Course Descriptions

Each course carries a four-digit number. The first digit (1 or 2) identifies whether the course is recommended primarily for freshmen (1) or sophomores (2). The second and third digits do not pertain to students. The fourth digit (1 through 6) identifies the number of school semester credit hours awarded for the course. Behind each course title the reader will find three numbers in parenthesis. The first number identifies the required number of lecture hours per week for a regular semester. The second number identifies the required number of laboratory hours per week for a regular semester. The third number identifies the amount of school semester credit hours (SSCH) awarded for the course.

ACCOUNTING

ACT 1002 Basic Accounting (2-0-2)
This course will introduce the basic accounting procedures needed to maintain daily records for a small business and the use of such records in the decision-making process. Emphasis is on analyzing and recording financial transactions, classifying and summarizing data, and preparing financial statements. Basic payroll functions will also be introduced. This course does not transfer to a four-year college. Fall, Spring.

ACT 1103 Principles of Accounting I (3-0-3)
Designed to give the student fundamental knowledge of generally accepted concepts and principles employed in keeping accounting records and to give the students who wish to pursue the study of accounting as a profession the necessary fundamentals to do so. For those students who do not intend to continue their education at a senior institution, it will furnish background in business practices that will make the student a more knowledgeable consumer and investor. Fall, Spring.

ACT 1113 Principles of Accounting II (3-0-3)
Designed to further the student's fundamental knowledge of generally accepted concepts and principles of accounting. Completes the basics, working with partnership and corporations. Emphasizes significance of financial statements, their importance, and analysis. Prerequisite: ACT 1103 Principles of Accounting I with a grade of "C" or better. Fall, Spring.

ACT 1203 Computerized Accounting (3-0-3)
Computerized Accounting is designed to give the student hands-on experience in operating an accounting software package. Students will learn to use the accounting systems commonly found in computerized accounting environments including General Ledger, Accounts Payable, Accounts Receivable, Inventory, Fixed Assets, and Payroll. Prerequisites: OFAD 1001 Keyboarding I or a formal keyboarding course; ACT 1103 Principles of Accounting I or Instructor Permission. Fall, Spring. Lab Fee.

ACT 2003 Cost Accounting (3-0-3)
Covers accounting procedures for a manufacturing enterprise. Topics include entries for materials, labor, and overhead placed in production; job order and process cost systems; standard costs and variances analysis; and budgeting and control. Not intended for business administration transfer program. Prerequisite: ACT 1113-Principles of Accounting II with a grade of "C" or better. Available upon sufficient student demand.

ACT 2043 Intermediate Accounting (3-0-3)
Study of accounting theory and problems. Includes review of accounting cycle, statements from incomplete records, statement analysis, preparation of financial statements, and other topics. Not intended for business administration transfer program. Prerequisite: ACT 1113-Principles of Accounting II. Available upon sufficient
student demand.

ACT 2393 Accounting Technology Internship (1-9-3)
The Accounting Technology Internship is an opportunity to enhance and reinforce classroom instruction with on-the-job work experience. Appropriate training stations will be developed, and supervision will be provided by instructors and site personnel. Students are required to complete 135 clock hours of supervised experience during the term. Prerequisites: All classes for the Accounting Technical Certificate must be completed before a student is eligible to enroll in the Accounting Technology Internship. Students must maintain a "C" average in all classes required for the certificate.

ALLIED HEALTH

ALH 1114 Mathematics for Nurses (4-0-4)
Covers math and problem solving related to Practical Nursing. Topics include a review of fractions, decimals, percents, and ratio and proportion, as well as in-depth study of metric, household, and apothecary systems of measurement. Temperature conversions and basic dosage calculations are also emphasized. Additional math instruction will be incorporated into Pharmacology I and II.

ALH 1122 Computer/Communications (2-0-2)
Includes the fundamentals of computer in the following areas: keyboarding, word processing, Internet and email. Formatting a resume with cover letter to present during interviewing process. The communications aspect is designed to develop speaking, reading, writing, and human relations required in the employment setting.

ALH 1203 Medical Terminology (3-0-3)
Provides the student with an application of and orientation to medical terminology. The basic structure of medical terms and their components, roots, prefixes, suffixes, and combining forms with emphasis on analyzing meaning, spelling, and pronunciation. The student will build a medical vocabulary applicable to the specialties of all health care professions. Fall, Spring, Summer.

ALH 1302 Introduction to Health Science (1-2-2)
An introduction to the health care field, including health care delivery systems, reimbursement, communication, legal and ethical issues, and health and safety. The laboratory components offer variety based on the student's chosen field. Topics range from professionalism to specific skills, clinical applications and computer lab sessions. Fall, Spring.

ALH 1303 Professional Medical Transcription (3-0-3)
Introduction to the healthcare record and medical documents. Transcription of basic medical dictation, incorporating English usage and machine transcription skills, medical knowledge, and proofreading and editing skills, and meeting progressively demanding accuracy

and productivity standards. Prerequisites: English ASSET score of 45, COMPASS score of 75 or completion of appropriate English Writing course. Corequisite: ALH-1203. Fall.

ALH 1603 Advanced Medical Transcription (3-0-3)
Transcription of advanced, original medical dictation, using advanced proofreading and editing skills, while meeting progressively demanding accuracy and productivity standards. Prerequisite: ALH 1303 with "C" or better. Corequisite: HIT 2004, BIOL 1114. Spring

ALH 2003 Nutrition (3-0-3)
This Nutrition course is designed for college-level
students enrolled in health science programs as well as students who are interested in obtaining information on nutrition in order to better their lives and the lives of their families. Fall.

ALH 2103 Applied Medical Transcription (0-8-3)
Medical transcription experience in a local medical facility. Experience emphasizes histories and physicals, consultations, operative reports, and discharge summaries. Prerequisite: ALH 1603 with a grade of "C" or better and instructor permission. Summer.

ANTHROPOLOGY

ANTH 1113 General Anthropology (3-0-3)
Introduction to human evolution. Comparative study of cultural development, including archaeology, ethnology, and linguistics. Also deals with processes of cultural change. Spring.

ANTH 2263 Social Anthropology (3-0-3)
Comparative study of social systems of peoples around the world. Emphasis is on non-Western societies. Culture and society viewed as adaptive mechanisms. Available upon sufficient student demand.

ANTH 2291-6 Special Study (1-6 Variable Credit)
Individual study of various areas in anthropology. Course to be worked out by the student with the instructor's guidance. May be repeated for up to six hours total credit. Prerequisite Permission of the instructor. Available upon student eligibility.

ART (ALSO SEE GRAPHIC DESIGN).

ART 1093 Advanced Painting (3-3-3)
Course designed for students who have completed two or more semesters of painting. Not designed for transfer. Fall, Spring.

ART 1103 Design I (3-3-3)
A study of the creative process and the structure of two-dimensional art forms and their relationship to our environment. Specific problems will focus on line, shape, color, space, and texture. Fall, Spring.

ART 1113 Drawing I (3-3-3)
Introduction to drawing with specific emphasis on seeing, hand-eye coordination, and basic

techniques. The figure and still-life subjects will be stressed. Fall, Spring. Lab Fee.

ART 1123 Drawing II (3-3-3)
Continuation of Drawing I, with emphasis on composition and color. Prerequisite: ART 1113-Drawing I. Fall, Spring. Lab Fee.

