



COURSE DESCRIPTIONS

AGM 1613 Fundamentals of Agricultural Systems Technology (3-0-3)

Introduction to basic physical concepts important in agricultural technical systems: applied mechanics, power and machinery management, structures and electrification, and soil and water conservation. **Prerequisite:** MTH 1113

AGN 1002 Introduction to Equine Behavior and Training (2-0-2)

This course will provide a basic introduction to the principals involved in handling and training horses with an emphasis on the historical perspectives and technical development of the unique cooperation between horses and humans. In addition, the course will cover equine behavior patterns, and training philosophy, evolution of horsemanship, development of training equipment, alternative equine health care and therapies.

AGN 1101 Introduction to Equestrian Events (0-3-1)

This course will provide an introduction to practices in training for horse competition and show events such as: reining, horsemanship, showmanship, trail, pleasure, and halter as well as other events.

AGN 1102 Understanding Basic Equine Principles and Techniques (1-3-2)

This course will provide students the opportunity to learn the principles of general horse care, equipment and tack, and horse riding principles and techniques. Students will develop their skills through practical experience.

AGN 1112 Western Riding Techniques I (1-3-2)

This course is designed to teach beginning western riding techniques and equitation riding to students with little or no previous experience. Students will develop their skills through practical experience and will have individualized equitation lessons in a group setting.

AGN 1203 Introduction to Plant Science (3-0-3)

An introduction to basics of agricultural crop plant structure, growth, and production.

AGN 2103 Crop Science (3-0-3)

Principles of crop growth, development, and utilization and how these principles relate to production. Emphasis on major agronomic crop species.

Prerequisite: AGN 1203

AGN 2112 Western Riding Techniques II (1-3-2)

Intermediate and advanced western riding techniques and equitation. Use of natural aides for advanced equitation and riding maneuvers.

Applied Art Courses

All applied art courses may be repeated for credit; however, students may not enroll more than four times in any one medium (drawing, painting, pottery) of applied art courses and have the credit count to meet graduation requirements. Art courses may have additional fees.

ART 1001 Special Topics in Art (1-0-1)

ART 1002 (2-0-2)

Special topics courses will be offered at the discretion of the department when the need or interest is apparent. May be repeated for credit. **Course Fees:** ART 1001 \$30; ART 1002 \$60

ART 1003 Art Appreciation (3-0-3)

ACTS Equivalent Course Number = ARTA 1003

An introductory survey of the visual arts. Exploration of purposes and processes in the visual arts including evaluation of selected works, the role of art in various cultures, and the history of art.

ART 1013 Basic Design I (3-0-3)

Studio-lecture course. Introduction to the visual elements and two-dimensional design principles. Experience with a broad variety of media and techniques. **Course Fee:** \$30

ART 1103 Computer Applications in Art (3-0-3)

Introduction to computer-aided visual arts. Students will utilize computer technologies and current design software for digital image creation, manipulation, and processing. Color theory, design file input/output techniques, and use of tools for graphic design and image composition are introduced.

ART 1023 Drawing I (3-0-3)

Introduction to the basic principles of drawing. The graphic factors of gestural expression, shape, line, value, texture, perspective, volume and space, and media, as well as organizational and expressive issues are explored. May be repeated for credit. **Course Fee:** \$30

ART 1313 Basic Design II (3-0-3)

Studio-lecture course. Study of the visual elements. Investigation of color. Introduction to the elements and principles of three-dimensional design. **Course Fee:** \$30

ART 1323 Drawing II (3-0-3)

Further investigation of the principles of drawing through advanced investigation of media and technique. Drawing as a basic organizer of thought and feeling as a step to image making. May be repeated for credit.

Prerequisite: ART 1023, **Course Fee:** \$30

ART 1803 Introduction to Studio Art (3-0-3)

An introductory student-based hands-on appreciation course for students with no previous experience with the vocabulary or materials of the visual artist. Emphasis will be divided between discussion of the visual arts and studio projects which are designed to stimulate awareness of artistic process, materials, and techniques. The course encourages students to explore their own creativity and individual artistic expression using a wide variety of media and materials.

ART 2001 Special Topics in Art (1-0-1)

ART 2002 (2-0-2)

ART 2003 (3-0-3)

Special topics courses will be offered at the discretion of the department when the need or interest is apparent. May be repeated for credit. **Course Fees: ART 2001 \$30; ART 2002 and ART 2003 \$60**

ART 2013 Painting I (3-0-3)

The painting medium may include oil, watercolor, acrylic, or tempera. Painting is explored in terms of technique and expression. Basic problems are covered in both representational and abstract approaches. May be repeated for credit. **Course Fee: \$30**

ART 2023 Art History I (3-0-3)

ACTS Equivalent Course Number = ARTA 2003

Examination of painting, sculpture, architecture, and media from the prehistoric period to the Renaissance.

ART 2043 Photography (3-0-3)

Instruction in photography production, techniques, history, and theory. Emphasis is given to the visual organization of an effective photograph. Students are encouraged to explore individual creativity and artistic expression by experimenting with printing, enlarging, finishing, and mounting photographs. No previous experience is necessary. **Course Fee: \$30**

ART 2113 Pottery I (3-0-3)

An introduction to the techniques of clay forming, including wheel throwing, slab, and coil building. Glaze information is also included. May be repeated for credit. **Course Fee: \$60**

ART 2123 Pottery II (3-0-3)

Continues the exploration of the techniques introduced in Pottery I. Students will explore basic forms to refine ability and develop sensitivity to functional and aesthetic consideration. May be repeated for credit. **Course Fee: \$60**

ART 2313 Painting II (3-0-3)

A continuation of ART 2013. This course is an exploration of technical and expressive possibilities of painting media. May be repeated for credit. **Prerequisite: ART 2013, Course Fee: \$30**

ART 2323 Art History II (3-0-3)

ACTS Equivalent Course Number = ARTA 2103

Examination of painting, sculpture, architecture, and media from the Renaissance to the contemporary period.

BIO 1014 General Biology (3-2-4)

ACTS Equivalent Course Number = BIOL 1014

Modern concepts of biological science are introduced in this course, including the nature of life, cell theory, cell chemistry, genetics, and other topics in biology. This course is designed for non-science majors. **A lab is a required part of this class and will meet at a time different than the lecture. Lab Fee: \$20**

BIO 1614 General Zoology (3-2-4)

ACTS Equivalent Course Number = BIOL 1054

A study of processes, organ systems, development, ecology, and phyla of animals. **A lab is a required part of this class and will meet at a time different than the lecture. Lab Fee: \$20**

BIO 2014 Anatomy/Physiology for Paramedic (3-2-4)

A one-semester course reviewing the organs and systems of the human body. Emphasis is placed on gross anatomy of the body and general physiology of the organs and systems as they operate in a healthy individual. A grade of C or better must be received in this course to continue in the EMT program. This course is designed for an Allied Health program. **A lab is a required part of this class and will meet at a time different than the lecture. Lab Fee: \$20**

BIO 2114 Anatomy and Physiology I (3-2-4)

ACTS Equivalent Course Number = BIOL 2404

This offering is designed to give students a functional knowledge of Human Anatomy and Physiology. Emphasis is placed on the norm but reference to an explanation of some pathologies is included. The first of a two-semester course will cover several of the human body's major anatomical systems and implications in health. **A lab is a required part of this class and will meet at a time different than the lecture. Lab Fee: \$20**

BIO 2134 Anatomy and Physiology II (3-2-4)

ACTS Equivalent Course Number = BIOL 2414

This is a continuation of Anatomy and Physiology I in which additional major anatomical systems and their basic functions will be covered. **A lab is a required part of this class and will meet at a time different than the lecture. Prerequisite: BIO 2114, Lab Fee: \$20**

BIO 2304 Kinesiology (3-2-4)

Kinesiology is the study of musculoskeletal anatomy, posture, and movement of the human body. A brief anatomical and functional description of various body systems that have an effect upon the activity of musculoskeletal functions will be covered. **Prerequisite: BIO 2114, Lab Fee: \$20**

BIO 2504 Microbiology (3-2-4)

ACTS Equivalent Course Number = BIOL 2004

A study of the morphology, physiology, classification, and cultivation of bacteria, microscopic fungi, and other microorganisms. These will be related to the health of other organisms and the ecology of microorganisms. **A lab is a required part of this class and will meet at a time different than the lecture. Lab Fee: \$20**

BUS 1003 Introduction to Business (3-0-3)

ACTS Equivalent Course Number = BUSI 1013

This course provides an introduction to the operation of the business segment of society, including the free enterprise system, management, marketing, finance, and government regulation. Designed to give the student a survey of the field of business, including terminology and career opportunities.

BUS 1023 College Business Math (3-0-3)

This course is designed to teach basic math operations, decimals, percentages, bank statements, payroll, interest, finance charges, and discounts. The display calculator is used to perform computations. **Prerequisite: MTH 1073 or appropriate placement test score**

BUS 1111 Keyboarding (1-0-1)

This course teaches basic keyboarding skills. Emphasis is placed on techniques necessary to keyboard by touch.

BUS 1113 Legal Terminology (3-0-3)

This course provides students with a basic knowledge of legal language to allow them to work efficiently in a legal environment. It also provides a basic understanding of the administrative office duties and responsibilities relevant to the legal profession.

BUS 1121 Introduction to Computers (1-0-1)

This course introduces students to the personal computer. Students gain an understanding of computer terminology, operating systems, applications, and basic personal-use software.

BUS 1133 Introduction to Accounting (3-0-3)

Designed for students who expect to work in a secretarial or clerical position, this course emphasizes bookkeeping procedures of the basic accounting cycle with an orientation toward small service or merchandising businesses. Students will not be given credit in Introduction to Accounting if taken at the same time or after completing BUS 2113.

BUS 1171 Microsoft® Publisher (1-0-1)

This course introduces students to Microsoft Publisher. Students learn to create calendars, cards, postcards, and business cards using creativity to design and decorate their publications.

BUS 1191 Digital Photography (1-0-1)

This course introduces students to digital photography. Students learn how to take quality digital photographs and to share and store images.

BUS 1203 Consumer Finance (3-0-3)

This course offers insight into the effective handling of financial matters. Topics include budgeting, insurance, home ownership, renting, borrowing, saving, investing, taxes, and financial planning. Students are introduced to a popular financial software package.

BUS 1343 Computer Keyboarding I (3-0-3)

ACTS Equivalent Course Number = BUSI 1103

This course is designed to teach basic keyboarding with an emphasis on techniques necessary to keyboard by touch. In addition to keyboard mastery, learning experiences include basic word processing tasks such as letters, reports, memos, and tables.

BUS 1353 Basic Filing/Records Management (3-0-3)

This course introduces alphabetic, numeric, subject, and geographic filing systems and provides practice in the operation of these systems. Projects include hands-on practice in manual filing and electronic database management. Some data entry is required.

Prerequisite: BUS 1603 (Grade ≥ C)

BUS 1373 Computer Keyboarding II (3-0-3)

This course emphasizes skill development at a higher level and strengthens techniques in production problems, speed, and accuracy. Emphasis is placed on the production of business letters, statistical tables, manuscripts, business forms, and related projects.

Prerequisite: BUS 1343 (Grade ≥ C)

BUS 1603 Computer Fundamentals (3-0-3)

ACTS Equivalent Course Number = CPSI 1003

This course provides an introduction to computer systems. Computer system hardware, software, data storage and terminology are stressed. Additionally, the course provides students with beginning skills required to use a microcomputer system, operating system software, and an integrated software package. On the first day of class, students will be expected to key a minimum of 25 correct words per minute. **Prerequisite: Ability to key 25 words per minute or BUS 1343 Computer Keyboarding I.**

BUS 1621 Microsoft® Excel (1-0-1)

This course introduces students to the basic features of Microsoft Excel. Students learn about basic spreadsheet operations such as entering data, creating formulas, formatting, and creating financial reports.

BUS 1631 Microsoft® Access (1-0-1)

This short course is designed to present the knowledge and skills required to perform common database tasks and to serve as preparation for the Core certification in Microsoft Office XP. **Prerequisite: BUS 1603**

BUS 1633 Personal Software Applications (3-0-3)

This course is designed to introduce the non-business student to the personal computer. Students will gain a general understanding of computer terminology, operating systems and application software. Students will utilize various personal-use software programs.

BUS 1641 Microsoft® PowerPoint (1-0-1)

This course focuses on the knowledge and skills required to produce professional-looking presentations and serves as preparation for the Core certification in Microsoft Office XP. **Prerequisite: BUS 1603**

BUS 1651 Microsoft® Windows (1-0-1)

This course introduces students to the Windows operating system. Students learn basic Windows terminology and gain hands-on experience.

BUS 1661 Microsoft® Word (1-0-1)

This course introduces students to Microsoft Word. Students learn basic skills such as creating tables, formatting text and paragraphs, and creating, saving, and editing documents.

BUS 1671 Internet Basics (1-0-1)

This course introduces students to basic Internet features. Students use search engines, download files, send attachments, and complete other basic tasks.

BUS 1803 Contemporary Issues in Supervision (3-0-3)

This course helps students acquire workplace supervisory skills. While learning supervisory management concepts, students learn how to be supervisors. Topics discussed include workplace violence, discipline, sexual harassment, drug/substance abuse, and employee appraisal, among others.

BUS 1904 Principles of Real Estate (4-0-4)

This course covers the basic theories and practices that have a significant influence on the real estate market. It is designed to complete the Arkansas Real Estate Commission requirement of sixty classroom hours for a Real Estate License for salespersons in the state of Arkansas. Subjects covered include land descriptions, deeds, real estate law, real estate ethics, and real estate marketing.

BUS 2013 Technical Communication (3-0-3)

ACTS Equivalent Course Number = ENGL 2023

Students learn correct writing and oral presentation techniques. Topics include electronic communication, informal and formal reports, proposals and feasibility studies, page design, graphics, oral communication, and research. This course utilizes computers and requires keyboarding skills of 25 words per minute or better. **Prerequisite: ENG 1013**

BUS 2023 Community Leadership Development(3-0-3)

This course provides a foundation for leaders who desire to improve their community. Topics include community history, quality of life indicators, developing a vision for the future, trusteeship and responsibility of board members, and economic development.

BUS 2033 Legal Environment of Business (3-0-3)

ACTS Equivalent Course Number = BLAW 2003

This course provides an introduction to the legal system and its common law origin emphasizing its application to business situations. Such areas as the development and operations of the court system, government's regulation of American businesses and business disputes and remedies are covered.

BUS 2043 Business Law II (3-0-3)

This course covers various legal aspects and how they relate to different business situations. Such concepts as contracts, law, sales, agency, employment, and bankruptcy will be presented. **Prerequisite: BUS 2033**

BUS 2073 Business Statistics (3-0-3)

ACTS Equivalent Course Number = BUSI 2103

This course covers statistical methods used in business. Topics covered include sampling, probabilities, hypothesis testing and linear regression. **Prerequisite: MTH 1113**

BUS 2081 Special Topics In Business (1-0-1)

BUS 2082 (2-0-2)

BUS 2083 (3-0-3)

Special topics courses will be offered at the discretion of the department when the need or interest is apparent.

BUS 2113 Principles of Accounting I (3-0-3)

ACTS Equivalent Course Number = ACCT 2003

This introductory study of the financial accounting cycle emphasizes service and merchandising businesses and the proprietorship form of business organization. Fundamental accounting principles are covered.

BUS 2123 Principles of Accounting II (3-0-3)

ACTS Equivalent Course Number = ACCT 2013

This course is a continuation of BUS 2113 emphasizing the corporate form of business organization. Accounting for manufacturing businesses and an introduction to managerial accounting and financial statement analysis are included. **Prerequisite: BUS 2113 (Grade \geq C)**

BUS 2183 Electronic Spreadsheet Apps (3-0-3)

This introduction to the use of electronic spreadsheets in everyday applications exposes students to the fundamental concepts of spreadsheet technology through a modern software package used extensively in the business world. Worksheets, formulas, graphics, and other key facets of the spreadsheet package are used heavily. Macros and other advanced features are introduced. **Prerequisite: BUS 1603 within the past 5 years with grade \geq C**

BUS 2303 Integrated Business Projects (3-0-3)

This course provides a series of integrated projects for simulating real-world business activities. Students develop information technology solutions to meet the needs of the business community and demonstrate critical-thinking skills while deciding between alternative approaches. This course will allow students to integrate and reinforce skills and knowledge acquired in previous courses. **Prerequisites: BUS 2453, BUS 2183, and BUS 1353 (Grade \geq C)**

BUS 2393 Administrative Office Procedures (3-0-3)

This course provides training in the techniques of managing the electronic office, workstation and software. Special emphasis is also given to techniques involving human relations, time management, travel arrangements, written communications, telephone communications and information management. **Prerequisite: BUS 1373**

BUS 2423 Machine Transcription (3-0-3)

This course is designed to include instruction and practice in the operation of a transcription machine using a microcomputer. By using commercially prepared tapes in one of the following business areas: general, medical, or legal, basic language skills will be reviewed and documents will be prepared according to the student's chosen area. **Prerequisite:** ENG 1013 and BUS 1343

BUS 2453 Word Processing Concepts and Applications (3-0-3)

This course introduces word processing concepts and provides hands-on experience in training students to input, edit, save, retrieve, and print documents. Knowledge of the underlying communication skills—grammar, punctuation, and capitalization—is an essential part of this course. Students may be expected to spend time on word processing equipment outside of scheduled class time. **Prerequisite:** BUS 1343 (Grade \geq C) or keyboarding skills. **Prerequisite or Corequisite:** BUS 1603 within the past 5 years with Grade \geq C

BUS 2463 Advanced Word Processing Applications (3-0-3)

This course presents a hand-on approach to processing business and office correspondence by using computers. Students are taught to use word processing software to do advanced operations: merge, macros, sort, forms, graphics, etc. **Prerequisite:** BUS 2453 (Grade \geq C) **Corequisite:** BUS 2493, MOS Testing Fee: \$90

BUS 2473 Desktop Publishing (3-0-3)

This course introduces basic concepts of desktop publishing and provides training in producing in-house publications such as brochures, newsletters, flyers, advertisements, letterheads, business cards, resumes, and programs, etc.

BUS 2483 Medical Office Management (3-0-3)

This course is designed to familiarize one with computerized account management and to enable one to understand and perform the duties necessary to manage a medical office electronically.

BUS 2493 Internship in Administrative Office Technology (0-10-3)

This course provides administrative office technology students practical experience in a business environment. Students work with their faculty advisor and internship employer to develop an education plan with meaningful learning objectives based on their program of study. A minimum of 136 contact hours is required.

