animation using current programming languages and tools. May be repeated for a maximum of 6 credits. Prerequisite: consent of instructor.

OECS 246. Game Programming II 3 cr.
Continuation of OECS 245. May be repeated for a maximum of 6 credits. Prerequisite: OECS 245.

OECS 250. Systems Analysis and Design I 3 cr.
Analysis, configuration, design and testing of organizations’ work flow as it relates to hardware, software, data, procedures and personnel. Systems Life Cycle approach matching end users’ needs to feasible financial, technical and operational solutions. Prerequisite(s): OECS 220.

OECS 251. Systems Analysis and Design II 3 cr.
Continuation of OECS 250. Prerequisite(s): OECS 250.

OECS 252. Project Management 3 cr.
Utilization of project management software to establish, control and coordinate timelines, budgets, and work teams. Introduction to methods and principles of oriented project management emphasizing team-based performance.
OECS 255. Special Topics 1–4 cr.
Topics to be announced in the Schedule of Classes.

OECS 260. Hypertext Markup Language (HTML) 1–3 cr.
Coverage of HTML as used for web-page development for Internet and Intranet. Text manipulation, graphics, hypertext links, lists, and tables. Prerequisite: C S 110, BCIS 110 or OECS 105. May be repeated for a maximum of 3 credits.

OECS 261. Introduction to Networks 4 cr.
Introduction to networking principles including the practical and conceptual skills for understanding basic networking, planning and designing networks, implementing IP addressing schemes, examining the OSI and TCP/IP layers, and performing basic configurations for routers and switches. Aligns to the first course of the Cisco Networking Academy CCNA curriculum. Prerequisite(s): C S 110G, BCIS 110G, OECS 105, or ET 120.

OECS 262. Essentials of Routing and Switching 4 cr.
Examination of the architecture, components, and operations of routers and switches in a small network. Student will learn how to configure, verify and troubleshoot: routers and switches, static routing, default routing, VLANs, and ACLs. Aligns to the second course of the Cisco Networking Academy CCNA curriculum. Prerequisite: OECS 261.

OECS 263. Network Fundamentals 4 cr.
Fundamentals of networking architecture, components, and operations including practical and conceptual skills using routers and switches. Student will learn how to configure, verify and troubleshoot static routing, default routing, VLANs, and ACLs. This course aligns to the third course of the Cisco Networking Academy CCNA curriculum. Prerequisite(s): OECS 262.

OECS 264. Network Routing Protocols 4 cr.
Fundamentals of routing protocols for troubleshooting advanced network operations. Covers common networking issues such as RIP, OSPF, and EIGRP for IPv4 and IPv6 networks. This course aligns to the fourth course of the Cisco Networking Academy CCNA curriculum. Prerequisite(s): OECS 263.

OECS 269. Network Security 3 cr.
Fundamentals of design and implementation of network security solutions that will reduce the risk of system vulnerability. Prerequisite(s): OECS 207 or OECS 261 or consent of instructor.

OECS 272. Introduction to Bioinformatics Research 3 cr.
Bioinformatics is the intersection of computer science and molecular biology. It is the science of informatics as applied to biological research. This course develops the understanding of genomics research techniques and how large amounts of complex data is managed. This research based class is designed to introduce skills necessary to enter this high demanding field of study. Prerequisite(s): BCIS 110, or C S 110, or OECS 105.

OECS 275. PC Maintenance and Selection II 1–3 cr.
Continuation of OECS 185. Prerequisite: OECS 185. May be repeated for a maximum of 6 credits.

OECS 280. Desktop Publishing I 3 cr.
Design and production of publication materials to fill the needs of business communities, using a microcomputer. Prerequisites: either BCIS 100G, C S 110, OECS 105. May be repeated for a maximum of 6 credits. Same as BOT 280.

Fundamentals of designing video, audio and web-based multimedia presentations for business and technical needs.

OECS 290. Computer Technology Capstone 1–3 cr.
Refines skills learned in the OECS program. Culminates in a review and practice of advanced software applications. May be repeated up to 3 credits. Prerequisite(s): (OECS 125, OECS 128, OECS 207, OR OECS 203) AND (OECS 185 OR E T 283). Restricted to: OECS & OECT majors.

OECS 299. Independent Study 1–3 cr.
Specific subjects to be determined based on need.

**OEEM—Emergency Medical Services**

OEEM 101. CPR for the Health Care Professional 1 cr.
Students learn identification and response to airway and circulation emergencies, including use of a SAED and accessing the EMS system. This course is taught using the American Heart Association guidelines for course completion. Required: grade of C or better.

OEEM 103. Heartsaver First Aid/CPR 1 cr.
Students learn how to identify and respond to airway, circulation and basic first aid emergencies, to include using a SAED and accessing the EMS system. This course is intended for students who are not Allied Health Majors and utilizes the American Heart Association guidelines for course completion.

OEEM 105. Vehicle Extrication Course 2 cr.
Assessment and psychomotor skills required to perform motor vehicle extrication at the scene of an accident. Taught using the NM Fire Academy guidelines for motor vehicle extrication course completion. Graded S/U.

OEEM 115. First Responder Prehospital Professional 3 cr. (2+3P)
Provides training in prehospital medical and traumatic emergencies. Prerequisite: consent of instructor. Corequisite: OEEM 101. Requires a C or better to pass. Restricted to majors.

OEEM 116. Emergency Medical Technician Bridge 5 cr. (3+6P)
Enhanced skill instruction and didactic integration designed to meet the requirements for an EMT-Basic certificate. Prerequisites: OEEM 101 and OEEM 115, and consent of instructor. Corequisite: OEEM 121. Requires a C or better to pass. Restricted to majors.

OEEM 117. Emergency Medical Technician-Wilderness First Responder 4 cr.
A comprehensive study of pre-hospital medical and traumatic emergencies in the wilderness setting. Prerequisite: OEEM 101.

OEEM 118. Spanish for the EMS Provider 2 cr. (1+3P)
Intensive elementary Spanish with emphasis on developing communicative skills: listening and speaking for students in emergency medical services. Students will focus on mastering vocabulary for selected situations common to EMS, with limited reading and writing practice emphasizing correct pronunciation. EMS scenarios will be an important part of class participation.

OEEM 120. Emergency Medical Technician Basic 6 cr.
EMT-Basic skills to include care of soft tissue and muscular/skeletal injuries, circulatory, nervous, general medical and respiratory emergencies. Requires a C or better to pass. Corequisite(s): OEEM 101, OEEM 120L, OEEM 121 or consent of instructor. Prerequisite(s)/Corequisite(s): BIOL 154.

OEEM 120L. Emergency Medical Technician Basic Lab 2 cr. (6P)
EMT-Basic skills development with emphasis on assessment, skills competency and team-work in patient care in the prehospital setting. Corequisites: OEEM 101 or OEEM 120, and OEEM 121, or consent of instructor. Requires a C or better to pass.

OEEM 121. Emergency Medical Technician Basic Field/Clinical 1 cr. (3P)
Covers the patient care experience provided through assigned shifts in the hospital and/or ambulance setting. Corequisites: OEEM 101, OEEM 120, and OEEM 120L, or consent of instructor. Requires a C or better to pass.

OEEM 122. Emergency Medical Technician Basic Advanced Field/Internship 2 cr. (6P)
Expanded patient care experience provided through practical scenarios, assigned shifts in the hospital and/or ambulance setting. Prerequisite: current EMT-Basic license and consent of instructor. Requires a C or better to pass.