ART 1133 Design II (3-3-3)
The second half of Design I. Prerequisite: ART 1103- Design I. Fall, Spring.

ART 1143 Painting I (3-3-3)
Introduction to painting from painting surface to special techniques. Specific problems will deal with still-life, landscape, abstraction, and self-portrait. Either oils, acrylics, or watercolors may be used. Prerequisite: ART 1103-Design I, or ART 1696-Color Theory, or ART 1113-Drawing I. Fall, Spring.

ART 1153 Painting II (3-3-3)
Continuation of Painting I with problems dealing with special techniques, styles, and specific subjects. Prerequisite: ART 1183 Printmaking I (3-3-3)

ART 1183 Printmaking I (3-3-3)
The first half of the semester deals with the techniques of woodcut. The emphasis of the second half is on the techniques of etching. Basic introductory procedures of both are explored. Fall, Spring.

ART 1293 Printmaking II (3-3-3)
Continuation of Printmaking I. The student may choose to further explore either or both techniques of the first semester. Prerequisite: ART 1183-Printmaking I. Fall, Spring.

ART 1593 Art Appreciation for Non-Art Majors (3-0-3)
A course designed to analyze the structures, functions, styles, and mediums of the visual arts as they relate to and influence contemporary life. This is NOT an art history course. It will be a "hands on" course where the student will be expected to participate in the exploration of art definitions and use of art foundations (Design and Drawing) with their appropriate grammar and philosophies. Fall, Spring.

ART 1693 Color Theory (3-0-3)
Student will explore color theory relationships by creating a reference workbook that visually illustrates these relationships. Student will then apply these theories and relationships to painting specific exercise still-lifes that require the observing, mixing, matching, and painting of actual colors seen. Prerequisite: Experience with chosen medium. Fall, Spring.

ART 2203 Public School Art (3-0-3)
Designed for the prospective teacher. A study of the creative growth of children, methods and techniques for directing an art program in the public schools, with emphasis on art and its relationship to the child. Education methods courses for Arkansas State Teacher Certification will not be offered for home study credit in the Division of Communication and Arts. Prerequisite: English Composition I. Fall.

ART 2213 Art History I (3-0-3)

A study of the major world civilizations. Areas of study in Art include Paleolithic cave painting, pre-Colombian art of Central and South America, the civilization and art of Egypt, Mesopotamia, Greece, and Rome, early Christian art, Byzantine art, and the art works of the Middle Ages. Fall.

ART 2223 Art History II (3-0-3)
A study of Renaissance Art, the contributions of various dynasties and periods to art in China and Japan, the Baroque and Rococo, French Neo-Classical, Romanticism, Impressionism, Expressionism, and other forms of modern art. Spring.

ART 2233 Silkscreen Printmaking I (3-3-3)
A one semester studio course designed for students to learn to make art prints in any number of colors swiftly and without elaborate equipment. Students will learn to build their own screen frames and will study the many technical possibilities that silk screen printing offers: Touche lifts, film stencil, glue resists, and photo-direct screen printing. Fall.

ART 2243 Sculpture I (3-3-3)
Introduction to three-dimensional form through additive and/or subtractive methods. Clay will be the primary medium for exploration. Prerequisite: ART 1103-
Design I. Fall, Spring.

ART 2253 Sculpture II (3-3-3)
Continuation of Sculpture I. Prerequisite: ART 2243-Sculpture I. Fall, Spring.

ART 2263 Landscape Painting I (3-3-3)
Basic painting techniques applied to the landscape. Drawing and painting will occur on location when possible. ART 1113-Drawing I suggested but not required. Experience with painting medium of choice required. Available upon sufficient student demand.

ART 2273 Batik I (3-3-3)
Basic techniques of wax resist and dye fabric decoration are explored. Prerequisite: ART 1103-Design I or ART 1113-Drawing I suggested but not required. Fall, Spring, Summer.

ART 2283 Batik II (3-3-3)
Continuation of Batik I. Emphasis on increased experimentation with the Batik process. Prerequisite: ART 2273-Batik I. Fall, Spring, Summer.

ART 2293 Silkscreen Printmaking II (3-3-3)
Continuation of Silkscreen Printmaking I. Prerequisite: ART 2233-Silkscreen Printmaking I. Spring.

ART 2363 Landscape Painting II (3-3-3)
Continuation of Landscape Painting I. Available upon sufficient student demand.

ART 2391-6 Art Special Study (1-6 Variable Credit)
A course designed as a special problems course where students can choose their scope and direction for continued study. Permission of the instructor required.

AUTO SERVICE TECHNOLOGY

AST 1603 Engine Repair (3-0-3)
This course covers the introduction to automotive gasoline engines, and their theories of operation. The student will be instructed from the beginner level of engine operation through the final stages of engine rebuilding. Areas of training include assembly of major engine components, lubrication, cooling systems, basic tools and precision measuring devices. Shop safety, preventive maintenance, and engine troubleshooting are stressed. Corequisite: AST 1101 Automotive Lab II. Fall.

AST 1803 Engine Performance I (3-0-3)
This course offers an introduction to basic ignition system fundamentals and fuel system design and operation. This course is a how to class on tune-ups, carburetor rebuilding, and fuel injection service. The modern automotive computer system will be introduced along with troubleshooting and diagnostic procedures. Corequisite: AST 1102 Automotive Lab I. Fall.

AST 1403 Engine Performance II (3-0-3)
In this course the operation of computer sensors and their effect on drive ability will be covered. The use of computer scan tools, lab scopes, four-gas exhaust analyzers, and chassis dynamometers will be used to monitor the vehicles fuel, ignition, and electrical systems. Diagnostic procedures and troubleshooting will be stressed. Prerequisite: AST 1803 Engine Performance I. Corequisite: AST 1202 Automotive Lab III. Spring.

AST 1703 High Performance (3-0-3)
This course covers engine modifications and component selection to improve performance of the modern internal combustion engine. High performance carburetion and fuel injection, ignition system upgrades, fuel selection, and chassis improvements will be stressed. The theory of superchargers, turbochargers, and nitrous oxide will also be explained. Corequisite: AST 1301 Automotive Lab IV. Spring.

AST 1203 Brakes (3-0-3)
This course is designed to offer an introduction to the automotive brake system and its hydraulic principles of operation. Includes the theory, operation, and construction of disc brakes, drum brakes, power brakes, master cylinders, precision machining of rotors and drums as well as antilock braking systems and their related computer controlled components. Troubleshooting, diagnosis, and repair are emphasized. The student completing this curriculum will have been given the opportunity to gain the technical skills required to become a certified automotive brake specialist.
Corequisite: AST 1101. Automotive Lab II. Fall.

AST 1503 Suspension and Steering (3-0-3)
This course is the study of the automotive suspension and steering designs used in late model cars, trucks, and sport-utility vehicles. Instruction will cover suspension and steering components, McPherson strut, rack and pinion, power steering, wheels and tires as well as two and four-wheel alignment. Diagnosis, service, and repair will be emphasized along with the latest procedures used with specialized tools and computerized equipment in order for the student to gain the knowledge and hands-on skills needed to become a certified suspension and steering technician.

Corequisite: AST 1301 Automotive Lab IV. Spring.

AST 1103 Electrical/Electronic Systems I (3-0-3)
An introductory course to the basic fundamentals of the automotive electrical and electronic systems, and how they apply to the modern automobile. Electrical theories and principles, Ohms Law, basic electrical circuits, wiring diagrams, electrical symbols, and test meters will be covered as well as the construction and operation of batteries, alternators and starters. This course will serve as an excellent foundation for further studies as an automotive electrical service technician. Corequisite: AST 1102 Automotive Lab I. Fall.