Prerequisite: 45 credit hours toward the A.A.S. in AOT, registration for the internship during the preregistration, and completion of an Internship Agreement.

BUS 2513 Fundamentals of Marketing (3-0-3)

ACTS Equivalent Course Number = MKTG 2003

This course focuses on the various aspects of marketing, especially of consumer goods. Topics include consumer behavior, market segmentation, research, new product development, pricing, marketing channels, retailing, advertising, sales promotion, and marketing of services.

BUS 2523 Salesmanship (3-0-3)

This course discusses the principles and techniques of selling as they apply to business situations involving both final consumers and business firms as buyers. Such topics as planning and preparation for selling, the role of a salesman, and the process of selling are investigated. Lecture, case and project methods of teaching are used.

BUS 2553 Business Communication (3-0-3)

ACTS Equivalent Course Number = BUSI 2013

This course is designed to create an understanding of business correspondence of various forms. Business letters and reports of various types are investigated. A knowledge of the importance of communication is stressed as well as the various means used in business communication.

Prerequisite: ENG 1013

BUS 2813 Basic Management (3-0-3)

This course provides a study of the various principles and functions of management. Topics discussed include social responsibility, decision making, planning, organizational structure, human resource management, employee behavior, team building, motivation, and communication. Emphasis is placed on the practical application of course material.

BUS 2833 Human Resource Development (3-0-3)

This course provides a study of the policies and practices involved in personnel administration to build an effective work force. Staff planning, recruiting, selecting, orientating, educating, job training, compensating, performance management and labor relations are discussed.

Prerequisites: PSY 1003 and BUS 2813

BUS 2843 Group Dynamics & Teambuilding (3-0-3)

Students will learn how to organize, lead, and participate as members of project teams in improving quality and productivity while using data based methods. Team dynamics and growth will be examined including team building activities, handling disruptive behavior, and overcoming obstacles to quality improvement. Motivation, leadership, attitudes, perception, and communications will be major topics of concern. **Prerequisites:** PSY 1003 and BUS 2813

BUS 2863 Continuous Quality Improvement (3-0-3)

The course is designed to provide a comprehensive foundation for the implementation of quality management in both manufacturing and service organizations. The basic philosophy of quality management, improvement process and tools for quality management are stressed.

BUS 2903 Internship in Business Management (0-10-3)

This course is designed to give students an opportunity to enhance their knowledge by applying what they have learned in a work situation. Students work with their faculty advisor and internship employer to develop an education program with meaningful learning objectives based on their program of study. A minimum of 136 contact hours required. **Prerequisite: 45 credit hours toward the A.A.S. in Management, registration for the internship during preregistration, and completion of an Internship Agreement.**

BUS 2933 Leadership Skills and Ethics (3-0-3)

This course is designed to help students acquire the leadership skills necessary to become successful leaders in the workplace. Discussion will include conflict resolution, motivational theory, administrative responsibilities, and personality styles. Emphasis is placed on the impact of ethics in modern organizations and the positive impact and benefits of ethical conduct for a business.

CDL 1009 Commercial Driver License (CDL) (1-4-3)

This course covers motor vehicle operation, such as drive trains, brakes, fuel, exhaust, cooling, electrical, suspension, steering, and coupling. Additionally, students learn about shift patterns, securing loads, and principles of maneuvering. Laws and regulations are covered in the class as well as the handling of log books, bills of lading, and trip reports. Safety is emphasized throughout the course. Practical application is provided through field exercises and road trips.

CET 1013 Elementary Surveying (1-4-3)

This course covers the principles of geometry, theory and use of instruments, mathematical calculations, and the control and reduction of errors. Included are topics on tape measurement, differential leveling, traversing, contours, computations, and land surveys. **Lab Fee: \$15**

CET 2013 Civil Drafting (1-4-3)

This course introduces the student to drafting practices pertinent to the field of Civil Engineering Technology. Work is done on topographic drawings, land layout, utilities, plan and profile and earthwork cross-sections, including calculations. Construction and fabrication drawings are covered. **Prerequisites: DFT 1013 and CET 1013, Lab Fee: \$15**

CET 2103 Highway Drafting (2-2-3)

This course provides a study of basic information to highway drafting. Horizontal alignment of route surveys in the plan view, vertical alignment of route surveys in the profile view, typical sections, cross sections and area calculations and estimation of quantities are covered.

Prerequisite: DFT 1013, Lab Fee: \$15

CET 2203 Mapping & Topography (2-2-3)

This course includes instruction on selected drafting techniques that are applied to the problem of making maps, traverses, plot plans, plan and profile drawings using maps, field survey data, aerial photographs and related references. Materials including symbols, notations, and other applicable standardized materials are also covered.

Prerequisite: CET 1013, Corequisite: DFT 1123,

Lab Fee: \$15

CGR 1003 Introduction to Multimedia (3-0-3)

This course introduces the student to the basic skills of multimedia. Multimedia concepts and literacy will be covered as well as how to choose the appropriate software to design and produce effective presentations. Students receive hands-on experience working with digital cameras, images, presentation software, and audio and video software. **Prerequisite: BUS 1603 must be completed within the past 5 years with Grade \geq C.**

CHE 1013 Introduction to Chemistry (3-0-3)

A general introduction and orientation to the fundamentals of chemistry, this course is designed to prepare students for higher level chemistry courses.

Prerequisite: MTH 1073 (Grade \geq C) or equivalent

CHE 1024 General Education Chemistry (3-2-4)

ACTS Equivalent Course Number = CHEM 1004

This course is a survey of fundamental chemistry from the practical perspective, with emphasis on description and explanation of common phenomena. The course is designed for general education students with little or no science background. **A lab is a required part of this class and will meet at a time different than the lecture.**

Prerequisite: MTH 1093, Lab Fee: \$20

CHE 1214 College Chemistry I (3-2-4)

ACTS Equivalent Course Number = CHEM 1414

This is the first of a series of courses intended for science majors and includes a detailed study of fundamental principles of chemistry. **A lab is a required part of this class and will meet at a time different than the lecture.**

Lab Fee: \$20

CHE 1234 College Chemistry II (3-2-4)

ACTS Equivalent Course Number = CHEM 1424

This course is a continuation of the study of the principles of chemistry with emphasis on inorganic chemistry and ionic equilibrium. **A lab is a required part of this class and will meet at a time different than the lecture.**

Prerequisite: MTH 1113, Lab Fee: \$20

CIS 1003 Microcomputer Operating Systems (3-0-3)

The course extends the student's knowledge of microcomputer operating systems. Students gain thorough knowledge of, and skill in, using the standard single-user, multi-tasking disk operating system. Attention is given to installation, customization, and modification of the operating environment. **Prerequisite: BUS 1603 must be completed within the past 5 years with Grade \geq C.**

CIS 1013 Microcomputer Hardware Concepts (3-0-3) and Applications

An overview of the hardware of the personal computer is presented. Students are given the opportunity to assemble and configure a microcomputer. The motherboard, microprocessors, floppy drives, hard drives, CD-ROM, power supplies, modems, terminals, and printers are examined. Essential utilities necessary to upgrade and troubleshoot a PC are utilized. **Prerequisite: BUS 1603 within the past 5 years with Grade \geq C.**

CIS 1103 Information Technology Tools (3-0-3)

This course provides the basic knowledge and skills to be an active member of an information technology project team. Students are assigned to project teams with a related information technology task. They are responsible for planning, researching, tracking, documenting, and reporting activities related to the team's efforts using standard office software utilities, project management software and technical graphics software. The primary intent of this course is to develop basic skill sets for the software tools and for team building.

Prerequisite: BUS 1603

CIS 1203 Programming Logic and Design (3-0-3)

This course introduces students to programming concepts, structured and object styles, logical thinking, and problem solving. General programming topics, design tools, and algorithms are introduced through pseudo code with structured modular design, object, and event-driven programming paradigms. Students will be able to plan and design the logic for information technology systems.

Prerequisite: BUS 1603

CIS 2013 A+ Certification Review (3-0-3)

This course provides a complete analysis and comprehensive review in preparation for the A+ Certification Exams. Students are given extensive opportunities to practice for both the Core/Hardware Technologies exam and the Windows/Operating Systems Exam. Test taking strategies and research in a wide variety of topics are covered. This course integrates concepts learned in past and current microcomputer hardware and operating system classes.

Prerequisites: CIS 1003, CIS 1013, and A+ Certification Exam Fee: \$188

CIS 2023 Advanced PC Diagnostics/ Configuration (3-0-3)

This course is one of a set of courses to prepare a student for A+ Computer Certification. The course covers advanced PC configuration and troubleshooting of peripherals, resolving resource conflicts, and optimizing system performance. Additional topics include networking, Internet technologies, printers, portables, maintenance and recovery. **Prerequisites: CIS 1003 and CIS 1013**

CIS 2103 Java Programming (3-0-3)

This course introduces the Java Language. It covers the writing, compiling, executing, and debugging of Java Programs. Topics include the basic Java programming instructions, Java classes, and Java applets. Object-oriented programming with an emphasis on structured and top-down methods is an integral part of this class.

Prerequisite: CIS 1203

CIS 2113 COBOL Programming (3-0-3)

Common Business Oriented Language (COBOL) is a high-level programming language used extensively in programming business applications. In this course students learn to design and write structured programs using COBOL. A problem-oriented approach is used as students are introduced to structured design and programming through a series of programs illustrating typical business applications. **Prerequisite: BUS 1603 within the past 5 years with Grade \geq C.**

CIS 2123 Visual BASIC Programming (3-0-3)

Windows programming is introduced in this course, with windows programming conventions and user interface objects stressed. Graphics user interface (GUI) is emphasized with the goal of allowing students to be creative in developing programs. Linking files, module definition files, and operational considerations are an integral part of developing complete Visual BASIC programs. Structured programming techniques and standard logic techniques are taught. **Prerequisite: CIS 1203**

CIS 2133 C++ Programming (3-0-3)

This course introduces object-oriented programming with continued emphasis on structured and top-down methods. Students design, write, test and maintain programs in the C++ language. If-then-else, for-loops, arrays, and basic input/output operations are an important part of programming projects. Programs will be written requirements. **Prerequisite: CIS 1203**

CIS 2174 Advanced Programming (4-0-4)

Advanced programming techniques and concepts are presented using Java Programming. These techniques and concepts include inheritance, polymorphism, graphical user interfaces, event handling, exception handling, files and streams. **Prerequisite course: CIS 2103**

CIS 2203 Database Management Concepts and Applications (3-0-3)

This course introduces students to database programming and applications. Relational databases and database management systems and their properties are studied. Relational database software is utilized within the Windows operating system environment. Students create files, reports, forms, and queries using this package. The use of objects in the database software package is covered. Macros, menus, and toolbars are introduced as part of the development of an effective database management system (DBMS). **Prerequisite: BUS 1603 within the past 5 years with Grade \geq C.**

CIS 2213 Data Communications and Networks (3-0-3)

In this course data communications fundamentals are introduced with emphasis on vocabulary, concepts, and practical applications. Hardware and software interfaces, protocol terminology, and networks are explored. Numerous types of networks are discussed. Various methods of data movement are studied. Basic knowledge of networking skills is introduced in a Windows environment. Skills are developed to familiarize students with proper techniques and utilities to set up and operate a network.

Pre- or Co-requisite: CIS 1003 with Grade \geq C.

CIS 2514 Database and Queries (4-0-4)

This course will introduce the students to Structured Query Language (SQL) and how to utilize SQL to retrieve information from a database. It develops skills to build a database by creating tables, indexes, views, users, and sequences as well as populating and manipulating the data within tables. **Prerequisites: CIS 2203 and CIS 1203**

CIS 2613 Systems Analysis and Design (3-0-3)

The systems development life cycle is introduced to enable students to understand and appreciate the requirements of designing and implementing a computer information system. Time management and human resource requirements are explored. Students are prepared to use systems analysis and design techniques to take a problem and create a solution using the latest hardware and software development tools. A real-world problem is assigned and a solution proposed using SDLC techniques. This course integrates concepts learned in previous Computer Information Systems classes.

Prerequisites: 45 hours in the CIS and one of the following: CIS 1203, CIS 2113, CIS 2123, CIS 2133

CIS 2991 Internship in Computer Information Systems (0-4-1)

A minimum of 50 contact hours is required.

MOS Testing Fee: \$90

CIS 2992 Internship in Computer Information Systems (0-7-2)

A minimum of 100 contact hours is required.

MOS Testing Fee: \$90

CIS 2993 Internship in Computer Information Systems (0-10-3)

These courses are designed to give students an opportunity to enhance their knowledge by applying what they have learned in a work situation. Students work with their faculty advisor and internship employer to develop an education plan with meaningful learning objectives based on their program of study. A minimum of 136 contact hours required. **Prerequisite: 45 credit hours in CIS and completion of an Internship Agreement, MOS Testing Fee: \$90**

CJS 1003 Introduction to Criminal Justice (3-0-3)

ACTS Equivalent Course Number = CRJU 1023

This course examines the philosophy and history of the criminal justice system, which is composed of the police, the courts and corrections, and the interaction of these agencies with one another.

CJS 1013 Criminal Evidence/Court Procedures (3-0-3)

An examination of the rules governing the admissibility of evidence, specifically as they affect the law enforcement officer in the processes of arrest, force, search, seizure, protective custody, testimony, and courtroom procedures.

CJS 1023 Criminal Investigation (3-0-3)

The investigation activity of the police department is studied to evaluate its organization, functioning, and relationship with other divisions and agencies. Emphasis is placed on the administration, report writing, and procedural aspects of investigation.

CJS 1033 Municipal Police Administration (3-0-3)

Principles of organization, administration, and functioning of the police department to include inspection and control, personnel, training, and operations. Emphasis is also placed on operational services, records, and communications.

CJS 1043 Police Community Relations (3-0-3)

Attention is given to the needed balance between law enforcement and the community regarding their interaction with the criminal justice agencies. A survey of the factors involved in the designing and implementation of community relations programs will be considered.

CJS 1053 Juvenile Delinquency (3-0-3)

Historical, theoretical and practical aspects of the juvenile justice systems will be addressed. Causes of deviance among youth will also be explored, and relevant court cases and legal trends will be reviewed.

CJS 1073 Investigative Report Writing (3-0-3)

Designed to provide a basic foundation for the creation of accurate, complete and organized written reports, this class focuses on the nature, techniques and mechanics required for criminal justice professions.

CJS 1083 Traffic Accident Investigation (3-0-3)

A study of the application of techniques utilized in the investigative process involved in traffic accidents. The techniques will include instruction regarding the reporting of traffic accidents, data collection at the scene, and practical exercises in writing and producing correct traffic accident reports. Instruction will also include the use of drawings, maps, and photographs used in traffic accidents and how they are utilized in civil and criminal courts. Traffic laws will be discussed as they generally relate to vehicles and accidents.

CJS 1203 Special Topics in Criminal Justice (3-0-3)
Advanced Police Administration

In conjunction with the University of Arkansas system Criminal Justice Institute, this course will cover advanced police administration and supervision theories, techniques and issues. Specifically, the course will focus on legal aspects of police discipline and labor problems, the Civil Rights Act of 1991, equal employment opportunity laws, discrimination claims, the Americans With Disabilities Act, and administrators' liability regarding selection, training, hiring and termination of employees. Course is restricted to CJI students. **Prerequisites:** completion of 45+ clock hours of active Criminal Justice Institute coursework.

Corequisites: Pursuit of an A.A.S. degree in Criminal Justice and current employment with a federal, state or local criminal justice agency.

CJS 1303 Special Topics in Criminal Justice (3-0-3)
Correctional Management and Supervision

In conjunction with the University of Arkansas System Criminal Justice Institute, this course focuses on the inmate management issues, correctional emergency response team concepts, security issues, stress management and civil liabilities of the correctional facility and its personnel. Course is restricted to CJI students. **Prerequisites:** completion of 45+clock hours of Criminal Justice Institute coursework. **Corequisites:** Active pursuit of an A.A.S. degree in Criminal Justice and current employment at a local criminal justice agency. This course may be repeated for a maximum of six hours.

CJS 2003 Substantive Criminal Law (3-0-3)

Modern criminal law is examined from historical and philosophical aspects of the criminal justice system. Emphasis is placed on leading case law and the application of recent Supreme Court rulings to present day law enforcement.

CJS 2013 Comparative Criminal Justice (3-0-3)

An analytical overview of crime in democratic societies is presented. Emphasis will be given to the study of crime in America and how the criminal justice process compares to other nations' political, economic, and social aspects of society.

CJS 2023 Principles of Police Patrol (3-0-3)

This course includes principles of police patrol including beat patrol, preliminary investigation, crimes in progress, report writing, and field note taking.

CJS 2033 Introduction to Corrections (3-0-3)

This course is designed to provide students with an overview of the historical and philosophical foundations of the American correctional system. Emphasis will be place on the organizational and operational components of corrections, including jails, prisons, probation, parole, and community-based correction programs.

CJS 2043 Internship in Criminal Justice (0-10-3)

This course is designed to provide the student with theory and practical application of the criminal justice system. Students will be exposed to hands-on interaction with local, state, and federal law enforcement agencies, facilities, and the courts. Students work with their faculty advisor and internship employer to develop an education plan with meaningful learning objectives based on their program of study. **Prerequisites:** 45 credit hours toward graduation in the A.A.S. Criminal Justice program, registration for the internship during the preregistration period prior to the semester of enrollment, and completion of an Internship Agreement.

CJS 2053 Constitutional Rights of Inmates (3-0-3)

Students will be introduced to the various constitutional rights guaranteed to inmates, including the use of mail, visitation and legal services. **Prerequisite:** CJS 1003

CJS 2063 Crime Scene Photography (1-3-3)

Law enforcement photography techniques are presented through classroom lectures and hands-on laboratory exercises. The class provides step-by-step instruction in preparing photographs for courtroom presentation. Students must have access to a 35mm camera.

CJS 2083 Survey of Correctional Counseling (3-0-3)

Following the trend toward rehabilitation, this course provides the basic concepts involving counseling of the unwilling or involuntary client in the prison setting. Basic counseling theory, appropriate methods and techniques and relevant court cases establishing the necessity of counseling and rehabilitation will be discussed.