OEEM 150. Emergency Medical Technician Intermediate 5 cr.
Theory of the roles, responsibilities and scope of practice of the EMT-Intermediate. Assessment and management of respiratory, cardiac, trauma, environmental, behavioral, reproductive, and childhood emergencies. Prerequisites: current EMT-Basic license, pretest and consent of instructor. Corequisites: OEEM 150L and OEEM 151. Requires a C or better to pass.

OEEM 150L. Emergency Medical Technician Intermediate Lab 2 cr. (6P)
EMT-Intermediate skills development with an emphasis on assessment, skills competency, and team work in patient care in the prehospital setting. Requires a C or better to pass. Corequisite(s): OEEM 150 and OEEM 151.

OEEM 151. Emergency Medical Technician Intermediate Field/Clinical 2 cr. (6P)
Patient care experience provided through assigned shifts in the hospital and/or ambulance setting. Prerequisite: consent of instructor. Corequisites: OEEM 150 and OEEM 150L. Requires a C or better to pass.

OEEM 152. Emergency Medical Technician—Intermediate Advanced Field/Internship 2 cr. (6P)
Expanded patient care experience provided through practical scenarios, assigned shifts in the hospital and/or ambulance setting. Prerequisites: current EMT-I license and consent of instructor. Requires a C or better to pass.
OEM 153. Introduction to Anatomy and Physiology for the EMS Provider 3 cr.
To properly assess and manage a patient, a prehospital provider must have a solid foundation in human anatomy and physiology. This course provides a systematic approach to building this foundation. Grade of C or better is required to pass the course. Consent of instructor required.

OEM 155. Special Topics 1–6 cr.
Specific topics to be listed in Schedule of Classes. May be repeated for a maximum of 10 credits.

OEM 158. Emergency Medical Technician-Combination Refresher 2 cr.
A comprehensive review of prehospital medicine for the prehospital care provider from the first responder level through the EMT Intermediate. New material relevant to recertification of the New Mexico First Responder, EMT Basic and EMT Intermediate licensure included. Graded S/U.

OEM 177. Emergency Medical Services Instructor 4 cr.
Theory of student learning, methodology, instructional components, evaluation, and course coordination for the EMS profession. Prerequisite: consent of instructor. Restricted to majors. Requires a C or better to pass.

OEM 201. Human Pathophysiology 3 cr. (2+3P)
Overview of anatomy and physiology. Emphasis on human body pathophysiology including a medical illness component. Prerequisite(s): OEM 120.

OEM 202. EMT–Paramedic I Respiratory Emergencies 3 cr. (2+3P)
Review anatomy, physiology and pathophysiology of the respiratory system. Assessment and management of respiratory emergencies and acute respiratory failure in the prehospital setting. Prerequisites: consent of instructor. Restricted to majors. Requires a C or better to pass.

OEM 203. EMT–Paramedic II Trauma Emergencies 3 cr. (2+3P)
Study of the effects of trauma on the human body. Assessment and management of trauma patients and scenes, including vehicular extrication. Prerequisites: OEM 202 and consent of instructor. Restricted to majors. Requires a C or better to pass.

OEM 206. Introduction to Advanced Prehospital Care 3 cr. (2+3P)
Overview of prehospital care including roles and responsibilities of EMT-P, EMS systems, medical, legal, ethical issues, stress management, medical terminology, medical report writing and communication. Includes ride-along with ambulance and dispatch observation. Requires a C or better to pass. Restricted to majors. Consent of instructor required. Prerequisite(s): OEM 120. Restricted to OEM majors.

OEM 207. Introduction to Pharmacology 3 cr. (2+3P)
Drug actions, factors modifying drugs and dosages: characteristics of drug effects, and drug history and dosages. Prehospital protocol, transport, and common patient prescription medications. Restricted to majors. Requires a C or better to pass. Prerequisite(s): OEM 120. Restricted to OEM majors.

OEM 210. Cardiac Rhythm Interpretation 3 cr. (2+3P)
Cardiac conduction system: electrophysiology, electrocardiogram, monitor, atrial, sinuses, ventricular and junctional dysrhythmias, multiple lead EKG and 12 lead EKG interpretation. Prerequisites: OEM 203, OEM 230 and OEM 240. Requires a C or better to pass.

OEM 212. EMT–Paramedic Cardiovascular Emergencies 3 cr. (2+3P)
Review anatomy, physiology, and pathophysiology of cardiovascular system. Assessment and management of cardiovascular emergencies in the prehospital setting. Prerequisites: second semester standing in EMS program and consent of instructor. Requires a C or better to pass.

OEM 213. EMT–Paramedic: Medical Emergencies I 3 cr. (2+3P)
Study of the disease process; assessment and management of neurological, endocrine, gastrointestinal, renal emergencies and infectious disease. Prerequisites: OEM 212, OEM 230 and OEM 240. Requires a C or better to pass.

OEM 214. EMT–Paramedic: Medical Environmental Emergencies II 3 cr. (2+3P)
Study of disease process, assessment, and management of poisoning, drug and alcohol abuse, environmental, behavioral and geriatric emergencies. Prerequisites: OEM 213, OEM 230 and OEM 240. Requires a C or better to pass.

OEM 216. EMT–Paramedic: Reproductive and Childhood Emergencies 3 cr. (2+3P)
Covers anatomy, physiology, disease processes, assessment and management of male and female reproductive system emergencies, childhood emergencies and growth and development. Restricted to majors. Requires a C or better to pass. Prerequisite(s): OEM 214 and consent of instructor.

OEM 218. Pediatric Advance Life Support for the Healthcare Professional 1 cr.
Identify and respond to life threatening pediatric emergencies. Taught using the American Heart Association guidelines for course completion. Prerequisite: OEM 101. Graded S/U.

OEM 219. Advance Cardiac Life Support for the Healthcare Provider 1 cr.
Identify and respond to life threatening cardiac emergencies. Taught using the American Heart Association guidelines for course completion. Prerequisite: OEM 101. Graded S/U.

OEM 230. EMT–Paramedic Clinical Experience I 3 cr. (9P)
Assigns clinical experiences in patient assessment and specific management techniques. Successful completion includes minimum required hours and completion of course objectives. Prerequisite: consent of instructor. Restricted to majors. Requires a C or better to pass.

OEM 231. EMT–Paramedic Clinical Experience II 3 cr. (9P)
Assigns clinical experiences in patient assessment and specific management techniques. Successful completion includes minimum required hours and completion of course objectives. Prerequisites: OEM 230 and consent of instructor. Restricted to majors. Requires a C or better to pass.

OEM 241. EMT–Paramedic Field Internship I 3 cr. (9P)
Continued focus on advanced prehospital skills and knowledge, with increasing responsibility for patient care. Successful completion includes meeting at least the minimum required hours and course objectives. Prerequisites: OEM 240 and consent of instructor. Restricted to majors. Requires a C or better to pass.

OEM 242. EMT–Paramedic Field Internship II 3 cr. (9P)
Emphasis on total patient care responsibility and team leadership skills. Successful completion includes meeting the minimum hours required and course objectives. Prerequisites: second semester completion in EMS program, OEM 241, and consent of instructor. Restricted to majors. Requires a C or better to pass.

OEM 243. EMT–Paramedic Preparation for Practice 2 cr.
Comprehensive final program testing to prepare for licensing examination. Prerequisites: OEM 216 and OEM 242. Restricted to majors. Requires a C or better to pass.