AST 1303 Electrical/Electronic Systems II (3-0-3)
This course will build upon the knowledge gained on Electrical/Electronics I. The student will continue to build upon the basic fundamentals and principles of automotive electrical and progress to troubleshooting and analysis. Major subjects covered are electrical system failures, troubleshooting techniques, chassis electrical, lighting, specialized electronic circuits, electrical components, and power accessories. Students completing this curriculum will have been given the opportunity to gain the technical skills required to become a certified automotive electrical systems specialist.
Prerequisite: AST 1103 Electrical/Electronic Systems I. Corequisite: AST 1202 Auto Lab III. Spring.

AST 1903 Heating and Air Conditioning (3-0-3)
Theory of refrigeration, the refrigeration cycle and the basic components of a typical automotive refrigeration system will be introduced. The function of compressors, lines, expansion valves, orifice tubes, receiver dryers, condensers, evaporators and air distribution systems will be covered. Service and maintenance procedures, basic shop safety, environmental concerns and recycling of refrigerant are included. Summer.

AST 1102 Automotive Lab I (0-6-2)
The Automotive Lab courses are designed to allow the students to gain practical working knowledge in a simulated automotive repair setting. Electrical/Electronic and/or Engine Performance will be emphasized along with a variety of actual automobile repairs to give the student the "hands-on" instruction needed to complete their training as an automotive repair technician. Corequisite: AST 1103 Electrical / Electronic Systems I or AST 1803 Engine Performance I. Fall.

AST 1101 Automotive Lab II (0-3-1)
The Automotive Lab courses are designed to allow the students to gain practical working knowledge in a simulated automotive repair setting. Engine Repair and/or Brakes will be emphasized along with a variety of actual automobile repairs to give the student the "hands-on" instruction needed to complete their training as an automotive repair technician. Corequisite: AST 1203 Brakes or AST 1603 Engine Repair. Fall.

AST 1202 Automotive Lab III (0-6-2)
The Automotive Lab courses are designed to allow the students to gain practical working knowledge in a simulated automotive repair setting. Electrical/Electronics II and/or Engine Performance II will be emphasized along with a variety of actual automobile repairs to give the student the "hands-on" instruction needed to complete their training as an automotive repair technician. Corequisite: AST 1303 Electrical / Electronic Systems II or AST

1403 Engine Performance II. Spring.

AST 1301 Automotive Lab IV (0-3-1)
The Automotive Lab courses are designed to allow the students to gain practical working knowledge in a simulated automotive repair setting. Suspension & Steering and/or High Performance will be emphasized along with a variety of actual automobile repairs to give the student the "hands-on" instruction needed to complete their training as an automotive repair technician. Corequisite: AST 1503 Suspension and Steering or AST 1703 High Performance. Spring.

AVIATION

AVN 1013 Introduction to Aeronautics (3-0-3)
Beginning with an overview of aviation, the course covers basic and advanced aerodynamics, navigation, safety, weather, aircraft performance, flight planning, introduction to aircraft systems, and FAA regulations. Includes technical data necessary for the FAA Private and Commercial Pilot Certificates. Available through private flight training services. The curriculum for this course must meet the same standards as AVN 1013, Introduction to Aeronautics at Henderson State University.

AVN 1161 Private Pilot Certification (1-0-1)
Ground school instruction in preparation for the FAA Private Pilot written examination. Available through private flight training services.

AVN 1171 Private Pilot Certification Lab (0-2-1)
Flight instruction necessary to complete requirements for the FAA Private Pilot Certificate. Available through private flight training services.

AVN 2031 Commercial Pilot Certification (1-0-1)
Ground instruction in preparation for the FAA Commercial Pilot written examination and Commercial Pilot certification; instruction emphasizes advanced aerodynamics, aircraft performance, precision maneuvers, extended cross country and night flight, relevant FAA regulations, introduction to advanced systems and transition to more sophisticated aircraft. Available through private flight training services.

AVN 2052 Commercial Pilot Certification Lab I (0-4-2)
Flight instruction necessary to complete requirements for the FAA Commercial Pilot Certificate. Available through private flight training services.

AVN 2062 Commercial Pilot Certification Lab II(0-4-2)
Flight instruction necessary to complete requirements for the FAA Commercial Pilot Certificate. Available through private flight training services.

AVN 2071 Instrument Pilot Certification (1-0-1)
Preparation for FAA Instrument Pilot written examination. Course completion requires passing the FAA Instrument written exam. Available through private flight training services.

AVN 2083 Instrument Pilot Certification Lab (0-6-3)

Flight instruction necessary to complete requirements for the FAA Instrument Pilot Certificate. Available through private flight training services.

BIOLOGY

BIOL 1114 General Biology (3-2-4)
Provides an integrated study of plant and animal topics including the scientific method, introductory biological chemistry, cell structure, function and reproduction, nutrition, energy transformations such as photosynthesis and cellular respiration, the molecular basis of inheritance and the interaction of the organism and the environment. Prerequisite: A reading score of 80 Compass, 18 ACT, or 41 ASSET. Fall, Spring, Summer. Lab Fee.

BIOL 1154 Zoology (3-2-4)
Designed as a survey of the animal kingdom with emphasis on the structure, function and reproduction of the invertebrate phyla. The course emphasizes comparisons of the different animal phyla regarding: obtaining, storing and utilizing food, exchanging gasses and eliminating wastes; transporting materials; coordinating activities; receiving and responding to environmental stimuli; moving and maintaining the species. A survey of Latin binomial nomenclature and identification methods are included. Prerequisite BIOL 1114-General Biology with a "C" or better. Fall. Lab Fee

BIOL 1164 Botany (3-2-4)
Provides a survey of the plant kingdom with emphasis on the anatomy and physiology of the flowering plants. Prerequisite: BIOL 1114-General Biology with a C or better. Spring. Lab Fee.

BIOL 1224 Basic Human Anatomy & Physiology (3-2-4)
Designed for students needing fundamentals in the structure and function of human body systems. Systems to be covered: Integumentary, skeletal, muscular, nervous, special senses, endocrine, blood, cardiovascular, lymphatic, immune, respiratory, digestive, and reproductive. Prerequisite: BIOL 1114 - General Biology with a "C" or better. Lab Fee.

BIOL 2224 Anatomy and Physiology I (3-2-4)
Designed to study the anatomy and physiology of the human body. Topics include introductory biological chemistry, study of cells and tissues, the integument, skeletal system, muscular system, and the nervous system. Prerequisite: Compliance with NPCC placement standards. Fall, Spring. Lab Fee.

BIOL 2234 Anatomy and Physiology II (3-2-4)
Continuation of BIOL 2224-Anatomy and Physiology I. Topics include circulatory, respiratory, digestive, urinary, and endocrine and reproductive systems, fluids and electrolytes. Prerequisite: BIOL 2224-Anatomy and Physiology I, Corequisite: CHEM 1104-Chemistry for Non-Majors I or one year of high school chemistry. A "C" or better is required for prerequisite courses and all prerequisites must have been earned within the last 5 years. Lab Fee.