Prerequisite: CJS 2033

CJS 2093 Using Technology in Criminal Justice (3-0-3)

This course is designed to teach the application of technology in the criminal justice field, procedures for evidence collection and case presentation. This course is intended as an advanced course for second-year criminal justice students and police officers. The student will learn and develop a repertoire of scientific techniques that police officers and investigators use in various criminal investigations. The development of advanced skills using technology will enable current and future police officers to increase their effectiveness and thus achieve higher rates of conviction. **Prerequisites:** CJS 1023

CJS 2103 Ethical Issues in the Justice Professions (3-0-3)

This course will explore the concepts of ethical reasoning and morality as they relate to the unique environments of justice professionals. Integrity is a crucial component of the justice process; players in the system (law enforcement, courts, corrections) have unique challenges that must be faced in order to fulfill the goals of justice.

CON 1003 Construction Craft Skills (3-0-3)

This course includes modules for building foundation skills in construction and provides the tools necessary for achieving workplace success. It focuses on the hand and power tools safety and proper usage. An introduction to construction math and employability skills is also covered.

CON 1014 Construction Technology I (3-2-4)

This course builds on the student's skills in job-site safety, construction math, and hand/power tools. Students will also develop skills in rigging techniques and the safe assembly and use of scaffolding. Additional skills will include the operation and maintenance of light construction equipment used on the construction site including skid steer, aerial lift, forklift, scissor lift, generators, compressors, and compactors.

CON 1024 Construction Technology II (3-2-4)

This course is a companion to Construction Technology I and shall provide the student the opportunity to develop skills in site layout, form setting and placement, rebar layout and placement, and the pouring and finishing of concrete. Additional skills will include the use of maintenance of the cutt-off saw and rebar bender.

DFT 1013 Fundamentals of Drafting (1-3-3)

This course is designed to provide basic knowledge relating to mechanical drawing on the technical level. Topics covered include basic drafting techniques, lettering, geometric construction, multi-view and pictorial sketching, auxiliary views, sectioning, and dimensioning plus a laboratory activity to assist the student in obtaining necessary graphic skills. **Lab Fee: \$15**

DFT 1023 Introduction to Computer Aided Drafting (1-3-3)

This course is designed to provide a basic knowledge of computer aided drafting systems and their application to the drafting field. The student will become knowledgeable in using the computer as a drafting tool to create detail drawings. **Lab Fee: \$15**

DFT 1113 Construction Materials (2-2-3)

A course designed to familiarize the student with the physical properties of the materials generally used in the erection of a structure, with a brief description of their manufacture. **Lab Fee: \$15**

DFT 1123 Intermediate CADD (1-4-3)

This course is designed to be a continuation of Introduction to Computer Aided Drafting (DFT 1023). Subject areas will include plotting, dimensioning, sectional views, and pictorials. The lab component is designed to expand the information and number of drawings in the subject area being covered in Intermediate CAD. Emphasis is placed on dimensioning and sectional views. **Prerequisites: DFT 1013 and DFT 1023, Lab Fee: \$15**

DFT 1213 Construction Techniques/Methods (3-3-3)

This course introduces the student to building construction methods used in light and heavy framed structures.

Lab Fee: \$15

DFT 1313 Estimating (2-2-3)

This course acquaints the student with the basic principles and current practices employed in estimating construction costs. The student prepares material and labor quantity surveys from working drawings and specifications for residential and commercial buildings. The principles of bid procedures and requirements of construction projects are introduced. **Lab Fee: \$15**

DFT 2023 Advanced CADD (1-4-3)

This course is designed as a continuation of Intermediate CAD. Emphasis is placed on attributes, slide shows, the user coordinate system, 3-D faces, and solid modeling. **Prerequisite: DFT 1123, Lab Fee: \$15**

DFT 2113 Tool & Die Drafting (2-2-3)

This course provides knowledge of the metal working industry and the design of tools necessary in the metal removal processes used in production. Covered is a study of the basics in drawing and designing simple blanking, piercing, and forming dies used in the metal working industry. This course also stresses using the computer as a drafting/design tool in creating drawings of jigs, fixtures, and gauges as well as in creating drawings of die sets for metal parts. **Lab Fee: \$15**

DFT 2203 Architectural Drafting IW/CADD (1-3-3)

This course provides knowledge of architectural drawing with emphasis on residential design. Skills development using the computer as a drafting/design tool in making drawings for residential design will be stressed.

Prerequisite: DFT 1023, Lab Fee: \$15

DFT 2223 Architectural Drafting II (1-3-3)

This course covers drawing concepts used in commercial construction. Special emphasis will be placed on pre-stressed, pre-cast, and structural steel members. Zoning and parking will be studied. Includes a laboratory activity to assist the student in obtaining the necessary graphic skills introduced. **Prerequisite: DFT 2203, Lab Fee: \$15**

DFT 2233 Structural Drafting (1-4-3)

This course introduces the student to structural sections, terms and conventional abbreviations. Symbols used by structural fabricators and erectors are studied also. Knowledge is gained in the use of A.I.S.C. Handbook. Problems are studied that involve structural designing and drawing of beams, columns, connections, trusses, and bracing. **Prerequisite: DFT 1013, Lab Fee: \$15**

DFT 2303 Mechanical Drafting I W/CADD (1-3-3)

This course extends the student's knowledge of the drafting field relating to mechanical components used in industry. This course allows the student to develop additional skills in using the computer as a drafting/design tool.

Prerequisite: DFT 1023, Lab Fee: \$15

DFT 2313 Electrical/Electronic Drafting with CADD (1-3-3)

This course extends the student's knowledge of the drafting field to the electrical/electronics industry. The use of the computer as a drafting/design tool in creating schematic, wiring diagram, and printed wiring drawings will be emphasized. **Prerequisite:** DFT 1023, Lab Fee: \$15

DFT 2323 Mechanical Drafting II W/CADD (2-2-3)

This course is a continuation of Mechanical Drafting I with CAD with emphasis on advanced techniques and knowledge employed in the planning of mechanical objects. Includes instruction in pipe drafting and the use of tolerancing and dimensioning techniques.

Prerequisite: DFT 2303, Lab Fee: \$15

DFT 2413 Codes and Regulations (3-0-3)

This course provides a study of basic codes directly affecting Architectural, Structural and Mechanical drafting. Topics covered include but not be limited to the Southern Building Code (SBC), the National Electric Code (NEC) as established by the National Fire Protection Association (NFPA), local building codes (County and City, and other codes that may be deemed essential to the development of effective drafters). **Prerequisite:** DFT 2203, DFT 2303

DFT 2901 Special Projects in Drafting/Design (0-2-1)**DFT 2902 Special Projects in Drafting/Design (0-4-2)****DFT 2903 Special Projects in Drafting/Design (0-6-3)**

This course is designed to provide the student with the practical application of skills and knowledge gained in other drafting courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience.

DFT 2923 Drafting and Design Internship (0-10-3)**DFT 2926 Drafting and Design Internship (0-20-6)**

This course is a cooperative internship between industry and education and is designed to integrate the student's technical studies with industrial experience. Students work with their faculty advisor and internship employer to develop an education plan with meaningful learning objectives based on their program of study. A minimum of 136 contact hours required for DFT 2923, a minimum of 272 contact hours required for DFT 2926. **Prerequisites:** 45 credit hours in Drafting and Design, registration for the internship during the preregistration, and completion of an Internship Agreement.

DRA 1003 Theater Appreciation (3-0-3)

ACTS Equivalent Course Number = DRAM 1003

This course is an introduction to theater arts including history, dramatic works, stage techniques, production procedures, as it relates to the fine arts, society, and the individual.

DRA 1053 Introduction to Theater Arts (3-0-3)

A general introduction and orientation to the various areas of the theater arts: structure of drama; acting; directing; scene construction; lighting; general production requirements.

DRA 1063 Acting I (3-0-3)

An introduction and study of the theories and styles of acting. Group and individual projects in different types and periods of roles and plays.

DRA 2001 Special Topics in Drama (1-0-1)**DRA 2002 (2-0-2)****DRA 2003 (3-0-3)**

Special topics drama courses will be offered at the discretion of the department when the need or interest is apparent. May be repeated for credit.

DST 1004 Introduction to Diesel Engines (3-2-4)

This course is the first course in diesel technology. Students will gain skills in shop safety and other basic skills that will prepare them for specific diesel courses. The following topics will be covered: the basic theory of the internal combustion engine, the inventor of the diesel engine and its development, major components of a diesel engine, the proper use of precision measuring instruments, identifying different grades of fasteners and proper use of hand tools. Particular attention is given to the ability to follow detailed instructions from service manuals. **Lab Fee: \$15**

DST 1014 Introduction to Fuel Systems (3-2-4)

This course covers the different types of diesel injection systems and their operation. The students will learn to identify the different components that make up complete fuel delivery systems and that components specific function. All four major types of fuel systems will be broken down and described in detail. The student will learn what parts and seals in older fuel systems are prone to failure due to the use of biodiesel. This course will prepare the student for the diesel engine diagnosis and repair courses by familiarizing them with the most complex part of a diesel engine, the fuel system. **Lab Fee: \$15**

DST 2004 Diesel Engine Diagnosis and Repair (3-2-4)

This course is designed to instruct the student on correct diesel engine failure diagnosis and repair procedures. This will be done through failure analysis of each diesel engine component. Emphasis is placed on component identification and how it relates to the particular failure. All types of parts failure will be covered from minor to catastrophic and the proper repair procedures for each. Fuel system failure diagnosis will studied as it relates to high concentrations of biodiesel and the moisture it sometimes introduces to the fuel system and its high solvent properties. **Lab Fee: \$15**

DST 2124 Advanced Diesel Engine Diagnosis and Repair (3-2-4)

This course is a continuation of diesel engine diagnosis and repair. Students will perform timing and tune-up procedures on different makes and models of diesel engines. They will learn to use each individual type of diagnostic and testing equipment that is in use in repair shops at the present time. The course will cover mechanical and electronic failure. They will learn to identify different types of failures by studying wear patterns on moving parts as well as detailed electronic system diagnosis and repair.

Prerequisite: DST 2004, Lab Fee: \$15

ECO 2103 Principles of Macroeconomics (3-0-3)

ACTS Equivalent Course Number = ECON 2103

This course provides a general introduction to basic concepts in economics, including national income, money and banking, fiscal policy, and economic growth. Emphasis is placed on macroeconomics as applied to the world of today.

ECO 2203 Principles of Microeconomics (3-0-3)

ACTS Equivalent Course Number = ECON 2203

This course provides a general introduction to the area of microeconomics, emphasizing price theory, income distribution, employment of resources, and international economics, relating them to the fundamentals of supply and demand. Students develop an understanding of the different types of market systems including pure competition, monopoly, oligopoly, and monopolistic competition and their implications.

EDN 1002 College Orientation and Career Planning (2-0-2)

This course is for any beginning freshman (with less than 24 hours of credit) and provides a variety of experiences, exposures, and encounters between students and the institution. In addition, the course will address planning, decision-making, knowledge and use of information resources, general world of work information, and detailed information about occupations of one's preference and teaches skills which can be used again and again as individuals make new choices in successive life stages.

EDN 1003 Introduction to Multimedia (3-0-3)

This course introduces the student to the basic skills of multimedia. Multimedia concepts and literacy will be covered as well as how to choose the appropriate software to design and produce effective presentations. Students receive hands-on experience working with images, audio, and video while using PowerPoint, Adobe 6.0, and Adobe Premiere 6.0. Prerequisite: BUS 1603 must be completed within the past 5 years with Grade \geq C or permission.

EDN 1023 Keys to College Success (3-0-3)

This course includes a detailed and thorough orientation to the college campus. Guest speakers from Financial Aid, Student Services, etc., will make presentations to the class. The course will also include lecture and practice sessions on study skills, note-taking, classroom and campus etiquette, test-taking, written and oral communication, and library use. EDN 1023 Keys to College Success is mandatory for all students required to enroll in any one of the following courses: LAN 0966, LAN 0973, MTH 1073, or MTH 1093. However, the course is open to all students.

EDN 1031 FYI: First Year Information (1-0-1)

First Year Information is a one-credit hour course designed to give students the opportunity to acquire the skills necessary to be successful in their college career, as well as in the professional career. The purpose of the course is to help ensure academic success for students and to encourage a sense of community among students.

EDN 1013 Teaching the Adult Non-Reader (1-2-3)

A course designed to train students to tutor adult non-readers using effective methods of teaching reading and life skills. Instruction includes lecture, role-playing, discussion, supervised practicum, and exams. Each student tutor will be assigned an adult non-reader for 3 hours a week in a supervised lab situation.

EDN 2053 Introduction to Education (3-0-3)

A course designed to help students gain a comprehensive understanding of teaching as a career, to prepare the college student to enter the public school setting as a responsible observer and to provide students with varied observation experience that will develop a foundation for subsequent professional course work (20 clock hours of elementary classroom observation and directed assignments required).

EDN 2073 Survey of Early Childhood Education (3-0-3)

This survey course concentrates on examining educational foundations from historical and philosophical views, surveying current and legal issues, and emphasizing models and strategies for early childhood education programs. Six hours of observations in an early childhood education environment are required in the course.

EDN 2083 Child Growth and Development (3-0-3)

This course studies environmental and heredity effects on the cognitive, affective, psychomotor, and sociolinguistic development of typically and atypically developing children and adolescents. Students will learn to analyze, use, and incorporate an inclusive understanding of key theories of learning and how these theories are related to the physical, cognitive and emotional changes that occur during each developmental stage. Students will be introduced to observation and evaluation of children's and adolescents' development and to recognize possible delays in development. Practical application of theory is provided through a variety of hands-on experience and 5 clock hours of required observation.

EDN 2093 Praxis Preparation (3-0-3)

This course is designed for students pursuing a teaching degree to promote their understanding of the principles of successfully passing PRAXIS I. There is a particular emphasis on practicing the skills necessary for understanding how to take the test and on the three content areas of the PRAXIS I (Reading, Writing, Math). The course highlights the application of skill-based decision making in test preparation. Implications of individual differences are also discussed (test anxiety, depression, etc.). The course concludes with students taking several practice exams similar to the PRAXIS I.

EDN 2193 Educational Technology (3-0-3)

This course covers the use of computer-based technologies, including multimedia tools, essential to the K-12 educational process. Creation of classroom and instructional materials appropriate for the curriculum and grade levels are emphasized. Prerequisite: BUS 1343 or keyboarding skills.

EDN 2203 Exceptional Child (3-0-3)

This course examines historical and current delivery of special education services and program practices. Legal foundation and issues, special education terminology, and professional roles are addressed.

EDN 2213 Children's Literature (3-0-3)

This course reviews the major theories and concepts related to cognition, metacognition, and motivation for reading for students in the K-12 settings, including students with special needs. The course teaches candidates how to analyze and integrate developmentally appropriate literature across a standards-based curriculum—digitally and through traditional print. This is one course in a series of literacy courses for teacher candidates.

EGR 1004 Fundamentals of Engineering I (3-2-4)

This course provides an introduction to the field of engineering, the engineering process and possible career opportunities. Students use a hands-on approach to explore the engineering system and manufacturing procedures. Students develop problem solving skills utilized in the engineering profession. Students will be required to demonstrate keyboarding skills, computer aided drafting skills as well as basic computer knowledge and capabilities.

Lab Fee: \$15

EGR 1013 Blueprint Reading (2-2-3)

This course provides students with the knowledge and skills required to interpret a variety of blueprints, schematics and technical drawings. Topics include engineering drawings in the machine, electrical and manufacturing fields. Construction drawings are examined from architectural schematics to structural fabrication and erection drawings.

Lab Fee: \$15

EGR 1024 Fundamentals of Engineering II (3-2-4)

This course is a continuation of Fundamentals of Engineering I. Students will use state of the art computers and software to complete complex engineering projects. Students will continue to develop problem solving skills utilized in the engineering profession. The purpose of the course is to give students experience in the field of engineering and to determine if engineering could be a possible career choice. **Prerequisite: EGR 1004, Lab Fee: \$15**

EGR 2003 Geometric Dimensioning and Tolerancing (2-2-3)

This course introduces students to the quality control techniques utilized in various precision measurement applications. The coordinate system, ANSI standards and ASME Y14.5m will be reviewed and practical applications explored. Students will study form controls, orientation controls, run out controls and the tolerance of position. **Lab Fee: \$15**

EGR 2004 Engineering Design I (3-2-4)

This course is an introduction to engineering design. Problem solving skills will be used in conjunction with computer aided drafting and design to create 3-D models and photorealistic renderings of solid models. The course will explore all phases of design from conceptualization to design development and product manufacturing. The purpose of this course is to give students experience in the field of engineering and to determine if engineering could be a possible career choice. **Prerequisites: EGR 1024 and ELE 1124, Lab Fee: \$15**

EGR 2024 Engineering Design II (3-2-4)

This course is a continuation of Engineering Design I. Students will utilize various case studies to explore engineering systems and manufacturing processes. The course will emphasize the design development process of a product from model to manufacturing. Computer aided drafting and design will be used to analyze and evaluate all aspects of product development. **Prerequisite: EGR 2004, Lab Fee: \$15**

EGR 2033 Engineering and Design Project (2-2-3)

Students apply the principles learned in the preceding engineering courses. Computer aided drafting and design will be used to analyze and evaluate all aspects of the engineering problem. The purpose of this capstone course is to give pre-engineering students a platform to display their knowledge of engineering design and development. **Prerequisites: EGR 1024 and ELE 1124, Lab Fee: \$15**

EGR 2034 Engineering Project Development I (3-2-4)

A team approach to solving engineering problems will place students in teams of two to four to analyze, design and construct a solution to engineering problems. Students will apply the principles learned in the preceding engineering courses. Computer aided drafting and design will be used to analyze and evaluate all aspects of the engineering problem. The purpose of this capstone course is to give pre-engineering students a platform to display their knowledge of engineering design and development. **Prerequisites: EGR 1024 and ELE 1124, Lab Fee: \$15**

EGR 2053 Precision Measurement (2-2-3)

This course introduces students to metrology and the importance of accuracy and precision in measurements. Students analyze measurements in manufacturing and in the global market to be able to determine and describe resolution, accuracy, precision, calibration and working standards. A variety of instruments will be used to study measuring procedure and analysis of measured data.

Lab Fee: \$15

EGR 2054 Engineering Project Development II (3-2-4)

A team approach to solving engineering problems will place students in teams of two to four to analyze, design and construct a solution to engineering problems. Students will apply the principles learned in the preceding engineering courses. Computer aided drafting and design will be used to analyze and evaluate all aspects of the engineering problem. The purpose of this capstone course is to provide pre-engineering students a platform to display their knowledge of engineering design and development. **Prerequisite: EGR 2034, Lab Fee: \$15**

EGR 2062 Statistical Process Control (2-0-2)

This course introduces the basic concepts and tasks of Statistical Process Control (SPC) including data collection, calculation of values, construction of values, and control charts, and interpretation of variations.