OEM 245. EMT–Paramedic Field Internship III 1–3 cr.
Continuation of OEM 242. Prerequisites: OEM 242 and consent of instructor. Restricted to majors. Requires a C or better to pass.

OEM 247. Emergency Medical Technician - Paramedic Refresher 2 cr. (1+3P)
a comprehensive review of prehospital emergency medicine for the EMT Paramedic. New material relevant to recertification of the New Mexico and Nationally Registered Paramedic licensure. Graded S/U.

OEM 253. Critical Care Emergency Medical Transport Program 6 cr. (5+6P)
This course will provide further education to Paramedics, Registered Nurses and Registered Respiratory Therapists who wish to function as part of a critical care transport team. Consent of instructor required. Prerequisite(s): Licensed Paramedic, Registered Nurse or Registered Respiratory Therapist with one or more years experience.

OEM 254. Pediatric & Neonatal Critical Care Transport 5 cr. (4+3P)
This course is designed to prepare paramedics, nurses and respiratory therapists to function as members of a pediatric and neonatal critical care transport team. Consent of instructor required. Prerequisite(s): Licensed Paramedic, Registered Nurse or Registered Respiratory Therapist with one or more years experience.

OEM 290. Independent Study 1–3 cr.
Individual studies directed by a consenting faculty member and prior approval of the department head. Prerequisite: OEM 150 and consent of instructor. May be repeated for a maximum of 6 credits. Requires a C or better to pass.

OEE—Electrical Programs

OEE 110. Basic Electricity and Electronics 4 cr. (3+3P)
An introduction to electricity theory and practice, including electron theory, Ohms law, construction of electrical circuits, direct and alternating currents, magnetism, transformers, and practical applications. Same as HVAC 102, ELT 105, OEPB 102.

OEE 130. Introduction to Electrical Power Systems 2 cr.
An overview of electrical power systems, equipment, safety practices, first aid and CPR. Prerequisite: acceptance into the electrical lineman program. Corequisite: OEE 110 and OEE 131. Restricted to majors.
OEET 131. Electrical Lineworker Lab I 6 cr. (12P)  
Climbing and work on utility poles using ropes and rigging, pole setting and an introduction to transmission and distribution line construction. Maintenance and troubleshooting to include the use of hot sticks. Prerequisite: acceptance into the electrical lineworker program. Corequisite: OEET 110 and OEET 130. Restricted to majors.

OEET 140. Electrical Power Systems II 3 cr. (2+2P)  
Theory of power generation and distribution with emphasis on three phase systems to include transformers, voltage regulators, surge arresters. Includes troubleshooting. Prerequisites: acceptance into the electrical lineworker program and OEET 130. Corequisite: OEET 141. Restricted to majors.

OEET 141. Electrical Lineworker II 6 cr. (12P)  
Practice in the installation of electrical power lines including transformers, voltage regulators, and surge arresters. Also advanced hot sticking procedures, troubleshooting, underground systems procedures, and pole-top rescue. Prerequisites: Acceptance into the lineworker program and OEET 131. Corequisite: OEET 140.

OEET 151. Electrical Apprenticeship I 6 cr.  
Apprenticeship responsibilities and benefits as well as first aid and CPR will be covered. Hand tools, electrical theory, and the regulations imposed by national codes and OSHA. Students will apply theory taught in their jobs. Prerequisite: consent of instructor.

OEET 152. Electrical Apprenticeship II 6 cr.  
Ohm's law circuit sizing and service panel sizing will be covered in detail. Other topics include low voltage systems, heating and air conditioning circuits, alarm systems and smoke detectors. Prerequisites: OEET 151 and consent of instructor.

OEET 153. Electrical Apprenticeship III 6 cr.  
Various electrical measuring devices will be covered in detail. Inductance, transformers, capacitance, and simple motors will be studied. Prerequisites: OEET 152 and consent of instructor.

OEET 154. Electrical Apprenticeship IV 6 cr.  
Theory and application of three-phase transformers and autotransformers. Electrical distribution using switchboards, panelboards, and circuit breakers. Prerequisites: OEET 153 and consent of instructor.

OEET 221. Cooperative Experience I 1–4 cr.  
Supervised cooperative work program. Student is employed in an approved occupation and is supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U. Prerequisite: consent of instructor.

OEET 251. Electrical Apprenticeship V 6 cr.  
Commercial/industrial applications for electricians. Blueprint interpretation, commercial construction processes and processes, wiring methods, wiring materials, and motor controls. Prerequisites: OEET 154 and consent of instructor.

OEET 252. Electrical Apprenticeship VI 6 cr.  
In-depth commercial applications to include commercial/industrial service calculations, mobile home parks, multi-family dwellings, and commercial fire/security systems. Prerequisites: OEET 251 and consent of instructor.

OEET 253. Electrical Apprenticeship VII 6 cr.  
Control devices in commercial/industrial applications; emphasis on logic in-line diagrams, time delay starters, reversing starters, and manual/magnetic solenoids. Prerequisites: OEET 252 and consent of instructor.

OEET 254. Electrical Apprenticeship VIII 6 cr.  
Miscellaneous topics for the journey-person electrician to include power distribution/transmission, solid state controls and relays, photoelectric and proximity controls and programmable controllers. Prerequisites: OEET 253 and consent of instructor.

OEET—Technical Studies

OEET 102. Career Readness Certification Preparation 1 cr.  
This course is designed to prepare students to successfully obtain Career Readiness Certifications in all areas and at the appropriate levels for their program of study. Graded: S/U.

OEET 103. Technical Career Skills 4 cr.  
This course will be project-based and will encompass writing, presentation, math, reading, and critical thinking skills applied in a technical environment.

OEET 104. Basic Mathematics for Technicians 4 cr.  
Fundamental mathematical concepts and computations including measurement, ratio and proportions, and pre-algebra as it relates to technical programs. Prerequisite: appropriate placement test score.

OEET 118. Mathematics for Technicians 3 cr. (2+2P)  
Analysis and problem solving of technical problems using measuring instruments and techniques of arithmetic, algebra, geometry, and trigonometry. Prerequisite(s): OETS 104 or CCDM 101N or appropriate placement test score.

OEET 255. Special Topics Technical Studies 1–6 cr.  
Topics to be announced in the Schedule of Classes. Prerequisite(s): Consent of instructor.

PHIL—Philosophy

PHIL 101G. The Art of Wondering 3 cr.  
Introduction to some of the main problems of philosophy, with an emphasis on critical thinking. Philosophy conceived as an aid to living in this world with oneself and with others.

PHIL 136G. The Quest for God 3 cr.  
An effort to understand the religious life; a consideration of some of the traditional approaches to God and what it means to be religious.

PHIL 211G. Informal Logic 3 cr.  
Logical analysis of ordinary language, construction of definitions, argumentation, analysis of fallacious modes of thought and basic rhetorical considerations.

PHIL 223G. Ethics 3 cr.  
The philosophical explication of morality. Significant ethical systems developed in the history of Western thought.

PHLS—Public Health Sciences

PHLS 150G. Personal Health and Wellness 3 cr.  
A holistic and multi-disciplinary approach towards promoting positive lifestyles. Special emphasis is placed on major problems that have greatest significance to personal and community health. Topics to include nutrition, stress management, fitness, aging, sexuality, drug education, and others.