BIOL 2244 Microbiology (3-2-4)
Introduces the fundamentals of microbiology with emphasis on the impact of microorgan-

isms on the human population. Primarily designed for the student entering a health related field. Prerequisite: BIOL 1114 General Biology or BIOL 2224 Anatomy and Physiology I, and CHEM 1104 Chemistry for Non-Majors or one year of high school chemistry. A "C" or better is required for prerequisite courses and all prerequisities must have been earned within the last 5 years. Lab Fee.

BUSINESS ADMINISTRATION

BUS 1113 Introduction to Business (3-0-3)
Surveys business activities of individual, national, and international scope. A comparison of economic systems with emphasis on the free-enterprise system including forms of ownership, organization, management, ethics, labor relations, production, marketing, finance, and legal and regulatory influences. Fall, Spring.

BUS 1133 Introduction to Income Taxes (3-0-3)
Introduction to federal income taxation with special emphasis on tax rules and conventions, preparing tax forms for individuals, and tax planning. An introduction to corporate taxation concepts will also be discussed. This course is designed for individuals from all disciplines regardless of major. No business or accounting experience is required. Fall.

BUS 1143 Introduction to Marketing (3-0-3)
Overviews marketing and its role both within the firm and society. Explores concepts, functions, and institutions involved in the creation, distribution, and sale of products and services, along with the tasks and decisions facing the marketing manager. Fall

BUS 1173 Management Fundamentals (3-0-3)
A study of basic types of business organization, principles of operation, efficiency analysis, personnel aspects, industry perspective, and practical applications. Prerequisite: ACT 1103-Principles of Accounting I with a grade of "C" or better. Available upon sufficient student demand.

BUS 1183 Small Business Management (3-0-3)
Focus is on the application and interpretation of management concepts and techniques to the small business firm and the problems faced in the formation and early growth periods. Permission of the instructor. Available upon sufficient student demand.

BUS 1191 Special Problems in Real Estate (1-0-1)
Companion course to BUS 2223, Basic Principles of Real Estate. This course is designed for the student who wishes to meet the Arkansas Real Estate Commission's requirement of four college credit hours in order to take the State license examination. The course will involve directed studies and research tailored to the educational need of each student and should be taken concurrently with BUS 2223, Basic Principles of Real Estate. Fall, Spring

BUS 1193 Consumer Economics (3-0-3)
Designed as a practical personal finance course to acquaint students with consumer behavior principles, personal financial statements, budgeting, types of insurance, taxes, credit, housing, and investments. Spring.

BUS 2033 Business Communications (3-0-3)

Focus is on the principles of effective business letter writing and the solutions of business communications problems in the modern business world. Special emphasis on letters of application, sales and credit letters, related business forms, business reports, and the development of effective expression. Prerequisite: OFAD 1133-Business English with a grade of "C" or better; CIS 1013-Information Systems I or OFAD 1063 Word Processing I. Spring.

BUS 2203 Business Law I (3-0-3)
Focus is on the basic principles of contracts, negotiable instruments, real and personal property sales, secured property, insurance, bankruptcy, wills, trusts, and probate estates. Fall, Spring.

BUS 2213 Business Law II (3-0-3)
Covers domestic relations, wills, probate, estates, guardianship, adoptions, and criminal law from a probation standpoint. Prerequisite: BUS 2203-Business Law I with a grade of "C" or better. Available upon sufficient student demand.

BUS 2223 Basic Principles of Real Estate (3-0-3)
Introduces the student to real estate terms, land description, appraisals, financing, deeds, mortgages, leases, wills, basic real estate math, regulations concerning taxes, truth and lending, and federal housing. Also, some discussion and/or reading will be included involving the legal aspects concerning Arkansas real estate laws and contracts, i.e. listing agreements, offer and acceptances, and land contracts. Fall, Spring.

BUS 2232 Real Estate Appraisal (2-0-2)
Covers basic principles and techniques of appraising residential real estate. Available upon sufficient student demand.

BUS 2233 Legal Aspects of Real Estate Transactions (3-0-3)
Covers a range of legal aspects including estates, dowers, homesteads, easements, property ownership, mortgages, transferring titles, requirements for valid conveyance, taxes, liens, escrows, probate proceedings, trusts, zoning ordinances, etc. Prerequisite: BUS 2223-Basic Principles of Real Estate with a grade of "C" or better. Available upon sufficient student demand.

BUS 2263 Real Estate Property Management (3-0-3)
Covers property analysis, rental collection, budgeting, maintenance, repair, investment planning, and executive control as it relates to the management of residential, commercial, and industrial property. Prerequisite: BUS 2223-Basic Principles of Real Estate with a grade of "C" or better. Available upon sufficient student demand.

BUS 2273 Fundamentals of Abstracting (3-0-3)
Covers the basic principles and techniques of abstracting residential, commercial, and industrial property. Prerequisite: BUS 2223-Basic Principles of Real Estate with a grade of "C" or better. Available upon sufficient student demand.

BUS 2291-2292 Business Games (1-3 Variable Credits)
Harding University Invitational Business Games. A computerized business game designed to teach students real-life aspects of owning and operating a business. Instructor approval. Available upon sufficient demand.

BUS 2293 Business Strategy and Decision Making (3-0-3)
Computerized business simulation. Student teams make real-world decisions concerning their businesses in competition with other teams. The course develops logical thinking and provides training in writing and oral presentation of financial results integrating the fields of marketing, finance, law, accounting, economics, personnel, insurance, and other areas affecting business. Prerequisite: ACT 1113-Accounting II, BUS 1113-Introduction to Business, and CIS 1013-Information Systems I or instructor permission. Available upon sufficient student demand. Lab Fee.

BUS 2323 Creative Finance (3-0-3)
Provides the student with a survey of the strategies for real estate investments. Available upon sufficient student demand.

CHEMISTRY

CHEM 1104 Chemistry for Non-Majors I (3-2-4)
Introduces the student to descriptive inorganic chemistry, emphasizing those aspects pertinent to nursing science. Prerequisite: MATH 1003-Intermediate Algebra taken previously or concurrently with this course. Fall, Spring, Summer. Lab Fee.

CHEM 1114 Chemistry for Non-Majors II (3-2-4)
Continuation of Chemistry for Non-Majors I. Basic course in descriptive organic and biochemistry, emphasizing those aspects pertinent to nursing science. Prerequisite: CHEM 1104-Chemistry for Non-Majors I. Spring, or available upon sufficient student demand. Lab Fee.

CHEM 1204 General Chemistry I (3-2-4)
Provides the student with the fundamental laws and
theories with respect to structure and interactions of matter, properties of matter, stoichiometry, chemical bonding, chemical reactions, physical states of matter, and changes of state. Corequisite: MATH 1123-College Algebra. Fall. Lab Fee.

CHEM 2204 General Chemistry II (3-2-4)
Continuation of General Chemistry I. The study of solutions, chemical kinetics, equilibrium, pH, electro chemistry, nuclear chemistry, and fundamental concepts of organic chemistry. Prerequisite: CHEM 1204-General Chemistry I. Spring. Lab Fee.

COMPUTER INFORMATION SYSTEMS **(See also Electronics, Engineering, Office Administration and Physics)**

CIS 1001 Introduction to Computing I (1-0-1)
Introductory course designed to give the student hands-on computer instruction. Hardware and software basics, using the mouse and keyboard shortcuts, managing files and folders, running multiple applications concurrently, and cut-copy-paste techniques will be covered. Prerequisite: None; however, formal keyboarding course strongly recommended. The grading system for this class is Passing/Failing or letter grade. Fall, Spring. Lab Fee.