Prerequisite: MTH 1113

EGR 2923 Engineering Technology Internship (0-10-3)

This course is a cooperative internship between industry and education and is designed to integrate the student's technical studies with industrial experience. Students work with their faculty advisor and internship employer to develop an education plan with meaningful learning objectives based on their program of study. A minimum of 136 contact hours are required. **Prerequisite: 45 credit hours in EGR, registration for internship during the pre-registration, and completion of an Internship Agreement.**

EHS 1003 Introduction to Environmental Technology (3-0-3)

An introductory course designed to acquaint students with different aspects of the environmental technology field. This course specifically addresses air, water, and soil pollution, OSHA, hazardous waste, recycling, as well as other current issues. An overview of job opportunities will also be discussed.

EHS 1113 Environmental Regulations (3-0-3)

This course will present an overview and summary of the regulatory and legal requirements associated with environmental technology. The critical impact of accurate and complete records maintenance upon the overall success of environmental and hazardous waste management programs will be emphasized. Whenever possible, requirements in Arkansas will be used as the model presented in class.

EHS 1134 Environmental Sampling and Analysis I (3-2-4)

This course is a basic approach to field samplings and analytical testing often associated with environmental assessments and regulatory compliance activities. Emphasis will be placed on designing appropriate sampling schemes, appropriate use of sampling equipment and analysis of collected data. Hands-on experience will be a vital part of this course with students conducting sampling in real world situations. **Prerequisites: EHS 1003 (Grade \geq C), Lab Fee: \$15**

EHS 2134 Environmental Sampling and Analysis II (3-2-4)

This course continues with consideration of sampling designs and effective sample collection, handling, preservation, and shipping requirements often associated with environmental assessments, regulatory compliance and safety monitoring. Introductory analysis will also be conducted and emphasis will be given to correct summary reports from sample collections. **Prerequisite: EHS 1134 (Grade \geq C), Lab Fee: \$15**

EHS 2223 Hazardous Waste Operations HAZWOPER (3-0-3)

This course is designed to provide the training (HAZWOPER) required under 29 CFR 1910.120 for hazardous waste site personnel. Topics include hazard recognition, hazard control, monitoring, work practices, emergency response, and right and responsibilities.

EHS 2233 Chemistry of Hazardous Materials (3-0-3)

This course introduces students to the basic concepts of chemistry and physics which are essential for the characterization of the chemical hazards such as carcinogens, corrosives, explosives, flammables, oxidizers, and radioactive materials. Student will also become familiar with the chemistry of some elements, principles of chemical reactions, and the use of various reference books. **Prerequisite: CHE 1024 (Grade \geq C)**

EHS 2331 Current Issues in Environmental Technology (1-0-1)

This course will cover a number of current issues facing people in the Environmental Technology field. Coursework will involve discussion of issues with emphasis on examining a number of viewpoints on each issue. Effort will be made to tie concepts learned in previous classes to examine these real life situations. **Prerequisites: EHS 1003 and EHS 1113 Grade \geq C.**

EHS 2493 Environmental Health and Safety Internship (0-10-3)

This course is a cooperative internship between work environment and education and is designed to integrate the student's technical studies with work experience. Students work with their faculty advisor and the internship employer to develop an education plan with meaningful learning objectives based on their program of study. A minimum of 136 contact hours is required. **Prerequisite: 45 credit hours in EHS, registration for internship course during pre-registration, and completion of an Internship Agreement.**

ELE 1001 Understanding Basic Electricity and Electronics (1-0-1)

This course is an introduction to basic electrical terminology, units, symbols, concepts, and notation. An emphasis will be put on the application in a manufacturing setting.

ELE 1004 Electrical Technology I (3-2-4)

An introduction to basic electrical terminology, units, symbols, concepts, notation, and basic measurement techniques and equipment. Topics include charge, DC current and potential, resistance, Ohm's Law, power, series and parallel circuits, and basic troubleshooting techniques. **Prerequisite: MTH 1093 or MTH 1083, Lab Fee: \$15**

ELE 1011 Using and Maintaining Transformers (1-0-1) and AC Circuits

This course is an introduction to the use of transformers and other power transfer devices as applied to motors and motor controls.

ELE 1021 Electrical Measuring Instruments (1-0-1)

This course is an introduction to basic electrical measurement techniques and equipment. An emphasis will be put on the proper use and maintenance of measuring equipment in an industrial setting.

ELE 1023 Motor Controls (2-2-3)

This course introduces the student to the electronic devices, circuits, and systems used to control machinery, processes and facilities in industry. Power control, single and three-phase rectifier, servomechanism, and transducer circuit applications are also studied. The theory and operating characteristics of DC and single and three-phase motors are taught and verified in a lab setting. **Lab Fee: \$15**

ELE 1024 Electrical Technology II (3-2-4)

A continuation of ELE 1004. Topics include magnetics, inductance, capacitance, AC, inductive and capacitive reactance, impedance, passive filters, and circuit analysis/troubleshooting techniques. **Prerequisite: ELE 1004, Lab Fee: \$15**

ELE 1031 Electrical Safety and Protection (1-0-1)

This course is an introduction to proper safety and protection techniques associated with electrical maintenance technology in an industrial setting. Students will be required to demonstrate safe practices in a manufacturing setting.

ELE 1041 Operating/Maintaining DC Equipment and Controls (1-0-1)

An introduction to the electronic devices, circuits, and systems used to control machinery, processes, and facilities in a manufacturing setting.

ELE 1051 Operating/Maintaining Single Phase Motors (1-0-1)

This course is an introduction to the power control and operating characteristics of single-phase rectifier, servomechanism, and transducer circuit applications.

ELE 1054 Electronics I (3-2-4)

This course introduces the student to solid state theory and devices. Topics include semiconductor materials, the PN junction diode, special diodes, bipolar and field effect transistors, thyristors, and optoelectric devices. **Prerequisite: ELE 1004, Lab Fee: \$15**

ELE 1061 Operating/Maintaining Three Phase Motors (1-0-1)

This course is an introduction to the operation and maintenance of three-phase rectifier, servomechanism, and transducer circuit applications. The operation characteristics and applications of three-phase motors will be stressed.

ELE 1071 Developing Electrical Troubleshooting (0-2-1)

This is a lab course designed to provide hands-on experience with various electrical troubleshooting techniques and theories associated with equipment in an industrial setting. **Lab Fee: \$15**

ELE 1114 Electrical-Electronic Technology (3-2-4)

This is an introductory course in basic electronics. Students learn the basics of resistors, capacitors, and inductors and how electrical resistance, current, and power apply to those components. Students are introduced to basic solid state electronics components. They also utilize the computer as a drafting/design tool to create schematic and wiring diagrams and printed circuitry. **Prerequisite: MTH 1093, Lab Fee: \$15**

ELE 1124 Solid State and Digital Electronics (3-2-4)

This course covers digital electronics and logic and how they can be applied in the use of robotics. This course addresses in detail the various types of digital integrated circuits. BOOLEAN Algebra will be introduced as an important digital electronic design method. Circuits created as a part of classroom projects will be created and simulated on the computer to test their function for proper operation. Robotic fundamentals will be covered with emphasis on industrial robotics and the actual use of an industrial-type robotic arm. **Prerequisite: ELE 1114, Lab Fee: \$15**

ELE 2004 Electronics II (3-2-4)

An introduction to electronic circuits employing solid state devices. Topics include bias and stabilization, typical amplifiers, linear integrated circuits, active filters, power supplies, oscillators, pulse circuits, and modulation.

Prerequisite: ELE 1054, Lab Fee: \$15

ELE 2144 Programmable Logic Controllers (3-2-4)

This course describes the Programmable Logic Controller (PLC) and discuss its advantages over relay systems. It identifies the primary parts of the PLC and describe their functions. Number systems and codes are reviewed with emphasis on their use in programming a PLC. General maintenance procedures for a PLC are also discussed.

Lab Fee: \$15

ELE 2154 Digital Electronics (3-2-4)

An introduction to digital logic elements and electronic circuits employing digital techniques. Topics include number systems, data codes, logic elements, digital integrated circuits, registers, and sequential and combinational logic. **Prerequisite: ELE 1054,**

Lab Fee: \$15

EMT 1002 Emergency Medical Systems (2-0-2)

This course is an introduction to the EMS community. Topics covered include the well being of the paramedic, medical-legal concerns, ethical issues, therapeutic communications, and documentation. This course also presents the techniques for conducting a comprehensive physical examination and review of systems for patients presenting in the prehospital environment. Critical thinking and clinical decisions based on appropriate assessment techniques are discussed.

EMT 1009 Emergency Medical Technician (8-4-9)

The EMT program provides the student with an outline of the EMS systems, introduction to assessment skills, as well as provides basic pathophysiology of common neurological, respiratory, cardiac, and trauma related emergencies. The program will also include lifespan development, legal and ethical issues, the EMS profession, communication techniques, and life threatening emergencies. The EMT program requires the student to complete 24 hours of clinical emergency department time and 24 hours of ambulance 3rd ride- along with auto extrication hours.

Malpractice Insurance: \$65

EMT 1010 Clinical Applications for Fundamentals of Paramedic (0-9-0)

This course provides clinical experience in the hospital performing medication administration with the understanding of basic pharmacological principles, airway management, and assessment skills. **Corequisite: EMT 1017**

EMT 1017 Fundamentals for Paramedic (4-9-7)

Content is presented to areas of prehospital environment to include, but not limited to: an introductory study of modern Emergency Medical Services, basic principles, procedures, and techniques of emergency care concepts regarding pathophysiology, research in EMS, life span development, and public health. **Prerequisites: Arkansas EMT Certification; Pre or Corequisites: EMT courses from Term I; Corequisites: EMT 1010. FISDAP Fee: \$100, Malpractice Fee: \$80**

EMT 1020 Clinical Applications for Medical Emergencies (0-9-0)

This course provides clinical rotations for training in advanced assessment skills and procedures in the acute care setting of the respiratory department and critical care ICU. Students will also complete a 12-hour emergency room rotation. **Corequisite EMT 1028**

EMT 1028 Medical Emergencies (5-9-8)

Assessment and management of cardiac and advanced airway management are studied integrating pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for patients experiencing medical emergencies in prehospital care environment, involving the respiratory, cardiac, neuro, endocrine gastroenterological, and renal/urinary emergencies. **Prerequisites: All EMT courses from Term I. Pre or Corequisites: EMT courses from Term II; Corequisite EMT 1020, ACLS Card Fee: \$10**

EMT 1131 Prehospital Assessment Techniques (1-0-1)

This course presents the techniques for conducting a comprehensive physical examination for patients presenting in the prehospital environment. Critical thinking skills and clinical decision making will also be discussed.

EMT 2023 Concepts of Paramedic Care Management (3-0-3)

This course provides test-taking skills for the National Registry practical and written examination. The content areas incorporated in this course will be cardiac emergencies, medical emergencies, OB/GYN/Pediatrics, operations management, trauma, and airway and breathing. **Prerequisites: All required EMT courses from Term I, II, and III, Corequisites: EMT course from Term IV**

EMT 2030 Clinical Applications of Traumatology (0-9-0)

This course provides clinical rotations for training in the assessment and management of gynecological, obstetrical, neonatal, pediatric and geriatric patients. Students will address the transitions from the prehospital environment to the controlled hospital setting. **Corequisite EMT 2037**

EMT 2037 Traumatology (4-9-7)

This course deals with integration of the principles of kinematics to enhance the patient assessment and predict the likelihood of injuries based on the patient's mechanism of injury. Also studied are gynecological, obstetrical, neonatal, pediatric and geriatric patients.

Prerequisites: All EMT courses from Terms I and II; **Pre or Corequisites:** EMT courses from Term III; **Corequisite** EMT 2030

EMT 2043 Operations for Paramedic (3-0-3)

Topics studied in this course include operations that affect the scene, safety, assessments, and management. Also studied are hazardous materials, crime scene awareness, rescue operations, medical incident command.

Prerequisites: All EMT courses from Terms I, II, and III; **Corequisites:** EMT courses from Term IV, **FISDAP Fee: \$40, Malpractice Fee: \$80**

EMT 2046 Field Internship (0-20-6)

This field internship requires students to complete 300 clock hours on the ambulance and serve as a team leader on an advanced life support unit. Students will be required to complete 50 team lead contacts. Students will have supervised experience in the prehospital care setting applying previously learned knowledge and skills.

Corequisites: EMT courses from Term IV

EMT 2303 Pharmacology for Paramedic (3-0-3)

This course covers drug laws, indications and administration of emergency drugs, along with mathematical calculation of dosages.

ENG 0943 Conversational English as a Second Language (3-0-3)

Conversational English as a Second Language is designed for the non-English speaking student who desires a working knowledge of the language. Students begin by identifying items such as clothing, colors, grocery items, etc. and basic parts of speech. Participants learn to express their thoughts and gradually begin basic reading and writing activities.

ENG 1013 English Composition I (3-0-3)

ACTS Equivalent Course Number = ENGL 1013

English Composition I is designed to improve communication skills with emphasis on the mechanics of writing using the short essay as the vehicle. The course may include principles and techniques of expository and persuasive composition, analysis of texts with introduction to research methods, and critical thinking.

Prerequisites: Grade of C or better in LAN 0966 if required to enroll or appropriate placement scores as indicated on the College's placement test score table. Test scores used for placement must be no older than five years.

Co-requisite: LAN 0973 **Language Enhancement II.** Students are placed into LAN 0973 based on test scores and/or previous grades as indicated in the LAN 0973 course description. Since LAN 0973 and ENG 1013 are co-requisites, they must be taken together. LAN 0973 cannot be taken by itself. A student must earn a C or better in both courses during the same semester, or must repeat both courses. A student who wishes to withdraw from one course must withdraw from both.

ENG 1023 English Composition II (3-0-3)

ACTS Equivalent Course Number = ENGL 1023

A continuation of 1013 emphasizing quality and forms of writing culminating in the student's production of a research paper. The study of representative examples of major literary types may be included. The course includes further study of principles and techniques of expository and persuasive composition, analysis of texts, research methods, and critical thinking.

Prerequisite ENG 1013 (Grade \geq C) and LAN 0973 (Grade \geq C) if required to enroll.

ENG 1053 Vocabulary Building (3-0-3)

This course stresses processes and techniques of building an improved vocabulary through an examination of roots, prefixes and suffixes.

ENG 2001 Special Topics in English (1-0-1)

ENG 2002 (2-0-2)

ENG 2003 (3-0-3)

Special topics courses will be offered at the discretion of the department when the need or interest is apparent. May be repeated for credit.

ENG 2073 World Literature I (3-0-3)

ACTS Equivalent Course Number = ENGL 2113

Survey of masterpieces of the ancient world, the middle ages and Renaissance. Includes study of movements, schools, and periods.

Prerequisite: ENG 1023 (Grade \geq C)

ENG 2083 World Literature II (3-0-3)

ACTS Equivalent Course Number = ENGL 2123

Selected significant works of world literature from the Renaissance to the present. Includes study of movements, schools, and periods.

Prerequisite: ENG 1023 (Grade \geq C)

ENG 2093 Survey of African American Literature (3-0-3)

This course covers the poetry, essays, short stories, and novels by major authors of African American Literature. Analysis will be made of theme, structure, character, satire, and other literary devices.

Prerequisite: ENG 1023 (Grade \geq C)

ENG 2183 Western Literature I (3-0-3)

ACTS Equivalent Course Number = ENGL 2213

Selected significant works of western literature from ancient, medieval, and Renaissance periods. Includes study of movements, schools and periods.

Prerequisite: ENG 1023 (Grade \geq C)

ENG 2193 British Literature I (3-0-3)

ACTS Equivalent Course Number = ENGL 2673

Selected works of British literature from its beginning through the Renaissance.

Prerequisite: ENG 1023 (Grade \geq C)

ENG 2243 American Literature before 1865 (3-0-3)

ACTS Equivalent Course Number = ENGL 2653

Selected works of American literature from its beginning to 1865. **Prerequisite:** ENG 1023 (Grade \geq C)

ENG 2253 American Literature Since 1865 (3-0-3)
ACTS Equivalent Course Number = ENGL 2663
Selected works of American literature from 1865 to the present. **Prerequisites: ENG 1023 (Grade ≥ C)**

ENG 2283 Western Literature II (3-0-3)
ACTS Equivalent Course Number = ENGL 2223
Selected significant works of western literature from Renaissance to the present period. Includes study of movements, schools, and periods.
Prerequisite: ENG 1023 (Grade ≥ C)

ENG 2293 British Literature II (3-0-3)
ACTS Equivalent Course Number = ENGL 2683
Selected works of British literature from the Renaissance to present. **Prerequisite: ENG 1023 (Grade ≥ C)**

ETR 1003 Introduction to Entrepreneurship (3-0-3)
An introduction to the role of entrepreneurial business in the U.S., the impact of entrepreneurial business on the U.S. and global economy, how ideas become businesses, how entrepreneurs operate within a company and the general precepts of entrepreneurial businesses.

ETR 2003 Professional Selling/Advertising (3-0-3)
A course specifically designed to teach the tools of professional selling and advertising methods to students. Students will learn successful sales techniques for retail and non-retail customers. Students will also learn to develop an advertising program for products and services and the appropriate medium to use.

ETR 2013 Opportunity/Feasibility/Analysis (3-0-3)
This course will develop the student's knowledge of exploiting, determining, and implementing strategies for determining potential entrepreneurial opportunities in the marketplace and analyzing the feasibility of those opportunities.

ETR 2023 Funding Acquisitions for Entrepreneurs (3-0-3)
A course designed to teach the students the various types of funding mechanisms available to the entrepreneurial company and the importance of selecting the proper funding method.

FRE 1014 Elementary French I (3-1-4)
ACTS Equivalent Course Number = FREN 1013
An elementary course for students with no previous experience with the language. Pronunciation, vocabulary, oral and written composition, reading and functional grammar, laboratory practice and listening.