PHLS 275. Foundations of Health Education 3 cr.  
Role and responsibility of the health educator with emphasis on small group dynamics, oral and written communication skills, building community coalitions and an introduction to grant writing. Taught with PHLS 375. Cannot receive credit for both PHLS 275 and PHLS 375. Prerequisite(s): Either PHLS 100 or PHLS 150G, or consent of instructor.

PHLS 295. Essentials of Public Health 3 cr.  
The courses will focus on principles and major areas of public health, including ecological and total-personal concept of health care system, epidemiological approaches to disease prevention and control.

PHYS—Physics

PHYS 110G. The Great Ideas of Physics 4 cr. (3+3P)  
Conceptual, quantitative, and laboratory treatments of the great ideas and discoveries that have influenced lives and changed perceptions of nature, from Johannes Kepler's laws of planetary motion and Isaac Newton's and Albert Einstein's laws of motion and gravity to the modern concepts of the quantal structure of nature and the big bang universe.

PHYS 211G. General Physics I 3 cr.  
Non-calculus treatment of mechanics, waves, sound, and heat. Knowledge of simple algebra and trigonometry is required.

PHYS 211GL. General Physics I Laboratory 1 cr.  
Laboratory experiments in topics associated with material presented in PHYS 211G or PHYS 221G. Students wishing to use the PHYS 211G-212G or PHYS 221G-222G sequence to satisfy the basic natural science General Education requirement must register for either PHYS 211GL or PHYS 212GL. Prerequisite(s)/Corequisite(s): PHYS 211G or PHYS 221G.

PHYS 212G. General Physics II 3 cr.  
Non-calculus treatment of electricity, magnetism, and light. Prerequisite(s): PHYS 211G or PHYS 221G.

PHYS 212GL. General Physics II Laboratory 1 cr. (2P)  
Laboratory experiments in topics associated with material presented in PHYS 212G or PHYS 222G. Students wishing to use the PHYS 211G-212G or PHYS 221G-222G sequence to satisfy the basic natural science General Education requirement must register for either PHYS 211GL or PHYS 212GL. Prerequisite(s)/Corequisite(s): PHYS 212 or PHYS 222.

PHYS 215G. Engineering Physics I 3 cr.  
Calculus-level treatment of kinematics, work and energy, particle dynamics, conservation principles, simple harmonic motion. Prerequisite(s): MATH 191G.
PHYS 215GL. Engineering Physics I Laboratory 1 cr. (3P)
Laboratory experiments associated with the material presented in PHYS 215G. Corequisite: PHYS 215G. Students wishing to use the PHYS 215G-216G sequence to satisfy the basic natural science general education requirement must register for either PHYS 215GL or PHYS 216GL.

PHYS 216G. Engineering Physics II 3 cr.
A calculus-level treatment of topics in electricity, magnetism, and optics. Prerequisite(s): PHYS 213 or PHYS 215G and MATH 192G.

PHYS 216GL. Engineering Physics II Laboratory 1 cr. (3P)
Laboratory experiments associated with the material presented in PHYS 216G. Prerequisite: a C- or better in PHYS 213L or PHYS 215G. Corequisite: PHYS 216G. Students wishing to use the PHYS 215G-216G sequence to satisfy the basic natural science general education requirement must register for either PHYS 215GL or PHYS 216GL.

PL S—Paralegal Studies

PL S 160. Legal System for the Paralegal 3 cr.
Introduction to the court system, administrative agencies, functions of law offices, and professional conduct and legal ethics. Prerequisite(s): ACT standard score in English of 16 or higher or a Compass score 76 or higher; for those scoring 13–15 in English on ACT or 35–75 on Compass, successful completion of CCDE 105N or CCDE 110N; for those scoring 12 or below on the ACT standard score in English or 34 or below on the Compass, successful completion of CCDE 105N & CCDE 110N.

PL S 161. Legal Terminology 3 cr.
Survey of the language of the law that will serve either as an introductory course or as a review course to prepare students for the certification test.

PL S 162. The Virtual Law Office 3 cr.
The Virtual Law Office class is a 'hands-on', project oriented course designated to provide the student with the basic law office skills needed to function successfully in a law office setting. The student will gain a practical, working knowledge of the procedures necessary to work in a law office. The skills learned in the class will directly translate to real life situations. Prerequisite(s): PL S 160.

PL S 180. Constitutional Law for the Paralegal 3 cr.
Case standing of the law of the Constitution and Bill of Rights with regard to day-to-day applications in the law practice. Documents dealing with constitutional problems in both civil and criminal areas of law will be drafted and discussed. Prerequisite: PL S 160.

PL S 190. Criminal Law for the Paralegal 3 cr.
Introduction to federal and state criminal law; criminal proceedings, prosecution and defense, sentencing and appeal. Prerequisite: PL S 160.

PL S 200. Legal Ethics for the Paralegal 3 cr.
Introduction to ethical dilemmas faced in the workforce and the rules of ethics developed by the American Bar Association, various national paralegal organizations, and the Supreme Court of New Mexico. Prerequisite(s): PL S 160.

PL S 203. Immigration Law 3 cr.
Survey of the basics of immigration law including the rights and obligations of citizenship and the naturalization process. Prerequisite: PL S 160.

PL S 221. Internship I 2–4 cr.
Work experience that directly relates to a student's major field of study that provides the student an opportunity to explore career paths and apply knowledge and theory learned in the classroom. Internships can be paid or unpaid. Students are supervised/evaluated by both the employer and the instructor. Prerequisite(s): PL S 274.

PL S 222. Internship II 1–3 cr.
Continuation of PL S 221. Each credit requires specified number of hours of on-the-job work experience. Prerequisite(s): PL S 221.

PL S 231. The Law of Commerce for the Paralegal 3 cr.
Law of contracts, negotiable instruments, bank transfers, secured transactions, debtor-creditor relations, agency, and business types and their formation. Students will study the relevant statutes as well as draft documents associated with these types of legal practice. Prerequisite(s): PL S 160.

PL S 255. Special Topics 1–4 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 6 credits.

PL S 270. Administrative Law for the Paralegal 3 cr.
A study of the substantive law, procedures, and forms involved in practice before governmental agencies including worker's compensation, social security, employment security, and state and local administrations. Prerequisite: PL S 160.

PL S 272. Bankruptcy Law for the Paralegal 3 cr.
Individual and corporate bankruptcy; the basic principles and processes of bankruptcy law as a system of debtor relief and debt collection. Prerequisite: PL S 160.

PL S 274. Legal Research and Writing for the Paralegal I 3 cr.
Legal memoranda, briefs, and pleadings will be prepared and written on the student's original research. Research materials and techniques will be identified and studied; introduction of computer usage in legal research. Prerequisite: PL S 160 and ENG 111G.

PL S 275. Tort and Insurance for the Paralegal 3 cr.
Primary legal principles of tort and insurance law and means of establishing insurance plans, types of torts and insurance, as well as use of specific forms and procedures relating to these areas. Prerequisite: PL S 160.

PL S 276. Wills, Trusts, and Probate for the Paralegal 3 cr.
Covers wills, trusts, and probate for the paralegal. Prerequisite(s): ACT standard score in English of 16 or higher or a Compass score 76 or higher; for those scoring 12 or below on the ACT standard score in English or 34 or below on the Compass, successful completion of CCDE 105N & CCDE 110N.

PL S 277. Family Law for the Paralegal 3 cr.
Methods of conducting client interviews and drafting of pleadings and research relating to families. Laws relating to marriage, divorce, custody, support, adoption, name change, guardianship, and paternity. Prerequisite: PL S 160.