CIS 1003 Information Systems A (3-0-3)
This course considers terminology and concepts, operating environments (Windows), word processing (WordPerfect), spreadsheets (QuattroPro), and database systems (Paradox). Prerequisite: OFAD 1002-Keyboarding I with a grade of "C" or better, or equivalent. Recommended: Computer Literacy or CIS 1001-Introduction to Computing I. Available upon sufficient student demand. Lab Fee.

CIS 1011 Introduction to Computing II (1-0-1)
Introduction to Computing II is an introductory course designed to give the students additional hands-on computer instruction. Course content focuses on software applications that learners use on a regular basis, including word-processing, spreadsheet, database, and presentations. Prerequisite: CIS 1001 Introduction to Computing I or instructor permission. Fall, Spring. Lab Fee.

CIS 1013 Information Systems I (3-0-3)
This course introduces computer terminology and concepts, Web browser, word processing, spreadsheet, database, and presentations software. Emphasis is placed on hands-on practice to produce interesting and useful projects, and computer skills will be reinforced through the use of tutorials and cases. Prerequisites: OFAD 1002 Keyboarding I with a grade of "C" or better or equivalent; CIS 1001 Introduction to Computing I or CIS 1263 Microcomputer Operating Systems I or competency test. Fall, Spring, Summer. Lab Fee.

CIS 1021 Introduction to Microsoft Works (1-0-1)
This introductory course is designed to give the student hands-on computer instruction in the integrated software program, Microsoft Works for Windows. This integrated software program combines word processing, spreadsheet, graphics and database tools. Prerequisite: CIS 1001 Introduction to Computing I, CIS 1011 Introduction to Computing II, or equivalent. The grading system for this class is Passing/Failing. Available upon sufficient student demand. Lab Fee.

CIS 1053 Networking & Communications I (3-0-3)
This course provides an introduction to microcomputer-based local area networks. Issues concerning hardware and software for networks; data transmissions; and network architectures, protocols and standards are addressed. This course will familiarize students with the OSI model and network connectivity. Fall or available upon sufficient student demand. Lab Fee.

CIS 1101 Introduction to PowerPoint (1-0-1)
This course introduces basic and advanced Power Point techniques to create, modify, enhance and deliver dynamic and compelling on-screen presentations containing text, graphics, charts, and multimedia. Prerequisite: CIS 1001 Introduction to Computing I or Windows competency. Available upon sufficient student demand. Lab Fee.

CIS 1103 Foundations of Computer Science (3-0-3)
Designed to give students an all around knowledge of computer and information systems. Included is a study of information systems, computer systems, quantitative methods, and basic programming concepts and techniques. Prerequisite: PCLM 0063-Basic Math or equivalent, CIS 1013-Information Systems I with a grade of "C" or better or CIS 1003-Information Systems A with a grade of "C" or better. Corequisite 1593-Programming in C++. Available upon sufficient student demand.

CIS 1144 RPG II A (3-2-4)
This course presents elements of the computer programming language RPG II (Report Program Generator II), a report writer command used in IBM environments. It is the language for IBM systems 34, 36, and some 38's. Emphasis in the course is on writing and maintaining RPG II programs for business needs. Available upon sufficient student demand. Lab Fee.

CIS 1153 Systems Analysis and Design (3-0-3)
This course introduces practical and theoretical issues in Systems Analysis & Design using modern methods. Students are introduced to traditional SDLC (System Development Life Cycle) and to modern methods of database design and the use of CASE tools. Relational Database Management Systems and fourth generation languages like SQL play a central part in the student's understanding of the material. Students are expected to complete a major practical project in Systems Analysis & Design. Available upon sufficient student demand. Lab Fee.

CIS 1163 Introduction to Computer Information (3-0-3)
This course is designed to give students a thorough introduction into the electronic computer industry that began more than fifty years ago. The main focus of the course is to introduce the student to the world of computing, concepts relating to interaction with computers, fundamental hardware, software, and **communications'** concepts, and going online. Available upon sufficient student demand. Lab Fee.

CIS 1173 Spreadsheets I (3-1-3)
This course is designed to instruct students in the use of spreadsheet software to model, analyze, and support common business decisions. Instruction will include using the software as a decision support tool and as a list management tool. Concepts and features presented include: scenario and regression analysis, data scrubbing, chart building and analysis, Pivot tables and Pivot charts, filtering, troubleshooting formulas, tracing errors, and using advanced functions. An introduction into Visual Basic for Applications (VBA) is included and used in creating custom forms, custom functions, recording and editing macros, using variables and ranges and controlling code execution. Instruction is also given in importing, linking, and using VBA to share spreadsheet data with databases and the Web. Prerequisite: CIS 1013 Information Systems I with a grade of "C" or better; CIS 2013 Information Systems II recommended. Spring. Lab Fee.

CIS 1183 Assembler Language (2-2-3)
This course provides an introduction to programming using an Assembly level language. Programming exercises include using the 8086/8088 Macro assembler for IBM PC series microcomputers. Other common assembler languages are also considered. Prerequisite: Programming course or experience. Lab Fee.

CIS 1203 Presentation Graphics/DeskTop Publishing I (3-0-3)
This course covers basic design principles, desktop publishing fundamentals, document planning & layout, specific design tools, and Web publishing. Students will create interesting and useful desktop publishing projects with desktop publishing/photo-editing software. The application of design principles and layout will also be applied to presentations. Teamwork skills are taught through the use of team projects. Computer skills are reinforced

through the use of lab assignments, individual projects, and team projects. Prerequisite: 1013 Information Systems I with a grade of "C" or better or instructor approval. Lab Fee

CIS 1213 Help Desk Support (3-0-3)
This course provides a broad understanding of help desk support services and the tools and technology most frequently used to support business practices. This course focuses on training in user support, help-desk concepts and software, customer service, problem solving, evaluation techniques and interpersonal and communication skills are emphasized. Students will have an opportunity to apply their knowledge through hands-on projects, exercises, and case study assignments. Prerequisite: CIS 1013 Information Systems I. Spring or upon sufficient student demand. Lab Fee.

CIS 1223 Presentation Graphics/Desktop Publishing II (3-0-3)
This course covers planning, creation, and delivery of computerized presentations. Case studies with realistic business content are utilized. Effective delivery techniques are emphasized for both a live audience and a web audience. Software skills are reinforced through the use of lab assignments and creative projects. Prerequisite: CIS 1013 Information Systems I with a C or better or instructor approval. Lab Fee.

CIS 1243 Microcomputer Hardware Maintenance I (3-0-3)
This course provides knowledge of and experience with microcomputer hardware selection, installation, **mainte**nance and operation of external and internal components. Students will gain hands-on experience in the assembling of computers and the installation of drivers that make the components functional. Prerequisite: CIS 1263 Microcomputer Operating Systems I or equivalent. Fall, Spring. Lab Fee.

CIS 1263 Microcomputer Operating Systems I (3-0-3)
This course provides hands-on introduction to the Windows operating environment. Topics covered include graphical user interface basics, icon-based file manager and program manager operations, windows customization, and linking technologies. Fall, Spring. Lab Fee.