FRE 1024 Elementary French II (3-1-4)
ACTS Equivalent Course Number = FREN 1023
A continuation of French 1014.
Prerequisite: FRE 1014

FRE 2014 Intermediate French I (3-1-4)
ACTS Equivalent Course Number = FREN 2013
Practice in oral and written composition, reading, functional grammar and discussion of selected short stories, plays, and longer works. **Prerequisite: FRE 1024**

FRE 2024 Intermediate French II (3-1-4)
ACTS Equivalent Course Number = FREN 2023
A continuation of French 2014.
Prerequisite: FRE 2014 or equivalent

GEO 2103 World Geography (3-0-3)
ACTS Equivalent Course Number = GEOG 2103
A survey of the geographic regions of the world, including the physical, economic, political, historic, and social influences of a region's geography.

GEO 2223 Physical Geography (3-0-3)
ACTS Equivalent Course Number = GEOG 2223
Examines the nature and character of various components of the physical environment including weather elements, climate, landforms, soil, and natural vegetation.

GER 1014 Elementary German I (3-1-4)
An elementary course for students with no previous experience with the language. Pronunciation, vocabulary, oral and written composition, reading, and functional grammar, laboratory practice and listening.

GER 1024 Elementary German II (3-1-4)
A continuation of German 1014.
Prerequisite: GER 1014 or equivalent

GER 2014 Intermediate German I (3-1-4)
Practice in oral and written composition, reading, functional grammar and discussion of selected short stories, plays, and longer works.
Prerequisite: GER 1024 or equivalent

GER 2024 Intermediate German II (3-1-4)
A continuation of German 2014.
Prerequisite: GER 2014 or equivalent

GIS 1003 Introduction to GIS (3-0-3)
This course teaches the fundamentals of a Geographic Information System (GIS). It introduces the components of the system, theories and concepts of GIS and will explore the application of GIS in a variety of careers. The point and click ARCGIS software version 9.0 will be used to provide students hands-on experience in map creation and manipulation. **Prerequisite: BUS 1603 completed within the past 5 years with Grade ≥ C**

GIS 1303 Cartography for GIS (3-0-3)
This course provides an introduction to cartography and geography. Topics of map design, map interpretation, and map analysis will be covered. Emphasis will be placed on the comprehensive study of history, map projections, map scale, type of maps, and map accuracy.

GIS 2003 Remote Sensing and Data Acquisition (3-0-3)
This course is an overview of theories and principles of remote sensing and data acquisition. It provides the background ability to input data from various sources for use in GIS projects. Students will learn how various satellites and sensor systems are used to identify how images are corrected and analyzed. Obtaining GIS data, formatting and formal conversion of digital GIS data management will also be covered. **Prerequisite: GIS 1003 and GIS 1303**

GIS 2203 Advanced GIS (3-0-3)

This course continues the hands-on use of GIS system using the ARCGIS 9.0 software. Advanced topics such as planning, management, and data quality issues will be addressed. **Prerequisite: GIS 1003 (Grade \geq C)**

GIS 2303 Spatial Analysis and Modeling (3-0-3)

This course provides the fundamentals of spatial analysis and modeling in GIS and a survey of quantitative techniques applicable to spatial data. Concepts of spatial modeling is covered and students learn how to use various modeling techniques available for solving complex environmental and management problems. Students use statistical models in the process of spatial analysis. **Prerequisite: MTH 1053 (Grade \geq C), GIS 1003, and GIS 1303**

GIS 2503 Independent Project (3-0-3)

This course will provide students with the opportunity to integrate knowledge used in previous courses for completion of an entire project. Work will begin with developing a proposal, obtaining the required data from numerous sources, performing analysis, and preparing final analysis. **Pre- or Co-requisite: GIS 2203**

HIS 1013 Western Civilization I (3-0-3)

ACTS Equivalent Course Number = HIST 1213

A survey of Western Civilization to 1600; a study of the development of the culture and institutions of the ancient Near East and Classical, Medieval, and Renaissance civilizations.

HIS 1023 Western Civilization II (3-0-3)

ACTS Equivalent Course Number = HIST 1223

A survey of Western Civilization since 1600; a study of cultural developments and the growth of institutions from the late Renaissance to the present; emphasis is placed on the expansion of European civilization.

HIS 2001 Special Topics in History (1-0-1)

HIS 2002 (2-0-2)

HIS 2013 (3-0-3)

Special topics courses will be offered at the discretion of the department when the need or interest is apparent. May be repeated for credit.

HIS 2003 African-American History (3-0-3)

A study of the heritage, origins, and major historical events and figures in African-American history, including an examination of relevant social, political, economic, and cultural factors.

HIS 2033 U.S. History Before 1865 (3-0-3)

ACTS Equivalent Course Number = HIST 2113

A study of American history including discovery, colonial foundations, movement for independence, and the early years of the new nation through the Civil War; emphasis on the social, political, and economic factors influencing early national development.

HIS 2043 U.S. History Since 1865 (3-0-3)

ACTS Equivalent Course Number = HIST 2123

A study of American history from the reconstruction era to the present, including the industrial growth of the nation, the emergence of the U.S. as a world power, the depression and New Deal, the post-World War II era.

HIS 2053 Arkansas History (3-0-3)

A study of the major historical events and figures in the growth and development of the state of Arkansas; primary emphasis is focused on the varied social, political, economic, and cultural factors that have influenced and shaped the state and its history.

HOS 1003 Introduction to Hospitality (3-0-3)

This course covers the history and development of the hospitality industry, an introduction to principles and concepts used in the service industry, and career opportunities in the field. The restaurant industry, hotel management, cruise line industry, gaming and casino, and franchising are covered. The course is designed for those who would like to learn about the hospitality industry.

HOS 1013 Introduction to Travel and Tourism (3-0-3)

This course provides thorough, current knowledge of the principles, practices, and economic, social, cultural, and environmental impact of the travel and tourism industry. It addresses opportunities, responsibilities, concerns, and ethics of a career in travel, transportation or tourism. Students develop effective reasoning, communication, decision-making, and interpersonal skills. The course facilitates development of individual responsibility, self-esteem, sociability, self-management, and personal integrity.

HOS 1113 Introduction to Lodging Industry (3-0-3)

This course covers the history and development of the lodging industry, an introduction to principles and concepts used in the service industry, and career opportunities in the field. The course is designed to help prepare students for a rewarding management career.

HOS 1123 Lodging Fundamentals (3-0-3)

This course covers the physical management areas of the lodging industry. Students learn to manage the back of the house operations in the lodging industry. This course is designed for those who are interested in learning more about physical aspects of the lodging industry.

HOS 2023 International Travel (3-0-3)

This course provides a detailed coverage of international air travel geography, international airfares and ticketing procedures, travel requirements, travel in Europe, Russia, Asia, and the Pacific, ecotourism analysis, and broadening global horizons to maximize cultural understanding.

Prerequisite: HOS 1013

HOS 2033 Travel Operations (3-0-3)
 This course provides detailed information on the basics of the travel business. Topics covered include appointments, functions, resources, reservations, booking, traffic documents, accounting, sales reports, automation, and financial planning and management.

Prerequisite: HOS 1013

HOS 2133 Lodging Concepts (3-0-3)
 This course covers skills needed in operating a lodging facility. Such skills include leadership, communication, and team building. In addition, such topics as career development, marketing, and sales are covered as they specifically relate to the lodging industry.

Prerequisite: HOS 1123

HOS 2143 Advanced Lodging Concepts (3-0-3)
 This course covers specific topics in the lodging industry that pertain to food services. Topics included are menu planning, dining, and beverage service, casual/theme restaurants, banquets and catering, and room service.

Pre- or Co-requisite: HOS 2133

HOS 2993 Internship in Hospitality/Lodging (0-10-3)
 This course is designed to give students an opportunity to enhance their knowledge by applying what they have learned in a work situation. Students work with a faculty advisor and internship employer to develop an education program with meaningful learning objectives based upon their program of study. A minimum of 136 contact hours is required. **Prerequisite: 45 credit hours toward an A.A.S. in Management and registration for the internship during preregistration.**

Each physical education activities course involves skills, techniques, and rules for the specified activity. Physical education activities course may be repeated for credit; however, students may not enroll more than four times in any one type of applied physical activities course and have the credit count to meet graduation requirements. Activity Fee: \$5

- HPR 1011 Conditioning for Horse and Rider (0-3-1)**
- HPR 1121 Fitness for Women (0-2-1)**
- HPR 1201 Aerobics (0-2-1)**
- HPR 1231 Martial Arts (0-2-1)**
- HPR 1261 Yoga (0-2-1)**
- HPR 1301 Tennis (0-2-1)**
- HPR 1321 Conditioning (0-2-1)**
- HPR 1361 Golf (0-2-1)**
- HPR 1371 Badminton (0-2-1)**
- HPR 1381 Volleyball (0-2-1)**
- HPR 1411 Softball (0-2-1)**
- HPR 1421 Zumba (0-2-1)**
- HPR 1471 Basketball for Women (0-2-1)**
- HPR 1491 Basketball for Men (0-2-1)**
- HPR 1501 Recreational Riding (0-3-1)**
- HPR 1511 Trail Riding (0-3-1)**
- HPR 1721 Pickle Ball (0-2-1)**
- HPR 1811 Weightlifting (0-2-1)**

HPR 1732 Concepts of Physical Activity (2-1-2)
 Designed to provide knowledge of relationships among health, wellness, exercise, nutrition and fitness, this class shows students how to develop a lifetime fitness program.

HPR 2113 Personal Health and Safety (3-0-3)
ACTS Equivalent Course Number = HEAL 1003

This course is designed to assist students in understanding and developing attitudes and behaviors necessary to establish healthful living practices.

HSC 1003 Medical Terminology (3-0-3)
 This course will provide the student basic knowledge of medical language to allow him or her to recognize and understand medical terms. Prefixes, suffixes and root words are covered to provide a basis from which the student may build or recognize new medical terminology.

HSC 1023 Pharmacology (3-0-3)
 The course is designed to give the student an up-to-date look at the pharmacological aspects of drugs. Students must learn and apply principles of pharmacology to safely administer medications and to educate clients and caregivers to effectively manage a therapeutic drug regimen. Along with drug therapy, teaching-learning and critical thinking will be integrated.

HSC 1101 Math for Nurses (1-0-1)
 This course is designed to help students in calculating drug dosages. The basic skills in calculating dosages will be presented. Measurement systems, the metric system, apothecary and household systems will be discussed. All routes will be done. Emphasis of the course is on the mathematical skills essential for the integration of pharmacological computations mandatory for safe, effective administration of medications to client/families.

HSC 1113 Nutrition (3-0-3)
 This course is an introduction to nutrition, including nutritive value of foods, factors influencing body food requirements, and the importance of promoting health and preventing disease. The body physiology in relation to total nutritional needs will also be studied. Emphasis is on the nutritional requirements throughout the human life cycle with attention to cultural and other individual needs. Application of the basic food groups and diet therapy will provide the student with a clinical focus.

HSC 1213 Human Biology (3-0-3)
 Designed to provide students with a basic overview of the human body, this class will include instruction in cell structure and function, body systems and functions, and principles of inheritance.

HSC 1223 Human Diseases (3-0-3)
 Intended as a one-semester pathophysiology course, the health science course provides an introduction to the essential concepts of human diseases and related laboratory tests.

HSC 1303 Intro to Medical Professions I (3-0-3)

Experiences in the Introduction to Medical Professions course are designed to provide students with basic information and skills needed for a career in the health care field. In this comprehensive semester course, emphasis is given to the development of competencies related to Career and Technical Education Student Organizations (CTSOs), medical history and events, health care systems, health care careers, qualities of a successful health care worker, medical ethics, and legal responsibilities, and nutrition and health.

HSC 1313 Intro to Medical Professions II (3-0-3)

The course provides students with a general overview of the more crucial content areas of the Medical Professions Education program core courses. Areas covered are: Medical terminology, medical math, human growth and development, process of disease, and employability skills needed within the health care field. This course is recommended for students who will to have the opportunity to take any additional Medical Professions Education program courses.

HSC 1323 Medical Procedures I (3-0-3)

This course allows students to develop specific skills needed in the health professions. Emphasis is given to the development of competencies related to the following areas: safety, infection control, vital signs, CPR and first aid medical math abbreviations, and charting.

HSC 1333 Medical Procedures II (3-0-3)

The Medical Procedures expanded course focuses on the specific skills needed in several different areas of entry-level positions in health care. The different skill areas addressed are: dental assisting, laboratory assisting, medical assisting, nurse assisting, physical therapy assisting, and veterinary assisting.

HSC 2012 Introduction to Pathophysiology (2-0-2)

This health science course presents an introduction to the basic principles of human physiological processes that lead to diseases and disorders. Risk factors, signs and symptoms, diagnostic tests, and treatments for common diseases are presented.

HSC 2022 Introduction to Pharmacotherapy (2-0-2)

This course emphasizes the principles of pharmacology, drug therapy, and therapeutic classes of drugs, clinically important prototype drug and drug information sources. Pharmacologic treatment of major health problems will be explored. Principles of pharmacokinetics and pharmacodynamics will be examined. Basic and clinical concepts of pharmacology as it relates to allied health and medical practice will be explored.

HSC 2123 Healthcare Law and Ethics (3-0-3)

This course will present legal guidelines and requirements for healthcare. Medical ethics and related issues will also be presented. Emphasis will be on confidentiality and performance within the legal and ethical boundaries of healthcare. Also federal and state healthcare legislation and regulations will be discussed.

HSC 2223 Pathophysiology (3-0-3)

The focus of pathophysiology is the abnormal functioning of diseased organs. The course includes descriptions of causes, signs and symptoms, diagnostic tests, and treatments dealing with patient care.

Prerequisite: BIO 2114

JPN 1001 Beginning Conversational Japanese I (1-0-1)

An introductory course designed to provide basic Japanese conversational skills.

JPN 1101 Beginning Conversational Japanese II(1-0-1)

A continuation of JPN 1001 Beginning Conversational Japanese I. **Prerequisite:** JPN 1001

JPN 1013 Elementary Japanese I (3-0-3)

Conversational Japanese is designed to familiarize the students with the basic Japanese sounds, expressions, and words necessary for daily life. The principal method used is aural-oral practice.

LAN 0966 Language Enhancement I (6-0-6)

This course integrates language instruction in reading and writing to help students whose test scores indicate a need to enhance their reading and writing competency before beginning English Composition I. This intensive language course focuses on reading comprehension and writing. Students are placed into this class based the College's placement test score table. Test scores used for placement into this course must be no older than five years. Any student with test scores older than five years.

LAN 0973 Language Enhancement II (3-0-3)

This course integrates language instruction in reading and writing to help students enhance their reading and writing competency *while simultaneously enrolled* in English Composition I. This language course focuses on reading comprehension and writing. Students must **co-enroll** in this course and English Composition I. This course is a **co-requisite** for English Composition I.

Prerequisite: LAN 0966 (Grade \geq C) OR appropriate placement test scores in English and Reading as indicated by the College's placement test score table. Test scores used for placement must be no older than five years.

Co-requisite: ENG 1013 English Composition I.

Since LAN 0973 and ENG 1013 are co-requisites, they must be taken together. LAN 0973 cannot be taken by itself. A student must earn a C or better in both courses during the same semester, or must repeat both courses. A student who wishes to withdraw from one course must withdraw from both.

LNT 1004 Introduction to Lean Technology (4-0-4)

This course provides an overview of the Lean principles of team development, continuous improvement, inventory control, material and process flow, quick changeovers, customer satisfaction, and lean maintenance. Students are introduced to different types of teams and their functions and explore a wide variety of teams including Kaizen, Quality Circles, and GE Workout teams. Evaluation is based on team involvement and participation.

LNT 1014 Inventory Control (4-0-4)

This course explores JIT (just in time) and material inventory processes involving raw materials, WIP (work in process), and finished goods. Additional topics covered include material and process flow to facilitate waste reduction and customer satisfaction.

Prerequisite: LNT 1004

LNT 1023 Quick Changeovers (3-0-3)

Students design and use a process map to examine changeover steps. By using this process, changeover time is reduced allowing for greater flexibility in meeting customer demands. **Pre- or Co-requisite: LNT 1014**

LNT 1033 Lean Maintenance (3-0-3)

This course is designed to provide students the secret to equipment performance. Students explore the role of the operator, supervisor, and maintenance personnel in developing a plan of equipment up time.

Pre- or Co-requisite: LNT 1014

LNT 1043 Value Stream Development (3-0-3)

This course explores the set of specific actions (value stream) required to develop a product (whether a good, service or increasingly, a combination of the two) that creates value to the ultimate customer. After generating a value stream, a plan is developed to eliminate all non value-added steps from the stream.

Pre- or Co-requisite: LNT 1014

LNT 1053 Total Productive Maintenance (3-0-3)

This course explores the use of TPM (total productive maintenance) to prevent equipment breakdowns. Students are introduced to the concepts of OEE (overall equipment effectiveness), OI (operation instructions), and SWI (standard work instructions) which are used to develop the charts and tools needed in charting lean maintenance. This course is designed specifically for the maintenance department. **Pre- or Co-requisite: LNT 1014**

MAT 1043 Introduction to Coding and Insurance Processing (3-0-3)

This course will present information on how to apply managed care policies and procedures, third party guidelines, and complete insurance claim forms. Also, students will be instructed in how to perform basic procedural coding and diagnostic coding using ICD-CM principles and guidelines.

MAT 1053 Medical Assisting Procedures I - Intermediate Diagnosis Coding (3-0-3)

The student will learn the fundamentals of coding from ICD-9-CM Volumes I & II for physician and outpatient facilities. The student will learn how to abstract the diagnosis from documentation and apply it to a claim for billing. In addition, the student will learn how to code to the highest level of specificity for the purpose of accurate billing.

MAT 2023 Medical Assisting Procedures II - Intermediate Procedure Coding (3-0-3)

This course is designed to present information on the use of CPT coding for physician and non-physician services. In addition, various exercises will be used to develop the student's basic procedural coding skills. **Prerequisite: MAT 1053**

MAT 2043 Reimbursement Methodologies (3-0-3)

This course will introduce the basics information of reimbursement methodologies that apply to Medicare, Medicaid, and private insurance companies, including primary and secondary claims. In addition, the student will learn how Diagnosis Related Groups (DRG) and Ambulatory Payment Classification (APC) are related to optimizing reimbursement.