PL S 278. Litigation for the Paralegal 3 cr.
The law of procedure and evidence will be considered through rules and cases. Case situations will be used to identify and solve problems. Prerequisite: PL S 160.

PL S 279. Legal Research and Writing for the Paralegal II 3 cr.
Continuation of PL S 274. Advanced training in legal research problems with a focus on analysis, writing, and preparation of sophisticated legal memoranda and documents. Prerequisite: PL S 274.

PL S 280. Interviewing and Investigation for the Paralegal 3 cr.
Methods and principles of behavior. Topics include human evolution and development, biopsychology, perception, learning, thinking, motivation, social interaction, and the diagnosis and treatment of abnormal behavior.

PL S 266. Applied Psychology 3 cr.
Explanation of the psychological principles of everyday living. Emphasizes motivation, learning of intelligent behavior, and applications of psychology to social issues.

PSY—Psychology

PSY 201G. Introduction to Psychology 3 cr.
Methods and principles of behavior. Topics include human evolution and development, biopsychology, perception, learning, thinking, motivation, social interaction, and the diagnosis and treatment of abnormal behavior.

PSY 201G. Introduction to Psychology 3 cr.
Introduction to psychology, learning of intelligent behavior, and applications of psychology to social issues.

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Introduction to psychology, learning of intelligent behavior, and applications of psychology to social issues.
RADT 105. Radiographic Physics and Equipment 3 cr. Fundamentals of rad physics. Includes electromagnetism, x-ray production and interactions, x-ray circuitry, tubes, grids, screens, AES, fluoroscopic and portable units, beam restricting devices, calibration and quality assurance/control. Overview of mammography, US, CT, MRI, and digital radiography. Restricted to Majors. Prerequisite: RADT 103 or consent of instructor.

RADT 110. Radiographic Pathology 1 cr. Overview of pathology demonstrated by radiographic procedures. Prerequisite: RADT 154. Restricted to majors.

RADT 154. Radiographic Anatomy and Physiology 3 cr. Basic A&P for radiographic application. Includes a systems approach to body structures and organs as they relate to anatomical projections, radiographic identification, and various imaging modalities. Prerequisite(s): AHS 153 or AHS 140 or BIOL 225 or BIOL 154, or consent of instructor. Restricted to: RADT majors.

RADT 156. Independent Study 1–6 cr. Individual studies/research on topics related to the radiological sciences. May be repeated for a maximum of 6 credits.

RADT 190. CT Equipment and Methodology 3 cr. Skill development in the operation of computed tomographic equipment, focusing on routine protocols, image quality, and quality assurance and radiation protection. Consent of Instructor required. Restricted to: Computed Tomography Certificate majors.

RADT 200. Radiation Biology and Protection 2 cr. Biological effects of ionizing radiation on cells and tissues. Includes radiation measurements, policies and protection measures for self, patients, and others. Restricted to majors. Prerequisite(s): RADT 103.

RADT 201. Clinical Education I 9 cr. (40P) Supervised practice in a radiology department under direct supervision of a registered technician. Includes film critiques. Prerequisite(s): RADT 105. Restricted to: RADT, OERT majors.

RADT 202. Clinical Education II 12 cr. (36P) Continuation of RADT 201. Student will work under indirect supervision of registered personnel. Prerequisite(s): RADT 201.


RADT 205. Radiographic Image Critique 1 cr. Review of radiographs produced in clinical settings to evaluate anatomy and technical issues. Prerequisite: RADT 201. Restricted to majors.

RADT 206. Applied Radiographic Procedures 2 cr. (1+3P) Advanced course which integrates the principles and techniques of radiologic technology. Prerequisite: RADT 202. Restricted to majors.

RADT 207. Cross Sectional Anatomy for Medical Imaging 3 cr. Anatomic relationships that are present under various sectional orientations as depicted by computed tomography or magnetic resonance imaging. Consent of Instructor required. Restricted to: Computed Tomography Certificate majors.

RADT 208. Clinical I (Computed Tomography) 3 cr. (9P) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinic professional. Consent of Instructor required. Restricted to: Computed Tomography Certificate Majors.

RADT 209. Clinical II (Computed Tomography) 3 cr. (9P) A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills and concepts. Direct supervision is provided by the clinic professional. (Capstone Course). Consent of Instructor required. Restricted to: Computed Tomography Certificate majors.

RESP—Respiratory Therapy

NOTE: All RESP courses are restricted to Respiratory Therapy majors.

RESP 110. Respiratory Therapy I 3 cr. Introduction to basic respiratory care techniques. Includes history, professional organizations, medical gas administration, oxygen therapy, cardiopulmonary AP, patient assessments, and medical terminology. Requires a C or better to remain in program. Restricted to DA-RESP-AA majors.

RESP 110L. Respiratory Therapy I Lab 2 cr. Laboratory practice of basic respiratory care procedures. Requires a C or better to remain in program. Restricted to DA-RESP-AA majors.

RESP 111. Respiratory Therapy Cardio Pulmonary Diseases 3 cr. Introduction to basic respiratory care techniques and concepts of physics as they apply to the physiology of the lungs. Restricted to DA-RESP-AA majors.

RESP 115. Respiratory Therapy Pharmacology 3 cr. Concepts of physics as they apply to the physiology of the lungs. Requires a C or better to remain in program. Restricted to DA-RESP-AA majors.

RESP 120. Respiratory Therapy II 3 cr. Advanced respiratory care techniques. Emphasis on airway management, aerosol therapy, chest physiotherapy, pharmacology, posture pressure breathing, and pulmonary rehabilitation. Requires a C or better to remain in program. Prerequisite(s): Admission to program and RESP 110. Corequisite(s): RESP 120L. Restricted to RESP majors.

RESP 120L. Respiratory Therapy II Lab 2 cr. (6P) Continuation of lab practices and procedures learned in RESP 120, Respiratory Care II, using equipment and simulations. Requires a C or better to remain in program. Prerequisite(s): Admission to program, RESP 110, RESP 110L and RESP 112. Corequisite(s): RESP 120. Restricted to RESP majors.

RESP 124. Respiratory Therapy II Clinical 3 cr. (9P) Supervised practice and application in a hospital setting. Requires a C or better to remain in program. Prerequisite(s): Admission to program, RESP 110, RESP 110L and RESP 112. Corequisite(s): RESP 120 and RESP 120L. Restricted to RESP majors.

RESP 125. Respiratory Therapy Physics 3 cr. Concepts of physics as they apply to the physiology of the lungs. Emphasis on laws pertaining to gas, gas flow, humidity, and the mechanics of the breathing process. Requires a C or better to remain in program. Prerequisite(s): Admission to program. Restricted to: RESP majors.

RESP 155. Respiratory Therapy Special Topics 1–4 cr. Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 10 credits. Consent of instructor required. Prerequisite(s): Admission to program. Restricted to RESP majors.

RESP 210. Respiratory Therapy III 2 cr. Introduction to adult, mechanical, neonatal ventilator theory and concepts of critical care medicine. Requires a C or better to remain in program. Prerequisite(s): Admission to program, and RESP 115, RESP 120, RESP 120L, and RESP 124. Corequisite(s): RESP 210L. Restricted to RESP majors.

RESP 210L. Respiratory Therapy III Lab 2 cr. Advanced practice procedures using mechanical ventilation devices. Requires a C or better to remain in program. Prerequisite(s): Admission to program, and RESP 115, RESP 120, RESP 120L, and RESP 124. Restricted to RESP majors.