CIS 1273 Spreadsheets II (3-1-3)
This course is designed to teach intermediate and advanced features of Excel. Topics covered will include What-If Analysis, Multiple Worksheets/Workbooks, Scenario Manager, Goal Seek, Solver, Pivot Table and Charts, Data Exchange, Auditing a Worksheet, and VBA code. The learning experienced in this course will help to make the student a more productive worker by teaching the skills necessary to be competitive in the workplace. Prerequisite: CIS 1173 Spreadsheets I. Available upon sufficient student demand. Lab Fee

CIS 1283 JAVA Programming I (3-0-3)
This course is designed for student with previous keyboarding and Windows computer experience. Mastery of basic computer concepts and terminology is also assumed. This course provides a hands-on introduction to the JAVA programming language from a procedural point of view. Topics include programming fundamentals and structures, variable,s constants, functions, and writing and debugging JAVA code. Prerequisite: CIS 1013 Information Systems I with a grade of "C" or better, CIS 1263 Microcomputer Operating Systems I with a grade of "C" or better. PCLM 0063 Basic Math or equivalent with a grade of "B" or better. Strongly Recommended: Grade of "B" or better in all the above or equiv-

alent. Fall. Lab Fee.

CIS 1293 JAVA Programming II (3-0-3)
This course is designed for students with previous JAVA programming experience for the Windows environment. Topics covered include variable arrays, object-oriented programming. Unified Modeling Language (UML) classes, data structures, exception handling and JAVA input/output (I/)) streams. Prerequisite: CIS 1283 JAVA Programming I with a grade of "C" or better. Strongly Recommended: Grade of "B" or better in CIS 1283 JAVA Programming I. Spring, Lab Fee.

CIS 1301 Introduction to Personal Web Page (1-0-1)
This course introduces FrontPage basic features to create, modify, format, enhance, and publish personal Web pages. Prerequisites: CIS 1001 Introduction to Computing I or Windows competency; CIS 1501 Introduction to the Internet or Internet competency. Lab Fee.

CIS 1303 Visual Basic I (3-0-3)
This course provides a hands-on introduction to the Visual Basic programming language. Topics covered include menus, IDE tools and forms, GUI's, and writing and debugging VB code. Prerequisite: CIS 1593 Programming in C++ with a grade of "C" or better or competency test. Spring. Lab Fee.

CIS 1491-1496 Special Study in Computer Information Systems (1-6 Variable Credits)
Special courses or independent studies in computer information systems are offered on demand. Students may plan individual projects and research in consultation with the instructor. Prerequisite: Permission of the instructor. May be repeated for credit when topics vary. Lab Fee.

CIS 1501 Introduction to the Internet (1-0-1)
This introductory course is designed to give the student basic hands-on computer instruction on the most widely used services of the Internet: getting connected; learning to use features of the web browser, searching the web, downloading files and programs, and using e-mail. Prerequisite: CIS 1001-Introduction to Computing or Windows competency. The grading system for this class is Passing/Failing. Fall, Spring. Lab fee.

CIS 1503 Computer-Aided Drafting I (3-0-3)
This course provides knowledge about and experience with industry standard graphics software. Tasks included are: Line Drawings, Bar Graphs, Shapes, and 3-D Representation. Fall, Spring. Lab Fee.

CIS 1593 Programming in C++ (3-0-3)
This course is designed to develop proficiency in the fundamental structures of computer programming using the "C" language. The structured nature and versatility of the language are emphasized as well as techniques for developing applications. Prerequisites: CIS 1263 Microcomputer Operating Systems I with a grade of "C" or better or competency test; Math ACT with a score of 19. Fall. Lab Fee.

CIS 1603 UNIX (3-1-3)
This course provides an introduction to the UNIX operating system. The course consid-

ers and utilizes the features and commands available through this operating system. Prerequisites: CIS 1013 Information Systems I with a grade of "C" or better; Math ACT with a score of 19. Available upon sufficient student demand. Lab Fee.

CIS 1803 Internet (3-1-3)
Introduces the Internet from a user's perspective, with an emphasis on productive, professional access. Topics include how to connect to the Internet, how to communicate with others, how to find and share information productively utilizing presentation software, as well as educational, business and social issues related to the Internet. Prerequisite: CIS 1013 Information Systems I with a grade of "C" or better. Lab Fee.

CIS 1813 Computer Law & Ethics (3-0-3)
This course covers ethical issues related to technology including responsibility, liability, and legal issues affecting computer professionals and users. This course is designed to develop and encourage ethical decision making, behavior, and character expected of an IT professional. Fall, Spring. Lab Fee.

CIS 1823 Network Cabling (2-3-3)
This course is designed to provide students with the knowledge and skills necessary to become entry-level technicians in the Network Cabling industry with a concentration in Copper Cabling and Fiber Optics. The focus of the course is on the following: tool use and construction techniques; the characteristics of various industry standards; copper and fiber optic theory; characteristics of various cabling components; and troubleshooting and repair. After successful completion of this course and certification exams, a certificate will be issued from C-Tech Associates, Inc. Spring. Lab Fee.

CIS 1903 Web Design/Front Page
This course introduces FrontPage basic and advanced features to create, publish, and maintain websites. Emphasis is placed on hands-on practice to produce interesting and useful projects, and computer skills will be reinforced through the use of tutorials, lab assignments, and cases. Prerequisite: CIS 1013 Information Systems I with a grade of "C" or better. Internet literacy. Fall, Spring. Lab Fee.

CIS 1913 Web Design/HTML
This course introduces the student to Web authoring and publishing using Hypertext Markup Language (HTML). This course covers HTML structure and the HTML tags supported in HTML 4.0. Emphasis is placed on hands-on practice to produce interesting and useful projects, and computer skills will be reinforced through the use of tutorials, lab assignments, and cases. Prerequisites: CIS 1013 Information Systems I with a "C" or better. Fall. Lab Fee.

CIS 2013 Information Systems II (3-0-3)
This course considers the more complex capabilities of application packages. Word processing topics covered include: styles, outlines, tables and tables of contents, mail merge, comparing and merging documents, and Object Linking and Embedding (OLE). Spreadsheet topics covered include: sorting, filtering, subtotals, Pivot tables and charts within a data list; templates, multiple worksheets/workbooks, macros, application creation, and Object Linking and Embedding (OLE). Database topics include: database and table design and maintenance, advanced queries, custom forms, and custom reports. The course also

covers integration of all application programs with the Web and other programs. Prerequisite: CIS 1013 Information Systems I with a grade of "C" or better. Fall, Spring. Lab Fee.

CIS 2023 Visual Basic for Applications (3-0-3)
This course is designed to introduce students to Microsoft Visual Basic for Applications. Learn how to customize and control MS Access, MS Excel, and MS Word with VBA. Automate repetitive tasks and learn ho to add loops to recorded macros. Prerequisite CIS 2013 Information Systems II or CIS 1173 Spreadhseets I with a grade of "C" or better or with Instructor's permission. Lab Fee.

CIS 2053 Networking & Communications II (3-0-3)
This course is designed to provide students with classroom and laboratory experience in current and emerging network technology. Instruction includes: networking, LANs, WANs, Ethernet, TCI/IP, cabling, cabling tools, routers and basic router setup and programming. Prerequisite: CIS 1053-Networking & Communications I with a grade of "C" or better. Spring. Lab Fee.

CIS 2093 Advanced Programming in C++ (3-0-3)
This course is a continuation CIS 1593 Programming in C++ and is intended for those who want to pursue programming for more complex applications. Topics include: sorting, arrays, classes and more advanced object-oriented programming concepts. Prerequisites: CIS 1593 Programming in C++ with a grade of "C" or better. Spring. Lab Fee.