MAT 2053 Professional Practicum/Internship (0-9-3)

The student will practice coding skills in a hospital, physician's office, clinic or other health care setting. In addition, this course will prepare the student to sit for the certification examination in coding, as well as provide information on how to effectively search for a job and transition from student to employee. **Prerequisites: 45 credit hours toward graduation in the A.A.S. Medical Assisting Technology Program, registration for the internship during the preregistration period prior to the semester of enrollment, and completion of an Internship Agreement.**

MAT 2062 Medical Assisting Procedures III - Advanced Coding (2-0-2)

This course provides students with advance coding skills necessary to work in the medical records department of a health care facility. In addition, this course provides in-depth knowledge of coding principles, healthcare facility topics, and case studies to increase the student's knowledge and skills in coding. **Prerequisite: MAT 2023**

MCH 1001 Reading Blueprints (1-2-1)

This course is an introduction to the use of blueprints pertaining to maintenance and repair. Special emphasis will be given to applications in soldering, brazing, welding, and cutting operations. **Lab Fee: \$15**

MCH 1011 Reading Schematics and Symbols (1-2-1)

This course is an introduction to reading and interpreting schematics and the symbols used on schematics pertaining to welding, maintenance and repair. Special emphasis will be given to applications associated with mechanical devices in an industrial manufacturing setting, as well as applications associated with various welding operations. **Lab Fee: \$15**

MCH 1041 Auto Maintenance (1-0-1)

This course will emphasize basic preventive maintenance techniques such as checking and changing oil, replacing fuses, and checking fluids.

MCH 1051 Selecting and Maintaining Bearings (1-0-1)

This course is an overview of the principles, concepts, and applications of bearings in mechanical devices found in an industrial plant. Topics covered include the use and maintenance of bearings in various drive systems and sheaves and lubrication. Lab will be used to emphasize practical maintenance, installation, and procedures for repair and replacement.

MCH 1062 Welding Principles (1-3-2)

This course is designed to provide the basic knowledge of oxy-acetylene welding, cutting and brazing, and basic arc welding necessary in the maintenance and repair of production equipment. It provides a basic introduction to TIG and MIG welding procedures and practices.

Lab Fee: \$30

MCH 1072 Welding Operations (1-3-2)

This course is designed to provide hands-on skills in oxy-acetylene welding, cutting and brazing, basic welding, and safety necessary in the maintenance and repair of production equipment. **Lab Fee: \$30**

MCH 1082 Purging, Piping, and Safety (1-3-2)

This course is an introduction to the proper techniques and safety procedures associated with soldering or welding pipes and pipe fittings in an industrial setting. **Lab Fee: \$30**

MCH 2043 Mechanical Devices (2-2-3)

This course is an overview of the principles, concepts, and applications of mechanisms found in an industrial plant. Topics covered include belt drive systems, chains, chain drives, conveyor belts, conveyor systems, bearings, sheaves, lubrication, sprockets, and mechanical fasteners. Lab will be used to emphasize practical maintenance, installation and procedures for repair and replacement.

Lab Fee: \$15

MCH 2064 Advanced Welding Principles (3-3-4)

This course is designed to provide the advanced knowledge of oxyacetylene welding, cutting and brazing, and advanced arc welding necessary in the maintenance and repair of production equipment. It provides an advanced knowledge and skills for TIG and MIG practices. **Prerequisite: MCH 1062. Lab Fee: \$60**

MCH 2074 Advanced Welding Operations (3-3-4)

This course is designed to provide the advanced knowledge of oxyacetylene welding, cutting and brazing, and advanced arc welding necessary for the application in the manufacturing and industrial settings. It prepares students to apply the advanced technical knowledge and skills to unite or separate metal parts by heating and using variant techniques and equipment. **Prerequisite: MCH 1072. Lab Fee: \$60**

MCH 2083 Hydraulics and Pneumatics (2-2-3)

This class covers the principles of hydraulics and pneumatic equipment and their uses and applications in industry. Some of the topics covered in this class include: hydraulic pumps, control valves, cylinders, seals, air compressors, filters, pressure regulators, pressure control valves, and flow controls. **Lab Fee: \$15**

MCH 2204 Basic Machine Shop (3-2-4)

In this course, instruction is given in the care and operation of basic machine tools, measuring instruments, and shop safety procedures. Students learn the use of hand tools, drills and lathe cutting tools. They will study the methods used to machine parts by various methods. Shop projects are designed to provide practice in accurate turning, knurling, threading, and other operations. **Lab Fee: \$15**

MCH 2213 Advanced Maintenance Welding (2-4-3)

This course is designed to provide advanced practice safety welding measures and an understanding of shielded metal arc welding (SMAW) and prepare students to set up SMAW equipment for making V-groove welds and perform V-groove welds with backing in various positions. **Prerequisites: MCH 1062, MCH 1072, MCH 1082.**

Lab Fee: \$60

MED 1016 Medication Assistant (4-6-6)

This course will present information on medication principles, medication safety, and medication administration. Also, communication and documentation requirements will be covered. Ethical and legal issues will be explored as well as the responsibilities and certification renewal process for a medication assistant-certified. **Pre or Corequisites: BUS 1343 or BUS 1373 or BUS 1603 and HSC 1003. Corequisite: MED 1010, Malpractice Insurance Fee: \$15**

MED 1010 Clinical for Medication Assistant (0-6-0)

The student will apply the concepts from the Medication Assistant course and demonstrate safe administration of medications to clients in a nursing home setting. **Pre or Corequisites: BUS 1343 or BUS 1373 or BUS 1603 and HSC 1003. Corequisite: MED 1016**

MFG 1001 Developing Troubleshooting Skills (1-0-1)

This course is a lab designed to provide hands-on experience with various mechanical troubleshooting techniques and theories associated with equipment in an industrial setting.

MFG1011 Understanding Basic Hydraulics (1-0-1)

This course covers the principles of hydraulic equipment and its use and application in industry. Topics include hydraulic pumps, control valves, cylinders, seals, filters, pressure regulators, pressure control valves, and flow controls.

MFG1021 Hydraulic Troubleshooting Skills (1-0-1)

This course is a lab designed to provide hands-on experience with various troubleshooting techniques and theories associated with hydraulic equipment in an industrial setting.

MFG 1023 Design for Manufacturing (2-2-3)

This course is designed to expand on the introductory manufacturing course and expose the student to basic design concepts, computer skills, and drawing skills used in product and process design within the field of manufacturing. Additionally, the course is designed to expose students to a number of interpersonal skills and competencies necessary for a sustained career in manufacturing. **Lab Fee: \$15**

MFG 1031 Mechanical and Fluid Drive Systems (1-0-1)

This course is an overview of the principles, concepts, and applications of mechanical and fluid drive systems found in an industrial plant. Topics covered include belt drive systems, chain drives, conveyor belts, and sprockets associated with the manufacturing industry. Lab will be used to emphasize practical maintenance, installation and procedures for repair and replacement.

MFG 1033 Manufacturing Production Processes (2-2-3)

This course is designed to provide the student with a hands-on learning experience with the basic tools, equipment, and operations of manufacturing industries. The student will also understand the relationship between a manufacturing need, a design, materials, processes as well as tools and equipment. During this course, the student utilizes many of the basic manufacturing processes to produce primary and secondary materials for manufacturing. **Lab Fee: \$15**

MFG 1041 Understanding Basic Pneumatics (1-0-1)

This course covers the principles of pneumatic equipment and its use and application in industry. Topics include vacuum pumps, control valves, cylinders, seals, air compressors, filters, pressure regulators, pressure control valves, and flow controls.

MFG 1043 Manufacturing Power & Equipment (2-2-3) Systems

This course is designed to expand upon previous courses and allow students the opportunity to demonstrate knowledge of power systems and use the advanced tools of manufacturing production. Students plan, design, implement, use, and troubleshoot manufacturing power systems, equipment systems, and control systems.

Lab Fee: \$15

MFG 1051 Pneumatic Troubleshooting Skills (1-0-1)

This course is a lab designed to provide hands-on experience with various troubleshooting techniques and theories associated with pneumatic equipment in an industrial setting.

MFG 2013 Manufacturing Materials (2-2-3)

This course introduces students to manufacturing materials, materials testing, and material science. Additionally, this course will introduce students to primary and secondary processing in manufacturing and allow the student to construct and conduct experiments with various manufacturing materials. **Prerequisite: MFG 1033, Lab Fee: \$15**

MFG 2023 The Manufacturing Enterprise (3-1-3)

This course is designed to expand upon concepts learned in introductory courses while allowing students to further explore how manufacturing enterprises are established, how they maintain control, how they plan, how they produce, package, distribute, and market products. As a part of a product development team, students analyze customer needs and market requirements, conceptualize a design, develop a prototype, production tooling, quality control mechanisms, process control mechanisms, and other procedures necessary to complete a basic production run and distribute a final product. **Prerequisite: MFG 1033, Lab Fee: \$15**

MFG 2033 Manufacturing Equipment (2-2-3) Maintenance & Operation

This course is designed to provide the student with a comprehensive knowledge of manufacturing equipment, safety, maintenance, and operation procedures, control systems as well as leadership abilities in the field. **Prerequisite: MFG 1043, Lab Fee: \$15**

MFG 2923 Manufacturing Capstone: (2-3-3) Engineering Design & Problem Solving

This course introduces some new concepts related to engineering design and problem solving, however the primary function of this course will be to serve as a venue for students to place all previous learning into a manufacturing context. Students solve a given manufacturing challenge that requires the use of advanced manufacturing technology systems, design skills, communication skills, and a thorough understanding of manufacturing materials, processes, and techniques.

MNT 1003 Maintenance Management (3-0-3)

This course introduces the student to the processes that ensure that systems and plants continue to function at optimum levels through use of a totally supportive maintenance plan. Various maintenance techniques, including reliability, life cycle maintenance, and computerized maintenance management programs to enable a preventative and predictive approach in building reliability into the total production maintenance system are introduced. The course stresses maintenance planning within the corporate objectives, in particular considering cost factors, maintenance effectiveness and how to define and present the plan.

MSA 1113 Microsoft Server Operating (3-1-3) Systems I

This course prepares students to manage a network running Windows Server 2003. Students learn to create, configure and manage various operating system resources such as file, print, and Web resources as well as user accounts and groups. **Prerequisite: BUS 1603 (Grade \geq C), Pre- or Co-requisites: CIS 1013 and CIS 2213, Lab Fee: \$15**

MSA 2123 Microsoft Server Operating Systems II (3-1-3)

This course provides students with the knowledge and skills necessary to implement, manage, and maintain a Microsoft Windows 2003 Server network infrastructure. Emphasis is on managing IP addressing, name resolution, network security, and remote access.

Prerequisite: MSA 1113, **Lab Fee:** \$15

MSA 2243 Microsoft Workstation Operating Systems (3-1-3)

This course is designed to provide students with the knowledge and skills that are necessary to implement, configure, and administer Windows XP operating system. Emphasis is on administering resources, optimizing performance, troubleshooting, and implementing security measures. **Prerequisite:** BUS 1603 within the past 5 years with Grade \geq C. **Co-requisite:** CIS 1013 and CIS 2213, **Lab Fee:** \$15

MSC 1011 Introduction to ROTC (1-2-1)

Self-confidence through team study and activities in basic drill, physical fitness, rappelling, first-aid, basic rifle marksmanship, and making presentations. Fundamental concepts of professional leadership in both classroom and outdoor lab environments. Leadership lab required and 1-hour physical fitness session. **Lab Fee:** \$15

MSC 1021 Introduction to Leadership (1-2-1)

Principles of effective leading. Self-confidence through physically and mentally challenging exercise with upper-division ROTC students and instructors. Individual and group communication skills and organizational ethical values for effective leadership. Leadership lab required and 1-hour physical fitness session. **Co-requisites:** leadership lab and 1-hour physical fitness session.

Prerequisite: MSC 1011, **Lab Fee:** \$15

MTH 0913 Introductory Mathematics (3-0-3)

A beginning math course which covers basic operations for whole numbers, fractions, decimals, percents, and signed numbers, as well as ratio and proportions. This course is a co-requisite for MTH 1073.

MTH 1073 Mathematical Applications I (3-0-3)

This course includes beginning algebra with signed numbers, equations and inequalities, rectangular coordinates and slope, exponents and polynomials, and factoring. Students with appropriate placement scores will NOT be required to enroll in the co-requisite course MTH 0913. **Co-requisite:** MTH 0913. A student must earn a C or better in both courses during the same semester or must repeat both courses. A student wishing to withdraw from one course must withdraw from both.

MTH 1083 Technical Mathematics (3-0-3)

Selected topics in general mathematics, algebra, geometry, and trigonometry. The application of mathematical concepts to the solution of relevant technical problems will be emphasized. **Prerequisites:** MTH 1073 (Grade \geq C) or appropriate placement test score.

MTH 1093 Mathematical Applications II (3-0-3)

This course will be taken while simultaneously enrolled in MTH 1113 College Algebra unless the degree of study only requires MTH 1093. This course will reinforce algebraic concepts to help students whose test scores indicate a need for certain review topics. These topics will include, but are not limited to, multi-step equations, exponents, functions and graphs, factoring, rational expressions, exponents and radicals, and quadratic equations. **Prerequisites:** MTH 1073 (Grade \geq C) or appropriate placement test score.

MTH 1113 College Algebra (3-0-3)

ACTS Equivalent Course Number = MATH 1103

This course includes a study of functions including, but not limited to, absolute value, quadratic, polynomial, rational, logarithmic, and exponential functions as well as systems of equations and matrices. **Co-requisite:** MTH 1093. Students with appropriate placement scores will NOT be required to enroll in the co-requisite course. Students cannot withdraw from MTH 1093 without withdrawing from MTH 1113. **Prerequisite:** MTH 1093 (Grade \geq C) or appropriate placement test score.

MTH 1123 College Trigonometry (3-0-3)

ACTS Equivalent Course Number = MATH 1203

In preparation for calculus and general physics, this course includes topics in advanced algebra and trigonometry. **Prerequisite:** MTH 1113 (Grade \geq C) or appropriate placement test score.

MTH 1213 Quantitative Literacy (3-0-3)

ACTS Equivalent Course Number = MATH 1113

This course provides students with mathematical skills to be productive workers, discerning consumers, and informed citizens. Instruction is based in the context of everyday life that focuses on process, conceptual understanding, communication, and problem solving. Students will solve problems using mathematical reasoning involving logic, proportions, algebra, and relations. It focuses on four areas of study: personal, state and national finance, statistics and probability, mathematical modeling, and quantities and measurement. **Prerequisites:** MTH 1093 with grade \geq C or ACT Math score $>$ 19 or appropriate placement score.

MTH 2053 Finite Math (3-0-3)

Finite Mathematics consists of selected topics in probability, matrices, and linear programming. This course is considered a terminal math course for students in business, agriculture, and social sciences at many colleges. **Prerequisite:** MTH 1113 (Grade \geq C)

MTH 2103 Introduction to Statistics (3-0-3)

ACTS Equivalent Course Number = MATH 2103

This algebra-based course involves the presentation and interpretation of data, probability, sampling, basic, inference, correlation, and regression, and analysis of variance. Course includes the use of statistical software.

Prerequisite: MTH 1113 (Grade \geq C)

MTH 2114 Survey of Calculus (4-0-4)

ACTS Equivalent Course Number = MATH 2203

This is a survey of the basic concepts of calculus, including limits, derivatives, exponential and logarithmic functions, integrals, and series and sequences for students in business, agriculture, and social science. **Prerequisite MTH 1113 (Grade \geq C) or appropriate placement test score.**

MTH 2143 Business Calculus (3-0-3)

Exponential functions, mathematics of finance, systems of linear equations, linear inequalities and linear programming, limits, derivatives, and integrals, business calculus applications including marginal analysis, extrema and concavity of functions of one and several variables **Prerequisite MTH 1113 (Grade \geq C) or appropriate placement test score.**

MTH 2214 Calculus I (4-0-4)

ACTS Equivalent Course Number = MATH 2405

This is the first course in calculus, including topics of functions, limits, continuity, differentiation, antiderivatives, inverse functions, and introduction to integration. **Prerequisite: MTH 1123 (Grade \geq C) or appropriate placement test score.**

MTH 2224 Calculus II (4-0-4)

ACTS Equivalent Course Number = MATH 2505

This is a continuation of MTH 2214 and includes integration and applications, integration by parts, sequences and series, parametric equation, polar coordinates, conic sections. **Prerequisite: MTH 2214 (Grade \geq C)**

MTH 2234 Calculus III (4-0-4)

ACTS Equivalent Course Number = MATH 2603

This is a continuation of MTH 2224 and includes the study of multi-dimensional integration, partial differentiation, vector functions, and other topics.

Prerequisite: MTH 2224 (Grade \geq C)

MTH 2303 Survey of Geometry (3-0-3)

This is a geometry course designed for students needing an additional math elective or students desiring a geometry course for teacher certification. Topics covered include measurements of polygons, polyhedra and other shapes, formal euclidean geometry with congruence of triangles and quadrilaterals, similarity, circles, and tessellations.

Prerequisite: MTH 1113

MTH 2403 Math I (3-0-3)

Sets, logic, and development of the real number system are covered with an introduction to mathematical principles and concepts taught in schools.

Prerequisite: MTH 1113 (Grade \geq C)

MTH 2423 Math II (3-0-3)

Topics of this course include probability, statistics, concepts of measurement, introductory and coordinate geometry, constructions, congruence and similarity.

Prerequisite: MTH 2403 (Grade \geq C)

Applied Music Instruction

Private instruction courses typically meet either one-half hour or one hour per week. Private lesson times are arranged individually for students based on instructor availability. Students must contact music faculty to establish a weekly lesson time as soon as possible upon enrolling in an applied music course. All applied class instruction courses require five hours of practice per week for every half hour of individual instruction. The lab fee for a lesson that meets for one-half hour per week is \$25; the lab fee for a lesson that meets for one hour per week is \$50. Applied music courses may be repeated for credit; however, students may not enroll more than four times in any one type of applied music course and have the credit count to meet graduation requirements.

MUS 1021 Applied Voice (0-.5-1)

MUS 1022 Applied Voice (0-1-2)

MUS 1031 Applied Piano (0-.5-1)

MUS 1032 Applied Piano (0-1-2)

MUS 1121 Applied Instrumental (0-.5-1)

MUS 1122 Applied Instrumental (0-1-2)

MUS 1901 Applied Guitar (0-.5-1)

MUS 1902 Applied Guitar (0-1-2)

MUS 2011 Special Topics in Applied Music (0-.5-1)

MUS 1001 Gospel Choir (0-3-1)

This is a group of mixed voices with interest in gospel music. It is open to all students on campus and in the community. The group will perform each semester.

MUS 1003 Music Appreciation (3-0-3)

ACTS Equivalent Course Number = MUSC 1003

A music survey course for the listener who has little or no formal training or experience. Emphasis is on helping the student understand the interrelationship between music and the social, cultural, economic, and political development of society. For non-music majors as a general education elective. The course is an introductory survey of music including the study of elements and forms of music, selected musical works, music terminology, important musical genres, periods, and composers, and an introduction to major musical instruments.