RESP 224. Respiratory Therapy IV Clinical 3 cr. (9P) Continuation of RESP 124. Emphasis on mechanical ventilators. Requires a C or better to remain in program. Prerequisite(s): Admission to program, and RESP 115, RESP 120, RESP 120L, and RESP 124. Corequisite(s): RESP 210. Restricted to RESP majors.


RESP 230L. Respiratory Therapy V Lab 2 cr. Advanced practice and procedures of respiratory care. Requires a C or better to remain in program. Restricted to DA-RESP-AA majors.

RESP 233. Respiratory Therapy Cardiopulmonary 2 cr. Concepts of physics as they apply to the physiology of the lungs. Emphasis on laws pertaining to gas flow, humidity, and the mechanics of the breathing process. Requires a C or better to remain in program. Restricted to DA-RESP-AA majors.


RESP 240. Respiratory Therapy VI 3 cr. Advanced theory of hemodynamics, neonate, pediatric, and new specialties that apply to respiratory care. Requires a C or better to remain in program. Prerequisite(s): Admission to program, and RESP 230, RESP 230L, RESP 233 and RESP 234. Corequisite(s): RESP 240L. Restricted to RESP majors.

RESP 240L. Respiratory Therapy VI Lab 2 cr. (6P) Advanced laboratory practice and procedures. Requires a C or better to remain in program. Prerequisite(s): Admission to program, and RESP 230, RESP 230L, RESP 233 and RESP 234. Corequisite(s): RESP 240. Restricted to RESP majors.

RESP 243. Respiratory Therapy Neonatal Resuscitation 1 cr.
Advanced practice of the neonatal resuscitation and certification. Prerequisite(s): Admission to program and RESP 230, RESP 230L, RESP 233, and RESP 234. Corequisite(s): RESP 240 and RESP 244. Restricted to RESP majors.

RESP 244. Respiratory Therapy VI Clinical 3 cr. (9P)
Clinical experience on special modalities. Requires a C or better to remain in program. Prerequisite(s): Admission to program, and RESP 230, RESP 230L, RESP 233 and RESP 234. Corequisite(s): RESP 240. Restricted to RESP majors.

RESP 255. Respiratory Therapy Special Topics 1–4 cr.
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 4 credits. Consent of instructor required. Prerequisite(s): Admission to program. Restricted to RESP majors.

RESP 298. Respiratory Therapy Independent Study 1–10 cr.
Individual study for respiratory care majors. Chosen topics must have approval of program coordinator. May be repeated for a maximum of 10 credits. Restricted to majors. Prerequisite(s): RESP 110.

S WK—Social Work

S WK 221G. Introduction to Social Welfare 3 cr.
A broad overview of current social problems and the role of social agencies and community members in addressing these problems.

SOC—Sociology

SOC 101G. Introductory Sociology 3 cr.
Introduction to social theory, research, methods of analysis, contemporary issues in historical and cross-cultural contexts. Covers groups, deviance, inequality, family, gender, social change, and collective behavior.

SOC 201G. Contemporary Social Problems 3 cr.
Introduction to the fundamentals of social analysis through the analysis of contemporary American social problems. Emphasis on methods of analysis and cross-national comparisons showing that the social problems studied are common to all societies. Covers racism, violence, poverty, crime, health care, and substance abuse.

SOC 273. Sex and Gender 3 cr.
Analysis of changes, behaviors, and stereotypes of women and men in contemporary Western societies. Same as W S 273.

SPAN—Spanish

SPAN 111. Elementary Spanish I 4 cr.
Spanish for beginners. Not open to Spanish-speaking students except by consent of instructor. Prerequisite: language placement and assessment by departmental examination.

SPAN 112. Elementary Spanish II 4 cr.
Spanish for beginners. Not open to Spanish-speaking students except by consent of instructor. Prerequisite: language placement and assessment by departmental examination or C or better in SPAN 111.

SPAN 211. Intermediate Spanish I 3 cr.
Speaking, reading and writing. Not open to Spanish-speaking students except by consent of instructor. Prerequisite: language placement and assessment by departmental examination or C or better in SPAN 112.

SPAN 212. Intermediate Spanish II 3 cr.
Speaking, reading and writing. Not open to Spanish-speaking students except by consent of instructor. Prerequisite: language placement and assessment by departmental examination or C or better in SPAN 211.

SPAN 213. Spanish for Heritage Learners II 3 cr.
Emphasis on development of heritage language skills learned at home and/or in the community. Covers spoken Spanish, reading activities and grammar skills to build on existing knowledge of the language.

SPAN 214. Spanish for Heritage Learners III 3 cr.
Continued development of heritage Spanish language skills learned at home and/or in the community. Emphasis on reading, writing and critical thinking skills. Review of grammar points will also be stressed in preparation for upper level courses.

STAT—Statistics

STAT 251G. Statistics for Business and the Behavioral Sciences 3 cr.
Techniques for describing and analyzing data; estimation, hypothesis testing, regression and correlation; basic concepts of statistical inference. Prerequisite: MATH 120. Same as A ST 251G.

SUR—Surveying Engineering

SUR 222. Plane Surveying 3 cr. (2+3P)
Surveying theory and practice as applied to plane surveying, in these areas: error propagation, linear measurements, angle measurements, area determination, differential and trigonometric leveling, and topographic mapping. Prerequisite(s): MATH 190G.

TCEN—Environmental and Energy Technologies

TCEN 101. Energy for the Next Generation 3 cr. (2+2P)
This course will survey a broad range of sources of energy, types of energy, energy storage, and the forms of energy. Students will be exposed to theory in the classroom, laboratory exercises, and field trips to provide them with a solid foundation for all subsequent energy related environmental courses. Crosslisted with: OETS 101. Prerequisite(s)/Corequisite(s): OETS 118 or MATH 120.

TCEN 105. Building Analyst I 3 cr. (2+2P)
This course is designed to provide the foundational knowledge and expertise necessary for the energy auditor and home performance contractor. Crosslisted with: OETS 105.

TCEN 106. Building Analyst II 3 cr. (2+2P)
Designed to prepare the student for the BPI Building Analyst Certification. This course will walk the student through the hands-on process of conducting visual building inspections, diagnostic testing, identifying improvement opportunities, documenting a home's performance and preparing a scope of work. Crosslisted with: OETS 106. Prerequisite(s)/Corequisite(s): TCEN 105 or OETS 105.

TCEN 110. Photovoltaic Application 4 cr. (3+2P)
This course will provide an introduction to Photovoltaic (PV) installation. The course will provide instruction on site selection, prep, installation, and maintenance for photovoltaic applications. Students that complete the course and have the opportunity to take the entry level exam with the North American Board of Certified Energy Practitioners (NABCEP) en route to becoming Certified Installers. Crosslisted with: OETS110. Prerequisite(s)/Corequisite(s): TCEN 101 or OETS 101.

TCEN 130. Introduction to Biomass/Biogas 3 cr. (2+2P)
Introduction to utilization of renewable biological wastes including crops for production of fuels. Anaerobic digestor, gasification, pyrolysis, combustion and fermentation will be covered. Prerequisite(s)/Corequisite(s): TCEN 101 or OETS 101.

TCEN 140. Biofuel Science 3 cr. (2+2P)
Fundamentals of basic organic chemistry and biochemistry applied to biopellet synthesis. Students will also be introduced to concept of conservation of matter and chemical reactions.