CIS 2123 Database Applications Development (3-0-3)
This course provides an introduction to the use of database applications design tools including VBA programming. Approximately 60% of the course is the development of customized database applications. Prerequisite: CIS 2013-Information Systems II with a grade of "C" or better. Recommended: CIS 1303 Visual Basic I or CIS 2023 Visual Basic for Applications. Fall. Lab fee.

CIS 2133 Applications in Structured Query Language (SQL (3-0-3)
This hands-on course is designed for students with previous Windows and computer database design experience. Mastery of basic computer / database concepts and terminology is also assumed. This course employs a variety of database application design tools, primarily using SQL (Structured Query Language) and VBA (Visual Basic for Applications) programming. Prerequisite: CIS 2013 - Information Systems II - minimum grade of "C". Recommended: CIS 2123- Database Applications Development - minimum grade of "C" OR instructor permission Strongly Recommended: Grade of "B" or better in all the above or equivalent. Available upon sufficient student demand. Lab fee.

CIS 2143 Microcomputer Hardware Maintenance II (3-0-3)
This course is designed to introduce students to servicing computer systems from the software standpoint. This course includes IRQ, DMA, files, drivers, operating systems, applications, and other software conflicts that occur in computer systems. An in-depth focus on application conflicts and software installation and troubleshooting, utilizing various software packages, is included. Virus scan software is touched upon. Emphasis is toward hands-on software troubleshooting and repair environment. Prerequisite: CIS 1243 Microcomputer Hardware Maintenance I with a grade of "C" or better or equivalent. Fall,

Spring. Lab Fee.

CIS 2153 Networking & Communications III (2-3-3)
This course is designed to teach the student how to make networks operate faster and better regardless of their size. The focus is on the design and management of local area networks covering protocols, switching and Fast Ethernet. Prerequisite: CIS 2053-Networking & Communications II with a grade of "C" or better. Fall or upon sufficient student demand. Lab fee.

CIS 2163 MS Essentials (3-0-3)
This is an introductory course designed to provide an overview of networking concepts and how they are implemented in Windows. It is the student's responsibility to make arrangements to take and pay for the certification exam. NPCC does not guarantee passage of the MCSE exam. Prerequisite: CIS 1243 Microcomputer Hardware Maintenance I with a grade of "C" or better. Fall, Spring. Lab Fee.

CIS 2243 Visual Basic II (3-0-3)
This course is a continuation of CIS 1303 Visual Basic I and is intended for those who want to pursue programming for more complex applications. Those intending to do database development or software support should take this course. Prerequisite: CIS 1303-Visual Basic I with a grade of "C" or better. Fall. Lab fee.

CIS 2253 Networking & Communications IV (2-3-3)
This course is designed to introduce the student to wide area networks, including different WAN services such as ISDN and Frame Relay. Prerequisite: CIS 2153-Networking & Communications III with a grade of "C" or better. Spring or upon sufficient student demand. Lab fee.

CIS 2263 Microcomputer Operating Systems II (3-0-3)
This course provides a hands-on technical study of the Windows 2000 and Windows XP Command Line. Topics covered include: opening a command line session and working with commands, files, directories and subdirectories in the command line interface, managing and backing up a hard disk, using troubleshooting tools, using batch programs, and using network, TCP/IP, and FTP commands. Prerequisite: CIS 1263 Microcomputer Operating Systems I or equivalent. Fall or upon sufficient student demand. Lab Fee.

CIS 2273 Microsoft Network Operating Systems (MS NOS)
This course provides students with the knowledge and skills necessary to install and configure Microsoft Windows Professional on stand-alone and client computers that are part of a workgroup or domain. In addition, this course provides the skills and knowledge necessary to install and configure Windows Server to create file, print, Web, and Terminal servers. It also provides students with the prerequisite knowledge and skills required for Implementing a Microsoft Windows Network Infrastructure. It is the student's responsibility to make arrangements to take and to pay for the certification exam. NPCC does not guarantee passage of the MCSE exam. Prerequisite: CIS 2163 MS Essentials. Fall, Spring. Lab Fee.

CIS 2283 MS Networking I
This course is for support professionals who are new to Microsoft Windows and will be responsible for installing, configuring, managing, and supporting a network infrastructure

that uses the Microsoft Windows Server products. It also provides students with the prerequisite knowledge and skills required for Implementing and Administering Microsoft Windows Directory Services. It is the student's responsibility to make arrangements to take and to pay for the certification exam. NPCC does not guarantee passage of the MCSE exam. Available upon sufficient student demand. Prerequisite: CIS 2273 MS NOS. Fall. Lab Fee.

CIS 2293 MS Directory Services
This course is designed to provide students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows® Active Directory™ directory services. The course also focuses on implementing Group Policy and performing the Group Policy-related tasks that are required to centrally manage users and computers. This course is designed to assist students in gaining the technical skills required to attain the Microsoft Certified Systems Engineer (MCSE). It is the student's responsibility to make arrangements to take and to pay for the certification exam. NPCC does not guarantee passage of the MCSE exam. Prerequisite CIS 2273 MS NOS. Fall, Spring. Lab Fee.

CIS 2313 MS Security Design (3-0-3)
This course provides you with the knowledge and skills to design a secure network infrastructure. Topics include assembling the design team, modeling threats, and analyzing security risks in order to meet business requirements for securing computers in a networked environment. The course encourages decision-making skills through real-life scenarios that the target audience may encounter. You are given the task of collecting the information and sorting through the details to resolve the given security requirement. Fall. Lab Fee.

CIS 2353 Networking and Communications V (3-2-3)
This course is designed to introduce the student to Hierarchical Network Design Model, including Classfull Addressing, Routing Processes, OSPF (Open Shortest Path First) Overview, EIGRP (Enhanced Interior Gateway Routing Protocol) Concepts, and Traffic Management Techniques. Available upon sufficient student demand. Lab Fee.

CIS 2383 MS Networking II
This course is for support professionals who are new to Microsoft Windows and will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows Server products. It also provides students with the prerequisite knowledge and skills required for Implementing and Administering Microsoft Windows Directory Services. Spring. Lab Fee.

CIS 2413 MS Networking Design (3-0-3)
This course provides students with the knowledge and skills to design a Microsoft Active Directory® directory service and network infrastructure for a Microsoft Windows environment. The course is intended for systems engineers who are responsible for designing directory service and/or network infrastructures. It is the student's responsibility to make arrangements to take and to pay for the certification exam. NPCC does not guarantee passage of the MCSE exam. Prerequisite: CIS 2283 MS Networking I. Spring. Lab Fee.

CIS 2423 MS Firewall
The goal of this course is to provide Information Technology (IT) professionals with the knowledge and skills to deploy and manage Microsoft Internet Security and Acceleration

(ISA) Server in an enterprise environment. It is the student's responsibility to make arrangements to take and to pay for the certification exam. NPCC does not guarantee passage of the MCSE exam. Prerequisite: CIS 2273 MS NOS. Available upon sufficient student demand. Lab Fee.

CIS 2433 MS Mail
The goal of this course is to teach students the knowledge and skills necessary to install, configure, and administer Microsoft Exchange. It is the student's responsibility to make arrangements to take and to pay for the certification exam. NPCC does not guarantee passage of the MCSE exam. Prerequisite: CIS 2273 MS NOS. Fall. Lab Fee.