MUS 1013 Music Theory I (3-0-3)

A study of the fundamentals of music: major and minor scales, key signatures, intervals, triads, note values, and time signatures. Emphasis is placed on reading of rhythms, sight singing, ear training and dictation. Part writing in tonic, subdominant and dominant harmonies is begun. Course is required for all beginning music majors.

Co-requisite: MUS 1611

MUS 1071 College Singers (0-3-1)

This is a group of mixed voices, open to all students on campus. Both sacred and secular choral music are studied and performed. Open to all college students with consent of director.

MUS 1081 Jazz Band (0-3-1)

An ensemble designed for the study and performance of a wide variety of jazz and contemporary music, including swing, progressive, modern, and rock styles. Membership is by permission of the director.

MUS 1091, 1591, 2091, 2591 Class Piano (1-0-1)

This series of courses is designed for piano students with no previous knowledge. Musical skills, techniques, and an understanding basic to keyboard musicianship at an early level of study are covered. Through the use of electronic pianos and headphones, the student will learn to sight read, to harmonize simple tunes with primary and secondary chords, and to transpose easy song arrangements. Limited class size. **Lab Fee: \$35.**

MUS 1103 Fundamentals of Music (3-0-3)

Fundamentals of Music is a course designed for the person with a meager musical background who wants to learn more about the basics of music. Material covered includes the notation of pitch and rhythm, computation of major and minor scales, and the formation of musical intervals and triads. Slight emphasis is given to the playing of scales and simple melodies. This course is open to both music majors and non-music majors.

MUS 1200 Voice Repertoire (0-2-0)

Voice Repertoire is a coaching lab designed to teach songs and arias to vocal students in preparation for voice lessons. The course is required for music majors taking voice who lack piano or sight singing skills. Voice students who need assistance in learning assigned repertoire may register for the class. **Corequisite: Any Applied Voice course.**

MUS 1401 Jazz Ensemble (0-3-1)

Students participate in a variety of musical styles including progressive, swing and popular. Membership is by audition of instructor. The group conducts periodic tours/performances.

MUS 1411 Wind Ensemble (0-3-1)

Designed for the study and performance of a wide variety of renaissance, these courses will include baroque, classical, romantic and contemporary music. Membership is by permission of instructor.

MUS 1513 Music Theory II (3-0-3)

Continuation of Music Theory I. Triads, seventh chords, non-harmonic tones and simple modulations are studied. Melodies are harmonized and exercises in the realization of figured bases are included. Ear training, sight singing, and dictation are continued. **Prerequisite: MUS 1013. Co-requisite: MUS 1711**

MUS 1611 Aural Theory I (2-0-1)

Training in the aural perception of scales, melodies, intervals, and chords. Sight singing skills are also developed. **Corequisite: MUS 1013**

MUS 1621 Class Voice I (1-0-1)

This vocal course is designed for beginning vocal students who may or may not plan to pursue further voice study. Emphasis is placed on correct posture, breath control, phrasing, extending vocal range, vowel production, and interpretation. One-hour lesson weekly.

MUS 1711 Aural Theory II (2-0-1)

A continuation of Aural Theory I, which is a prerequisite. **Prerequisite: MUS 1611. Co-requisite: MUS 1513**

MUS 1721 Class Voice II (1-0-1)

A continuation of Class Voice I. Concentration is centered on the continued development of the correct foundation for breath control, tone and pitch consciousness, style and interpretation. The student is introduced to a wide range of vocal literature. **Prerequisite: MUS 1621.**

MUS 1811 Aural Theory III (2-0-1)

Aural training including more advanced melodic, rhythmic and harmonic materials.

Prerequisite: MUS 1711. Co-requisite: MUS 2013

MUS 1911 Aural Theory IV (2-0-1)

A continuation of Aural Theory III, which is a prerequisite. **Prerequisite: MUS 1811. Coreq. MUS 2513**

MUS 2001 Special Topics in Music (1-0-1)

MUS 2002 (2-0-2)

MUS 2003 (3-0-3)

Special topics courses will be offered at the discretion of the department when the need or interest is apparent. May be repeated for credit.

MUS 2012 Special Topics in Applied Music (0-1-2)

MUS 2013 Music Theory III (3-0-3)

Knowledge presented in Music Theory I and II is reviewed. Ear training, sight singing, dictation, and keyboard harmony are integrated with four part written harmony. Altered chords, secondary dominants, leading tone chords and seventh chords are studied. Choral melodies are harmonized and exercises in harmonic analysis are stressed. **Prerequisite: MUS 1513.**

Co-requisite: MUS 1811

MUS 2201 Opera Workshop/Non-Majors (0-2-1)

Workshop emphasizing learning, memorizing, interpreting and staging a show or scenes for public performance. Training will concentrate on characterization, stage movement, and effective singing for the stage. Some basic technical stagecraft is included.

Co-requisite: Any Applied Voice course

MUS 2202 Opera Workshop/Majors (0-4-2)

Workshop emphasizing learning, memorizing, interpreting and stage a show or scenes for public performance. Training will concentrate on characterization, stage movement, and effective singing for the stage. Some basic technical stagecraft is included.

Co-requisite: Any Applied Voice Course

MUS 2503 Music History Survey (3-0-3)

An overview of music history from antiquity to the present with emphasis on composers, their works and listening. The intention is to provide students with a working knowledge of the unique characteristics of music common to each historical period. This course is designed primarily for music majors but is open to any student.

Prerequisite: MUS 1003 or permission of instructor

MUS 2513 Music Theory IV (3-0-3)

A continuation of Music Theory III. Keyboard harmony, dictation, sight singing, and ear training are continued. Concentration is placed on the study of diminished seventh chords, dominant ninth, eleventh and thirteenth chords and the Neapolitan sixth. Classical, romantic, and contemporary music is studied for harmonic analyzation.

Prerequisite: MUS 2013. **Co-requisite:** MUS 1911

NUR 1010 Clinical Applications of Fundamentals of Nursing (0-6-0)

The student will practice nursing skills in the laboratory after demonstration, readings, and applying theoretical concepts. The students will then apply the nursing process and nursing diagnoses to clients in the clinical setting. Beginning level recognition of pathophysiology and psychological concepts will be utilized to care for clients. Care plans will be done to help the student in applying these concepts. **Corequisite:** NUR 1014

NUR 1014 Fundamentals of Nursing (2-6-4)

This course will present the different pathophysiological and psychopathological mechanisms or processes of the individual. Emphasis will be on human health promotion, growth and development, nursing diagnosis, and the nursing process. **Prerequisites:** Admittance to the Nursing Program. **Corequisites:** BIO 2114, ENG 1013, PSY 1003, MTH 1113, NUR 1010. **Assessment Fee:** \$250. **Malpractice Fee:** \$50

NUR 1020 Clinical Applications of Medical Surgical Nursing I (0-6-0)

The student applies concepts from Medical Surgical I when caring for individuals and families in the hospital setting. Plans of care will be developed, using the nursing process. Integrations of nutrition, growth and development will be done. **Corequisites:** NUR 1024

NUR 1024 Medical Surgical Nursing I (2-6-4)

This course will integrate principles and concepts from the physical sciences, social sciences, and nursing as they relate to the individual and families throughout the life cycle. Emphasizes the prevention of illness, restoration of health during acute and chronic physical illness, and preservation of dignity in death. **Prerequisites:** All required courses from Term I. **Corequisites:** BIO 2134, ENG 1023, PSY 2003, NUR 1020. **Assessment Fee:** \$250

NUR 1900 Clinical Applications of Role Transition for LPNs/LPTNs (0-1-0)

The student will have simulated and actual opportunities to apply principles and skills used in the transition from the LPN/LPTN to the professional role of a registered nurse. Emphasis will be placed on the nursing process, physical assessment skills, client education, and care of acute and chronically ill clients. **Corequisites:** NUR 1904.

NUR 1904 Role Transition for LPNs/LPTNs (4-1-4)

This course allows the LPN/LPTN with current licensure and experience in nursing to develop necessary skills and knowledge to use as a base for transition to professional nursing. The course will review content in foundations of nursing and cover content in health assessment and care for lower acuity level clients in the medical surgical setting. Upon successful completion of this course, the LPN/LPTN will enter the 2000 level nursing courses. **Corequisites:** BIO 2504, NUR 1900, **Assessment Fee:** \$250

NUR 2040 Clinical Applications of Mental Health Nursing (0-6-0)

This course gives the student an opportunity to apply principles of psychiatric/mental health nursing with clients and families. Special populations, cultural diversity, and risk factors of clients experiencing emotional illness will be emphasized. **Corequisite:** NUR 2044

NUR 2044 Mental Health Nursing (2-6-4)

This course introduces the student to the theories of emotional health and restoration of health during acute and chronic emotional/behavioral illness. Emphasis will be on critical thinking, growth, and development, psychosocial/cultural diversity, communications and therapeutic interventions. **Prerequisites:** All required courses from Terms I and II. **Corequisite:** NUR 2040, BIO 2504. **Assessment Fee:** \$250, **Malpractice Fee:** \$50

NUR 2130 Clinical Applications of Medical-Surgical Nursing II (0-6-0)

The course accompanies NUR 2134 and focuses on rehabilitative care. Identification of skills based upon scientific principles for nursing practice with clients will be the emphasized. **Prerequisites:** All required courses from Terms I, II and III. **Corequisite:** NUR 2134

NUR 2134 Medical-Surgical Nursing II (2-6-4)

This course builds upon Medical-Surgical I and focuses on the chronic illness phases of the disease process. Rehabilitative stages will be emphasized. The life cycles issues of individual with chronic illness will be presented. The nursing process and critical thinking skills with case presentations will be utilized. **Prerequisites:** All required courses from Terms I, II and III. **Corequisites:** NUR 2130, NUR 2164, NUR 2160, SOC 1013 or SOC 2043, and BUS 1603. **Assessment Fee:** \$250

NUR 2160 Clinical Applications of Maternal Child Nursing (0-6-0)

This course accompanies NUR 2164 and focuses on giving nursing care to clients in the pediatric and maternity settings. Students will provide care using the theoretical principles of maternal and child health. **Corequisite: NUR 2164.**

NUR 2164 Maternal Child Nursing (2-6-4)

This course will explore the concepts of childbearing and childrearing. It will focus on health promotion, family structures, and cultural diversity. The traditional role of the maternal and child nurse must expand to meet the challenges that changes and new technology are posing. With these concepts the student will use the nursing process in working with clients from birth through adolescence. **Prerequisites: All required courses from Terms I, II and III. Pre or Corequisites: NUR 2130, NUR 2134, NUR 2160, SOC 1013 or SOC 2043, BUS 1603**

NUR 2242 Nursing Concepts and Intervention (2-0-2)

This course is designed to further understand the concepts of environment and health in client care through core presentation, discussion, and content review. The nursing process will be utilized by the student through problem-solving and critical thinking skills in applying nursing interventions to client situations. **Prerequisites: All required courses from Terms I, II, III and IV. Corequisites: NUR 2254, NUR 2263**

NUR 2250 Clinical Applications of Medical-Surgical Nursing III (0-6-0)

This course accompanies NUR 2254. This course provides the student with the opportunity to apply theoretical principles when caring for the adult medical-surgical clients with complex disorders affecting the cardiac, respiratory and renal systems. The clinical course emphasizes the rehabilitative aspect of the client with complex disorders. **Corequisite: NUR 2254**

NUR 2254 Medical-Surgical Nursing III (2-6-4)

This course is designed to introduce complex knowledge and skills applicable to the nursing care of an acute adult with multiple complex problems and the critically ill adult client experiencing alterations in the cardiac, respiratory, circulatory, and renal systems. The course builds on and reinforces previous knowledge and skill. The course reinforces ethical and legal implications, health promotion and maintenance, emotional, spiritual, physical, psychosocial integrity and developmental tasks of the adult. **Prerequisites: All required courses from Terms I, II, III and IV. Corequisites: NUR 2242, NUR 2250, NUR 2260, NUR 2264, Assessment Fee: \$250**

NUR 2260 Clinical Applications of Nursing Leadership & Management (0-3-0)

This course accompanies NUR 2263 and focuses on managing the nursing care to clients in the hospital setting. Students will provide and coordinate client care under the supervision of a nurse manager or charge nurse. Students will demonstrate the skill of coordinating care and applying leadership and management principles necessary to function in a complex health care environment. **Corequisite: NUR 2263**

NUR 2263 Nursing Leadership & Management (2-3-3)

This course is designed to give the student a broad understanding of where nursing has been in the past, where it is today, and where it is going in the future. Content will include influences affecting nursing practice and the education that is needed to practice in entry-level staff positions. Additional roles of the entry-level nurse will be discussed including coordinating interdisciplinary groups, prioritizing client needs, understanding the role of economics, politics, culture, legal, and ethical aspects and accepting accountability for delegating tasks. **Prerequisites: All required courses from Terms I, II, III and IV. Corequisites: NUR 2260, NUR 2242, NUR 2254**

PHL 1003 Introduction to Philosophy (3-0-3)

ACTS Equivalent Course Number = PHIL 1103

A study of problems that confront man as he deals with the nature of the world and his relationship to it; explores the four major branches of philosophy: metaphysics, epistemology, axiology, and logic.

PHS 1014 Principles of Geology (3-2-4)

ACTS Equivalent Course Number = GEOL 1114

This is a physical science course covering the origin of rocks, weathering, mass wasting, water, glaciation, volcanos, earthquakes, minerals, and classification of rocks. **A lab is a required part of this class and will meet at a time different than the lecture. Lab Fee: \$20**

PHS 1104 Earth Science (3-2-4)

ACTS Equivalent Course Number = PHSC 1104

An introduction to the fundamental topics of earth science including physical and historical geology, oceanography, and meteorology. Laboratory exercises include the study of minerals, rocks, fossils, topographic and geologic maps, and oceanographic and meteorological phenomena. **A lab is a required part of this class and will meet at a time different than the lecture. Lab Fee: \$20**

PHS 1214 Physical Science (3-2-4)

ACTS Equivalent Course Number = PHSC 1004

A survey of selected physical science topics will be presented including various topics in measurement systems, basic mechanics, energy and heat, chemistry fundamentals, aspects of atmospheric science and of the basic solar system will be covered for general education students. **A lab is a required part of this class and will meet at a time different than the lecture. Prerequisite: MTH 1093 (Grade \geq C) or appropriate placement test score, Lab Fee: \$20**

PHY 1004 Technical Physics (3-2-4)

Selected topics in mechanics, heat, sound, electricity, and light with the practical implications of physical phenomena emphasized. Laboratory activities related to the principles discussed will be included. **A lab is a required part of this class and will meet at a time different than the lecture. Prerequisite: MTH 1083 (Grade \geq C), Lab Fee: \$20**

PHY 2013 Survey of Physics for Radiologic Technology (3-0-3)

This course is designed to provide the student with an understanding of the underlying physics principles of radiology. These principles include; mathematical concepts, temperature and heat, heat transfer, waves and sound, electric forces and fields, magnetism, electromagnetic waves, optics, nature of the atom, nuclear physics and radioactivity, and ionizing radiation and nuclear energy. These principles will provide the student with the tools necessary to understand how x-rays, ultrasound, CAT scans, and the other devices utilized in the field of radiology and why there are strict safety guidelines for the usage of this equipment. This course is a prerequisite for Radiologic Science- RAD 1222. **Prerequisite: MTH 1093 (Grade \geq C) or appropriate placement test score.**

PHY 2114 General Physics I (3-2-4)

ACTS Equivalent Course Number = PHYS 2014

Topics in mechanics, heat, and sound are covered in this course designed for the non-engineering major. **A lab is a required part of this class and will meet at a time different than the lecture. Prerequisite: MTH 1113 (Grade \geq C) or equivalent, Lab Fee: \$20**

PHY 2134 General Physics II (3-2-4)

ACTS Equivalent Course Number = PHYS 2024

A continuation of PHY 2114, this course covers topics in electricity, magnetism, light, and modern physics. **A lab is a required part of this class and will meet at a time different than the lecture. Prerequisite: PHY 2114 (Grade \geq C), Lab Fee: \$20**

PIM 1313 Plastic Injection Molding I (2-3-3)

This course provides lecture and hands-on experiences in the injection molding process. Areas covered are safety, machine identification, setup procedures, operation, troubleshooting, and machine adjustment. Students are introduced to computer monitoring of the molding process as a quality control method to increase productivity.

Lab Fee: \$15

PIM 2023 Properties of Plastics (2-2-3)

This course is a survey of the mechanical, chemical, and electrical properties of plastic materials as they relate to the design of plastics parts. Topics include molecular structure and its effects on properties of plastic materials; classification of materials; rheology; physical behavior under various loading conditions; stress and strain characteristics; brittleness and impact strength; and electrical and thermal properties. Use is made of both empirical and theoretical formulas in the design of plastics parts. **Lab Fee: \$15**

PIM 2213 Tooling for Plastic Injection Molding (2-2-3)

This course covers construction methods necessary to build tooling for injection molding and blow molding. Includes an introduction to extrusion dies and thermoforming tools.

Lab Fee: \$15

PIM 2323 Plastic Injection Molding II (2-3-3)

This course is an extension of PIM 1313, Plastic Injection Molding I. Subjects include insert molding and accessory equipment associated with injection molding such as drying and pneumatic conveying. **Prerequisite: PIM 1313,**

Lab Fee: \$15

PSC 1003 Introduction to Political Science (3-0-3)

An introduction to political ideologies, governmental systems, and a comparison of national governments.

PSC 2003 American Government (3-0-3)

ACTS Equivalent Course Number = PLSC 2003

A study of the constitutional framework of American government; U.S. Constitution is studied in detail in relation to the basic structure and organization of the national government.

PSC 2013 State and Local Government (3-0-3)

An introduction to the organization, structure, functions, and administration of state and local governments.

PSY 1003 General Psychology (3-0-3)

ACTS Equivalent Course Number = PSYC 1103

This course focuses on the scientific study of human behavior and mental processes. This course presents various principles, concepts, and theories critical to the understanding of behaviors and mental processes.