TCEN 156. Building Envelope 3 cr. (2+2P)
Designed to prepare the student for the BPI Building Envelope Certification. This course will provide the principles behind building performance testing and the purpose of completing a comprehensive energy audit. Through lecture and subsequent field training, the student will learn how to use building diagnostics to develop a prescriptive plan for enhancing comfort, health & safety, building durability, and energy savings. The student will learn how to outline the follow-up process required after completion of the retrofit. Crosslisted with: OETS 156. Prerequisite(s): TCEN 106 or OETS 106.

TCEN 180. Bio-diesel and Bio-ethanol Production 4 cr. (2+4P)
Overview of the production of biofuels. Students will be introduced to current biofuel production processes, trans-esterification, hydrolysis and fermentation reactions, distillation, and laboratory synthesis of biofuels and engine performance tests. Prerequisite(s): TCEN 140.

TCEN 205. NEC for Alternative Energy 4 cr. (2+4P)
This hands-on course will cover the National Electrical Code specifices concerning photovoltaic installation. Also code compliant wiring of basic electrical systems will be covered. Existing installations will be visited and studied. Prerequisite(s): TCEN 101 and ELT 105.

TCEN 210. Solar Thermal 4 cr. (2+4P)
The purpose of this course is for students to learn to install solar thermal collectors for several applications, including domestic hot water, pool heating, and space heating. Students will be able to identify types of systems and components, adapt a system design, conduct a site assessment, install solar collectors, install components, install control systems, perform a system checkout, and maintain and troubleshoot a solar thermal system. Prerequisite(s): TCEN 101 or OETS 101.
TCEN 215. Fluid Thermal Systems  
Fluid properties and measurement, piping and tubing standards, pumps and operation. Prerequisite(s): PHYS 110G or PHYS 211G.

TCEN 220. Cooperative Experience  
1–3 cr. 
Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. May be repeated up to 6 credits. Consent of Instructor required. Prerequisite(s)/Corequisite(s): MAT 235. Prerequisite(s): TCEN 180. Restricted to: TCEN majors. S/U Grading (S/U, Audit).

TCEN 224. Field Experience  
1–3 cr. 
Student will collaborate with instructor in proposing, defining, implementing, and analyzing outcomes of a project in the Environmental and Energy fields of study. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: TCEN majors.

TCEN 240. Renewables and Sustainability  
3 cr. 
Various renewable energy technologies and sustainable design practices will be introduced. Prerequisite(s): TCEN 101 or OETS 101.

THTR — Theatre Arts

THTR 101G. The World of Theater  
3 cr. 
An appreciation class introducing the non-major to all aspects of theatre, including its history, literature and professionals. Students attend and report on stage productions.

THTR 105. Acting for Non-Majors  
3 cr. 
An introduction to basic performance techniques for non-majors.

THTR 205. Vocal Production for the Actor  
3 cr. 
Exploration and development of the actor's vocal instrument, including relaxation, projection, diction and articulation.

THTR 222. Theatre Topics  
1–3 cr. 
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 9 credits.

W S — Women's Studies

W S 201G. Introduction to Women's Studies  
3 cr. 
Analysis of the status of women in society today and history and consequences of gender stratification and inequality from the perspectives of sociology, anthropology, psychology, political science, and other sciences.

W S 202G. Representing Women Across Cultures  
3 cr. 
Historical and critical examination of women's contributions to the humanities, with emphasis on the issues of representation that have contributed to exclusion and marginalization of women and their achievements. Crosslisted with: HON 218

WATR — Water Technology

WATR 120. Introduction to Water Systems  
3 cr. 
Introduction to and theory of groundwater sources, production, treatment, and distribution.

WATR 130. Wastewater Collection and Basic Treatment Systems  
3 cr. 
Introduction to wastewater characteristics, collection, and basic treatment operations.

WATR 135. Sludge Handling  
2 cr. 
Survey of sludge processing units and disposal. Includes aerobic and anaerobic digestion, thickening, conditioning, dewatering, land applications, and ocean dumping. Overview of current sludge regulations.

WATR 140. Applied Water and Wastewater Math I  
3 cr. 
Introduction to basic water and wastewater mathematics, flows through distribution networks and collection systems, and fundamentals of flow measurement. Prerequisite: CCDM 114N or equivalent.

WATR 160. Systems Maintenance  
4 cr. (2+4P) 
Basic tools, equipment, maintenance schedules, chlorinator trouble-shooting, and chlorine safety. Hands-on training with valves, pumps, meters and chlorination equipment.

WATR 165. Backflow Prevention  
3 cr. (2+2P) 
Theory of operation of backflow prevention devices and their application. Backflow devices including double check, reduced pressure, and pressure vacuum breakers will be tested for proper operation. Prerequisites: WATR 120 and WATR 140, or consent of instructor.

WATR 170. Confined Space Entry  
2 cr. 
Regulations concerning confined spaces, identification of confined spaces and hazard identification. Hands-on use of SCBA, other entry equipment and atmospheric testing.

WATR 175. Programmable Logic Controllers  
2 cr. 
This course will introduce students to electrical safety, theory, and the function, operations, programming and troubleshooting of the PLC controlling common electrical components utilized in control circuits associated with the water and wastewater industry.

WATR 180. Water Chemistry  
3 cr. 
Basic chemistry with applications to water and wastewater analysis. Prerequisite: CCDM 114N or consent of instructor.

WATR 182. Water Chemistry Analysis  
1 cr. (3P) 
Beginning water and wastewater laboratory analysis including gravimetric, volumetric, and quality control techniques. Prerequisite: CCDM 114N or equivalent or consent of instructor.

WATR 190. Water and Wastewater Microbiology  
3 cr. 
Overview of microorganisms associated with water and wastewater. Growth and reproduction, energy production, and methods of counting. Prerequisite: WATR 130, WATR 180, or consent of instructor.

WATR 200. Internship  
3–5 cr. 
On-the-job training/work experience with municipalities or industries, working in water or wastewater treatment plants, high purity water plants, industrial waste plants, distribution systems, or wastewater collection systems. May be repeated up to 5 credits. Consent of Instructor required. Restricted to: Water Technology majors. S/U Grading (S/U, Audit).

WATR 220. Water Treatment Systems  
3 cr. 
Theory of water systems operation including surface water treatment, fluoridation, sodium zeolite softening, corrosion control, iron removal, various filtration methods, and overview of SDWA. Prerequisites: WATR 180 and WATR 182 or consent of instructor.

WATR 222. Water Systems Operation  
1 cr. (3P) 
Operations of various water treatment systems including surface water treatment, sodium zeolite softeners, and various filtration methods. Prerequisite: WATR 220 or consent of instructor.

WATR 230. Advanced Wastewater Treatment  
4 cr. 
Calculations and operations involved in wastewater and water reclamtion plants. Prerequisites: WATR 140, WATR 190, and WATR 192, or consent of instructor.

WATR 232. Wastewater Systems Operations  
1 cr. (3P) 
Operation of pretreatment, primary, and biological treatment units. Prerequisite: WATR 230 or consent of instructor.

WATR 240. Advanced Water and Wastewater Math II  
3 cr. (2+2P) 
Advanced water and wastewater mathematics. Flow measurement. Systems head and pump curves. Prerequisites: WATR 140.

WATR 250. Municipal Systems Management  
4 cr. 
Management of water utility systems including laws, finance, records, and safety. Prerequisites: WATR 120, WATR 130.

WATR 255. Special Individualized Problems in Water Technology  
1–4 cr. 
Individual studies in areas directly related to water technology. Prerequisite: consent of instructor.

WATR 257. Industrial Pretreatment  
3 cr. 
Industrial pretreatment regulations, program development and implementation, including correspondence, surveys and inspections. Overview of industrial wastewater treatment. Prerequisites: WATR 120, WATR 130.

WATR 270. Special Topics  
1–4 cr. 
Specific subjects to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.

WATR 275. Certification Review  
3 cr. 
Review of water and wastewater plant operations and laws in preparation for state certification exams. Prerequisites: WATR 220, WATR 230, and WATR 240.

WATR 285. High Purity Water Treatment Systems  
3 cr. 
Principles of high purity water production including microfiltration, ultra-filtration, reverse osmosis, and deionization. Prerequisite: WATR 220.

WATR 286. Advanced High Purity Water Systems Operation  
3 cr. 
Operations of high purity water systems including ultrafiltration, reverse osmosis and deionization. Prerequisite: WATR 220. Corequisite: WATR 285.
WATR 287. Advanced Water Chemistry Analysis 3 cr. (6P)
Sampling techniques, analysis, and evaluation of potable water contaminants using gravimetric, volumetric, spectrophotometric, and other instrumentation methods. Prerequisite: WATR 285 or consent of instructor.

WATR 290. Advanced Wastewater Microbiology and Chemistry 3 cr.
Covers NPDES permits and DMR calculations and reporting; 503 sludge regs, including pathogen and vector attraction reduction and pollutants; wetlands, composting, and wastewater treatment ponds microbiology; activated sludge bulking and foaming microbiology and treatment; and use of selector to remove nutrients and prevent the growth of filamentous bacteria. Prerequisite: WATR 190, WATR 192.

WATR 292. Advanced Wastewater Analysis 3 cr. (6P)
Covers sampling techniques, analysis, and evaluation of wastewater contaminants using gravimetric, volumetric, spectrophotometric, and other instrumentation methods. Prerequisite: WATR 190 and WATR 192.

WELD—Welding Technology

WELD 100. Structural Welding I 6 cr. (3+6P)
Development of basic skills in SMAW, OFC, and OFW in accordance with the AWS entry-level welder program.

WELD 102. Welding Fundamentals 3 cr. (2+2P)
Survey of welding and cutting processes for nonmajors. Classroom instruction and laboratory work with OFC/OFW, SMAW, GMAW, FCAW, and plasma arc cutting.

WELD 110. Blueprint Reading (Welding) 3 cr.
Interpretation of prints related to welding. Emphasis on AWS standard symbols for welding, brazing, and nondestructive examination.

WELD 112. Professional Development and Leadership 1 cr.
As members and/or officers of various student professional organizations, students gain experience in leadership, team building, and community service. Students competing or participating in SkillsUSA are required to register for the course. May be repeated up to 6 credits. Consent of Instructor required. Restricted to: WELD majors. S/U Grading (S/U, Audit).

WELD 120. Basic Metallurgy 3 cr.
Properties of ferrous and nonferrous materials. Service conditions and heat treatment of metals related to welding trade. Prerequisites: WELD 100 or consent of instructor.

WELD 125. Introduction to Pipe Welding 3 cr. (2+2P)
Pipe fit-up and welding techniques for pipe-fitting and pipe-weld joint using SMAW, GMAW, GTAW, and FCAW, 2G welding of pipe. Prerequisite(s): WELD 100, WELD 130, and WELD 140, or consent of instructor.

WELD 130. Introduction to GMAW (MIG) 3 cr. (2+2P)
Development of basic skills with gas metal arc welding (MIG) in accordance with AWS entry-level welder objectives. Wire electrodes, shielding/ purge gases, and modes of metal transfer.

WELD 140. Introduction to GTAW (TIG) 3 cr. (2+2P)
Development for basic skills with gas tungsten arc welding (TIG) in accordance with AWS entry/advanced welder objectives. Welding mild steel, tungsten electrode preparation, filler wire selection, and equipment setup.

WELD 150. Pipe Welding II 3 cr. (2+2P)
Continuation of WELD 125; with fillet and groove welded joints in a horizontal fixed and 45-degree fixed positions (5-F, 5-G, 6-F, 6-G). Prerequisite: WELD 125.

WELD 160. Introduction to SAW and FCAW 3 cr. (2+2P)
Submerged arc and flux-cored arc welding. Demonstrations and practice with machine travel submerged arc welding (SAW), flux-cored arc welding (FCAW-G, FCAW-S) on mild steel plate and pipe.

WELD 170. Welded Fabrication 3 cr. (1+4P)
Development of fabrication skills including basic layout, measuring, and utilization of various welding processes including out-of-position welding. Use of common shop tools. Prerequisites: WELD 100, WELD 110, WELD 130, and OETS 104 or OETS 118.

WELD 180. GTAW II 3 cr. (2+2P)
Continuation of WELD 140. Development of more advanced GTAW skills. Emphasis on pipe welding with mild steel, stainless steel, and aluminum. Prerequisite: WELD 140 or consent of instructor.

WELD 190. Welded Art 3 cr. (1+4P)
Students explore the possibilities of welded art in the form of sculpture, jewelry, furniture and as a framework to support other art media. Offered as an elective for students who wish to create art using welding. Prerequisite: WELD 102 or consent of instructor.

WELD 205. Welding Equipment Maintenance 3 cr. (2+2P)
Hands-on experience in the maintenance and repair of welding equipment, including welding machines and associate shop equipment, as well as the development of preventative maintenance programs. Basic safety, including MSDS and Right-to-Know will be introduced. Prerequisite(s): WELD 100, WELD 130, WELD 140, WELD 160.

WELD 211. Welder Qualification 6 cr. (3+6P)
Laboratory and classroom instruction on AWS and ASME Welder Performance Qualification Tests. All position plate and pipe techniques and tests for SMAW, GMAW, GTAW, FCAW, and SAW. Nondestructive and destructive examination methods. Basics of welding codes. Prerequisites: OETS 104 or OETS 118; and WELD 100, WELD 110, WELD 120, WELD 130, WELD 140, WELD 160 and WELD 180 or consent of instructor. Restricted to majors.

WELD 221. Cooperative Experience I 1–6 cr.
Supervised cooperative work program. Student is employed in an approved occupation and supervised and rated by the employer and instructor. Student will meet in a weekly class. Graded S/U. Prerequisites: WELD 100 or WELD 101 and consent of instructor. Restricted to majors.

WELD 223. Stainless Steel Welding 6 cr.
A specialized training course for qualified, experienced welders who desire to meet certification requirements of ASME Section IX (American Society of Mechanical Engineers).

WELD 230. Weld Testing 3 cr. (2+2P)
Covers destructive and nondestructive examination methods used to test welds. Tensile, compression, bend, hardness, impact, visual, dye-penetrant, magnetic particle, ultrasound, and radiographic methods of testing/examination. Prerequisite(s): WELD 100, WELD 130, WELD 140, WELD 211, and OETS 104 or consent of instructor.

WELD 255. Special Problems in Welding Technology 1–6 cr.
Individual studies in areas of welding technology. Prerequisite: consent of instructor. May be repeated for a maximum of 12 credits.

WELD 295. Special Topics 1–4 cr.
Topics to be announced in the Schedule of Classes. May be repeated for a maximum of 12 credits.