PSY 2003 Developmental Psychology (3-0-3)

ACTS Equivalent Course Number = PSYC 2103

This course focuses on the quantitative and qualitative ways human beings change during the life cycle. Cognitive, social, physical, and emotional processes are studied in detail. **Prerequisite: PSY 1003**

PSY 2013 Child Development (3-0-3)

This course studies environmental and heredity effects on the cognitive, affective, psychomotor, and sociolinguistic development of typically and atypically developing children and adolescents. Students will learn to analyze, use, and incorporate an inclusive understanding of key theories of learning and how these theories are related to the physical, cognitive and emotional changes that occur during each developmental stage. Students will be introduced to observation and evaluation of children's and adolescents' development and to recognize possible delays in development. Practical application of theory is provided through a variety of hands-on experience and 5 clock hours of required observation. **Prerequisite: PSY 1003**

PSY 2063 Abnormal Psychology (3-0-3)

This course is an examination and/or a survey of the manifestations of abnormal behavior and the psychological process. Detailed analysis of the clinical and developmental aspects concerning psychological disorders and their etiology will be considered. **Prerequisite: PSY 1003 or PSY 2003**

RAD 1106 Introduction to Radiologic Technology(4-6-6)

This course is an introduction to the basic aspects and principles of radiologic technology and the health care system including but not limited to radiation protection, patient care including human diversity, healthcare agency structure and function, radiology ethics and legal issues. Emphasis will be placed on effective patient and peer communication. Students will also learn positioning for radiographic demonstration of anatomic parts, including sectional anatomy of the chest and abdomen. **Prerequisites: Admittance to the Radiologic Technology Program. Pre or Corequisites: BIO 2114, MTH 1113, PHY 2013, and RAD 1110. Assessment Fee: \$50, Dosimetry Badge Fee: \$100, Malpractice Fee: \$50, Marker Fee: \$15**

RAD 1110 Clinical Practice I (0-6-0)

Supervised clinical experience emphasizing radiologic procedures of the chest and abdomen. **Prerequisites: Admittance to the Radiologic Technology Program. Corequisites: RAD 1106**

RAD 1202 Radiologic Imaging (2-0-2)

This course will provide the basics of radiologic image acquisition, equipment, and quality control. Students will learn to evaluate the image quality standards and the individual factors that influence that image. Some topics include circuitry, the x-ray tube, image intensifiers, digital radiography, PACS, and image receptors. Critical thinking and communication skills will be emphasized. **Prerequisites: All required courses from Term I. Pre or Corequisites: HSC 1003, RAD 1210, RAD 1216, RAD 1222**

RAD 1210 Clinical Practice II (0-9-0)

Supervised clinical experience emphasizing radiographic procedures of the extremities and vertebral column. **Prerequisites: All required courses from Term I. Corequisites: RAD 1216**

RAD 1216 Radiographic Procedures II (3-9-6)

This course provides an investigation of procedures used in patient positioning and radiation safety instruction for radiographic demonstration of anatomic parts and sectional anatomy of the upper and lower extremity and spine. **Prerequisites: All required courses from Term I. Pre or Corequisites: HSC 1003, RAD 1202, RAD 1210, RAD 1222**

RAD 1222 Radiologic Science (2-0-2)

This course includes the theoretical basis for understanding the nature, production, characteristics and interaction of radiation with matter. Emphasis will be on the principles associated with radiation production and the clinical significance of these interactions in radiography. Critical thinking skills will be emphasized. **Prerequisites: All required courses from Term I. Pre or Corequisites: HSC 1003, RAD 1202, RAD 1210, RAD 1216**

RAD 1310 Clinical Practice III (0-9-0)

Supervised clinical experience emphasizing radiographic procedures of the cranium, gastrointestinal system, and genitourinary system, and refinement of radiographic skills in orthopedic, chest, and abdomen. **Prerequisites: All required courses from Terms I and II. Corequisite: RAD 1315**

RAD 1315 Radiographic Procedures III (2-9-5)

This course provides an investigation of procedures used in patient positioning, sectional anatomy, and radiation safety instruction for cranium, bony thorax, gastrointestinal system and urinary system. **Prerequisites: All required courses from Terms I and II. Pre or Corequisites: BUS 1603, RAD 1310, SOC 2043**

RAD 2102 Radiation Protection (2-0-2)

This course is a study of the principles and practices of safe application of radiation, in regards to personnel, patients, and the public. Emphasis will also be placed on the responses of biological systems to radiation and their acute and chronic affects. **Prerequisites: All required courses from Terms I, II, and III. Pre or Corequisites: ENG1013, RAD 2112, RAD 2110, RAD 2115. Dosimetry Badge Fee: \$100, Marker Fee: \$15**

RAD 2110 Clinical Practice IV (0-10-0)

Supervised clinical experience emphasizing pediatric, geriatric, trauma, and advanced skeletal, cardiovascular, genitourinary, gastrointestinal radiographic procedures; and an introduction to various imaging modalities; and the refinement of orthopedic, gastrointestinal, and genitourinary procedures. **Prerequisites: All required courses from Terms I, II, and III. Pre or Corequisites: ENG1013, RAD 2102, RAD 2112, RAD 2115**

RAD 2112 Radiographic Pathology (2-0-2)

This course is designed to introduce theories of disease causation and the pathophysiologic disorders that compromise healthy systems. Etiology, pathophysiologic responses, clinical manifestations, radiographic appearance, and management of alterations in body systems will be presented. **Prerequisites: All required courses from Terms I, II, and III. Pre or Corequisites: ENG1013, RAD 2102, RAD 2110, RAD 2115, Assessment Fee: \$50**

RAD 2115 Special Imaging Procedures (2-10-5)

This course will provide an overview of the production of images including, but not limited to CT, mammography, MRI, sonography, radiation oncology, and nuclear medicine. An emphasis is placed on the ever-changing dynamics of computers and their impact on the radiological sciences. This includes computer applications related to image acquisition, presentation, and storage. Critical thinking and communication skills will also be emphasized. **Prerequisites: All required courses from Terms I, II, and III. Pre or Corequisites: ENG1013, RAD 2102, RAD 2110, RAD 2112, Malpractice Fee: \$50**

RAD 2212 Seminar in Radiologic Technology (2-0-2)

This course will prepare the radiologic technology student to sit for the American Registry of Radiologic Technology examination and effectively search for a job in radiography.

Prerequisites: All required courses from Terms I, II, III, and IV. **Pre or Corequisites:** ENG 1023, RAD 2220, RAD 2226

RAD 2220 Clinical Practice (0-12-0)

Elective clinical rotations and the demonstration of terminal clinical skills. **Prerequisites:** All required courses from Terms I, II, III, and IV. **Corequisites:** RAD 2226

RAD 2226 Radiographic Medical Image Evaluation (2-12-6)

This course is designed to place advanced emphasis on the application of knowledge, critical thinking skills, and communication skills when comprehensively analyzing diagnostic radiographic images. Also, emphasis will be on recognizing, evaluating, and correcting image problems.

Prerequisites: All required courses from Terms I, II, III, and IV. **Pre or Corequisites:** ENG 1023, RAD 2212, RAD 2220

REL 1003 Survey of World Religions (3-0-3)

A study of the historical and philosophical development of various religions of the world such as Judaism, Islam, Christianity, Hinduism, and Buddhism.

RET 1003 Introduction to Renewable Energy Technology (2-2-3)

This course introduces the concepts, methodologies, and sources of renewable energy. Energy production and the environment impacts from the use of fossil fuels will be compared with alternative forms of energy, including hydroelectric, solar, wind, geothermal, tidal, and nuclear energies. Upon completion, students should have a thorough understanding of renewable energy technology and its impact on humans and the environment.

Lab Fee: \$15

RET 1014 Biomass and Feedstocks (3-2-4)

This course provides a detailed study of the forms, structures, functions, and reproduction of plants and the production, handling, and maintenance of biomass in the alternative fuels industry. **Lab Fee: \$15**

RET 1024 Biofuels (2-3-4)

The history and early applications of biodiesel and ethanol will be explored. Understanding biochemical methods involved in the generation of biodiesel from feedstocks, animal fats, and waste vegetable oil. Students will investigate the structure, function, and production of ethanol and its uses. Social, environmental, and economical aspects of the production and usage of alternative fuels and new advancements in alternative fuel production will be introduced. **Lab Fee: \$15**

RET 1103 Fuels and Lubricants (3-0-3)

This course will cover the different grades and viscosities of lubricants and their function in an engine. The student will learn the process by which fuels and lubricants are produced. Topics covered will be: how lubricants are graded, how fuel oil is produced and graded, and the use of biodiesel and how it affects engine parts and its direct effect on the lubricating system.

RET 2024 Process Instrumentation (2-2-4)

Intensive combined lecture/lab course designed to expose students to the spectrum of analytical instruments utilized in modern biofuels production. **Prerequisites:** RET 1003 and RET 1013, **Lab Fee: \$15**

RET 2034 Bioprocess Practices and Lab (3-2-4)

This course involves an in-depth examination of the methods utilized in the production of biofuel throughout the plant manufacturing process. The laboratory provides a hands-on experience of producing and testing biofuel.

Lab Fee: \$15

RET 2923 Renewable Energy Internship (0-10-3)

This course is a cooperative internship between work environment and education and is designed to integrate the student's technical studies with work experience. Students work with their faculty advisor and the internship employer to develop an education plan with meaningful learning objectives based on their program of study. A minimum of 136 contact hours is required. **Prerequisite: 25 credit hours in RET, registration for internship course during the pre-registration, and completion of an Internship Agreement Form.**

RET 2933 Renewable Energy Capstone (2-3-3)

This course introduces some new concepts related to renewable energy technology design and problem solving. Students solve a given challenge that requires the use of advanced renewable energy technology systems, design skills, communication skills, and a thorough understanding of renewable energy technology materials, processes, and techniques.

SCI 2403 Science for Teachers (3-0-3)

This is an introduction to principles and concepts of science with methods for teaching school aged children. Emphasis will be on laboratory and demonstration techniques.

SCI 2801 Special Topics in Science (1-0-1)**SCI 2802 (2-0-2)****SCI 2803 (3-0-3)****SCI 2804 (3-2-4)**

Special Topics courses present topics at the discretion of the Department and will be offered when the need and/or interest is apparent. Courses may be presented in lecture format or lecture/lab format.

SFT 1063 Industrial Loss Prevention (3-0-3)

A survey course dealing with methods and programs utilized by industry to prevent injury and fatalities.

SFT 1071 CPR and First Aid (1-0-1)

A course designed to teach students how to deal with various injuries and health emergencies including heart and breathing difficulties, cuts, breaks, poisons, or other problems.

SFT 1081 Introduction to Industrial Safety (1-0-1)

An introduction to industrial hazards and methods for their remedy. Also introduces the role of the Occupational Safety and Health Act (OSHA).

SFT 2073 Industrial Safety and OSHA (3-0-3)

This course is designed to assist individuals on the supervisory levels of industry to establish, maintain, and update successful safety and loss prevention programs.

SOC 1013 Introduction to Sociology (3-0-3)

ACTS Equivalent Course Number = SOCI 1013

An introduction to the principles and methods in studying society; emphasis on basic concepts used in analyzing social behavior; includes such topics as culture, socialization, class relations, collective behavior, family, institutional organization, and ethnic and group interaction.

SOC 2003 Social Problems (3-0-3)

ACTS Equivalent Course Number = SOCI 2013

Introduction to the basic problems in American society; such problems as poverty, ethnic relations, population, crime, health and medical care, ecology, urbanism, and social deviance are explored in relevant lecture and discussion periods. **Prerequisite: SOC 1013**

SOC 2043 Cultural Anthropology (3-0-3)

ACTS Equivalent Course Number = ANTH 2013

A course in the study of man as a physical, cultural, and social being and of the key concepts, methods, and theories of cultural diversity, social institutions, and an examination of people and cultures around the world.

SOC 2063 Criminology (3-0-3)

Designed to introduce theories and research pertaining to crime and criminal behavior, including causes and methods of prevention; stresses systems of criminal punishment and criminal rehabilitation.

SPA 1001 Beginning Conversational Spanish I (1-0-1)

This introductory course is designed to provide basic Spanish conversational skills. It is designed for students using Spanish in the workplace.

SPA 1101 Beginning Conversational Spanish II (1-0-1)

A continuation of SPA 1001 Conversational Spanish I. **Prerequisite: SPA 1001**

NOTE: SPA 1114, SPA 1124, SPA 2114 and SPA 2124 must be taken in sequence. Students who wish to skip a prerequisite course should contact the testing coordinator in the Betty Jo Hodges Building about CLEP testing. Otherwise, regardless of experience with the language, students must begin with SPA 1114 and progress sequentially.

SPA 1114 Elementary Spanish I (3-1-4)

ACTS Equivalent Course Number = SPAN 1013

SPA 1114 is the first course in a four-course sequence. It is designed to help students develop listening, speaking, reading, and writing skills. The instruction is communicatively oriented and emphasizes the everyday life and culture of Spanish-speaking people. Students who believe their Spanish skills are beyond this level should contact the testing coordinator in the Betty Jo Hodges Building about CLEP testing. Otherwise, regardless of experience with the language, students must begin with this course and progress sequentially through SPA 1124, SPA 2114, and SPA 2124.

SPA 1124 Elementary Spanish II (3-1-4)

ACTS Equivalent Course Number = SPAN 1023

SPA 1124 is a continuation of SPA 1114. It seeks to further develop listening, speaking, reading, and writing skills. The instruction is communicatively oriented and emphasizes the everyday life and culture of Spanish-speaking people. Regardless of experience with the language, students must meet the prerequisite before enrolling in SPA 1114. See NOTE above. **Prerequisite: SPA 1114**

SPA 2114 Intermediate Spanish I (3-1-4)

ACTS Equivalent Course Number = SPAN 2013

SPA 2114 is designed to help the student develop an intermediate-level proficiency in the four skills of listening, speaking, reading, and writing. The instruction is communicatively oriented and emphasizes the everyday life and culture of Spanish-speaking people. Regardless of experience with the language, students must meet the prerequisite before enrolling in SPA 2114. See NOTE above. **Prerequisite: SPA 1124**

SPA 2124 Intermediate Spanish II (3-1-4)

ACTS Equivalent Course Number = SPAN 2023

SPA 2124 is a continuation of SPA 2114. It seeks to further develop an intermediate-level proficiency in the four skills of listening, speaking, reading, and writing. The instruction is communicatively oriented and emphasizes the everyday life and culture of Spanish-speaking people. Regardless of experience with the language, students must meet the prerequisite before enrolling in SPA 2124. See NOTE above. **Prerequisite: SPA 2114**

SPE 1003 Introduction to Oral Communication (3-0-3)

ACTS Equivalent Course Number = SPCH 1003

This course is an investigation of the components of communication. Study and practice in dyadic, small group, and speaker-audience situations.

SPE 2001 Special Topics in Communication (1-0-1)

SPE 2002 (2-0-2)

SPE 2003 (3-0-3)

Special topics courses will be offered at the discretion of the department when the need or interest is apparent. May be repeated for credit.

SPE 2011 Interpersonal Communication I (1-0-1)

SPE 2021 Interpersonal Communication II (1-0-1)

SPE 2031 Interpersonal Communication III (1-0-1)

These classes will provide the theory and experience to develop effective interpersonal communication skills. Students will gain experience with dyads and small group work in human interaction. Interpersonal Communication I focuses on self-disclosure, feedback and trust. Interpersonal Communication II focuses on sending messages effectively, understanding another's perspective, and helpful listening and responding skills. Level III emphasizes managing conflict in constructive ways, and managing anger and stress effectively.

SSC 0913 General Social Studies (3-0-3)

A study of basic, fundamental topics drawn from social science disciplines, especially psychology, government, geography, history, and sociology. Completion of this course should enhance a student's success in the social science courses required for an associate degree.

SSC 1003 Introduction to Social Science (3-0-3)

This course provides a broad study of various fields which involve human behavior and interactions. Rather than focus on any one topic in depth, the course provides an overview of society past and present. Examples of subjects typically covered include: history, economics, geography, government, and culture.

SSC 1013 Introduction to Human Behavior (3-0-3)

This course provides students with a general overview of psychology that includes history, research, theories, and applications of the knowledge of psychology. Topics covered include: consciousness, memory, learning, emotions, personality, psychological disorders, and methods of treatment.

SSC 2001 Special Topics in Social Science (1-0-1)

SSC 2002 (2-0-2)

SSC 2003 (3-0-3)

Special topics courses will be offered at the discretion of the department when the need or interest is apparent. May be repeated for credit.

SSC 2013 Social Science Seminar (3-0-3)

A course especially for those students who are seeking greater depth in the social sciences; utilizes a seminar approach to integrate major social science principles and concepts.

WEB 1003 Internet Business Foundations (3-0-3)

This course teaches students about key Internet technologies, such as Web browsers, e-mail, newsgroups, File Transfer Protocol, Telnet, and search engines. This course also covers topics in e-commerce, project management, and security in information technology. **Prerequisite: BUS 1603 within the past 5 years with Grade \geq C, CIW Testing Fee: \$25**

WEB 1013 Introduction to Web Page Design (3-0-3)

This course is designed to teach students Web page creation and other aspects of Web authoring utilizing both text and graphical user interface (GUI) editors. Students will learn the basics of HTML, cascading style sheets, javascript, dynamic HTML, and document object models. **Prerequisite: BUS 1603 within the past 5 years with Grade \geq C, CIW Testing Fee: \$30**

WEB 1023 Networking Technology Foundations (3-0-3)

This course teaches fundamental networking concepts and practices. Topics include network architecture and standards, network types, protocols, Internet servers, TCP/IP, and security. **Prerequisite: BUS 1603 within the past 5 years with Grade \geq C, CIW Testing Fee: \$35**

WEB 1033 Introduction to Web Page Editors (3-0-3)

This course provides an introduction to software applications for webpage design. Students are exposed to Microsoft Expressions and Adobe Dreamweaver. Students learn the skills necessary to quickly and easily design, develop, and maintain websites and web application from start to finish. Topics covered include creating a webpage and local site, adding web pages, links, and images, tables and page layout with forms, templates and style sheets, and layers, image maps and navigation bars. The course also introduces students to the seamless integration with Adobe Photoshop and Adobe Flash. **Prerequisite: WEB 1013**

WEB 2266 Advanced Web Page Design and Methodology (4-4-6)

This course teaches students to create and administer media-rich Web sites while utilizing tools such as Flash, Dreamweaver, FrontPage, and various multimedia components. Emphasis is on theory, design and Web construction, along with information architecture concepts, Web project management, scenario development, and performance evaluations in preparation for the Certified Internet Webmaster Professional certification. **Prerequisite: WEB 1013 with Grade \geq C or better and CIW Testing Fee: \$80**