CIS 2453 Networking and Communications VI (3-2-3)
This course focuses on the techniques and technologies for enabling WAN solutions on using a combination of both lectures and laboratory exercises. The course topics include configuring asynchronous connections with modems, PPP (Point-to-Point Protocol), ISDN (Integrated Services Digital Network), DDR (Dial-on-Demand Routing), X.25, Frame Relay, Queuing and NAT (Network Address Translation). Available upon sufficient student demand. Lab Fee.

CIS 2503 Computer-Aided Drafting II (3-0-3)
This course is designed to give the student experience with advanced drafting. Major tasks included are dimensioning variables, customizing software, developing 3-dimensional drawings, and creating drawings utilizing the two tilemodes. Prerequisite: CIS 1503 Computer-Aided Drafting I with a grade of "C" or better. Spring or upon sufficient student demand. Lab Fee.

CIS 2513 Macromedia Studio (3-0-3)
This course teaches the introductory skills in the Macromedia Studio MX 2004 necessary to create Web pages (Dreamweaver MX 2004), build Flash animations (Flash MX 2004), and manipulate graphics for the Web (Fireworks MX 2004). Emphasis is placed on hands-on practice to produce interesting and useful projects for practice and reinforcement. Prerequisites: CIS 1013 Information Systems I with a "C" or better. Internet Literacy strongly recommended. Spring. Lab Fee.

CIS 2603 Advanced UNIX (3-0-3)
This course is a continuation of CIS 1603 UNIX and is intended for those who want to pursue advanced operating system programming and applications. Prerequisite: CIS 1603 UNIX. Available upon sufficient student demand. Lab Fee.

CIS 2704 COBOL (3-2-4)
This course provides an introduction to the COBOL programming language (Common Business Oriented Language). The course is aimed at students interested in understanding the syntax and semantics of a programming language such as COBOL. Students will understand the role such a language is playing in the business world today, paying special attention to the Y2000 problems, that many organizations which still adopt legacy COBOL applications will face. Students will also gain knowledge of Object Oriented COBOL through the use of Micro Focus Personal COBOL for Windows. Available upon sufficient student demand. Lab Fee.

CIS 2903 Internship (1-9-3)
The Internship is an opportunity to enhance and reinforce classroom instruction with on-the-job work experience. Appropriate training stations will be developed, and supervision will be provided by instructors and site personnel. Students are required to complete 135 clock hours of supervised experience during the term. Available upon sufficient student demand. Prerequisite: Division Chair approval and minimum 2.0 GPA.

COMPUTER SCIENCE (See Computer Information Sciences and Technology)

CRIMINAL JUSTICE

CRJ 1103 Introduction to Criminal Justice (3-0-3)
Critical analysis of the American criminal justice system and its constituent components of law enforcement, prosecution, judiciary and corrections as they function interdependently within a democratic society and its inherent political and social forces; comprehensive examination of the evolution of criminal law and the eternal search for justice within the diversified demands of a multi-cultural society. Spring and Fall, except for home study arrangements.

CRJ 1123 Criminal Procedures and Evidence (3-0-3)
Focus on the criminal process, legal problems associated with investigation of crime, acquisition and preservation of evidence, commencement of a criminal proceeding, prosecution and defense of charges, sentencing, and appeal. Principal concern is with development of existing procedures and examination of current efforts for reform. Prerequisite: CRJ 1103-Introduction to Criminal Justice. Spring, except for home study arrangements.

CRJ 2153 Criminology (3-0-3)
An interdisciplinary course which examines the nature and origins of criminal behavior and societal reactions to that behavior. Included are biological, psychological and sociological theories of criminal behavior; formal responses of societal control agencies, and informal responses of communities, groups, and individuals in society. Also included are current research and trends in crime control policies and programs. Spring and Fall, except for home study arrangements.

CRJ 2223 Police-Community Relations (3-0-3)
Historical examination of the evolution of police work from the ancient to the modern, and the accompanying struggle of police agents and agencies to discover the right mix of enforcement and service. Focus is on contemporary movements from traditional, reactive police work to community-oriented, proactive models where citizens and police form partnerships to solve neighborhood social problems that generate disorder, fear and crime. Spring, except for home study arrangements.

CRJ 2243 Police Organization and Management (3-0-3)
Study or principles and theories of organization, management and administration as applied to law enforcement agencies operating within the political climate of democratic government; includes evolution of theory and practice in management styles, leadership, organizational structure, policy, planning, productivity, technology, public personnel issues and pub-

lic sector liability. Fall, except for Home Study arrangements.

CRJ 2253 Criminal Law (3-0-3)
History and philosophy of modern criminal law, including structure, definition, and application of statutes and leading case law; elements of crimes; penalties and general provisions of the penal code. Fall, except for home study arrangements.

CRJ 2263 Juvenile Justice and Delinquency (3-0-3)
Historical analysis of problems associated with juvenile delinquency and the evolution of a juvenile justice system apart from the adult criminal justice system; study of landmark court cases which have shaped the system's response to juvenile problems; dilemmas faced by criminal justice practitioners in deciding whether to apply juvenile or adult criteria in deciding cases involving young offenders. Spring, except for home study arrangements.

CRJ 2273 Introduction to Corrections (3-0-3)
History and evolution of theories and practices in penology and penal institutions; psychological and sociological profiles of the keepers and the kept; sentencing of offenders and unique problems associated with handling special categories of inmates: female, disabled, aged and those suffering from debilitating diseases. All students will participate in scheduled field trips to various correctional facilities. Fall, except for home study arrangements.

CRJ 2283 Criminal Justice Internship (3-0-3)
Criminal justice interns will be assigned to observe, record, and to the extent possible, participate in routine agency operations under supervision of agency officials. Written reports covering specific agency functions are submitted at regular intervals in accordance with a work-study plan, to be finalized with the submission of a formal work project paper as agreed upon by student and instructor. Prerequisite: Instructor permission. Fall, Spring, Summer.

CRJ 2291-6 Special Study (1-6 Variable credits)
Special courses or independent studies in criminal justice are offered on demand. Students may plan individual projects and research in consultation with the instructor. Prerequisite: Permission of the instructor.

EARLY CHILDHOOD EDUCATION

ECE 1103 CHILD CARE PRACTICUM I (1-6-3)
A lab experience designed to provide opportunities to teach children in the child development center under the supervision of the program staff. Course time is divided between the lab (children's program) and classroom. Lab includes working with children, food lab, resource, and office administration. Fall & Spring.

ECE 1203 CHILD CARE PRACTICUM II (1-6-3)
A lab experience designed to provide opportunities to teach children in the child development center under the supervision of the program staff. Course time is divided between the lab (children's program) and classroom. Lab includes working with children, food lab, resource, and office administration. Fall & Spring.

ECE 1113 Child Development (3-0-3)

This class examines basic principles of development: physical, emotional, social, and intellectual. Emphasis will be placed on developmentally appropriate practice, developmental growth, and theories and special problems. Prerequisite or corequisite for other courses. Required for CDA. Fall.

ECE 1183 Health, Safety & Nutrition (3-0-3)
This class explores the fundamentals of children's good health. It provides training in the ability to recognize and appropriately assume responsibility for the well being of children. Fall.

ECE 1143 Family Involvement (3-0-3)
Covers the diversity of experiences, values, and functioning found in today's family. The ability to empathize with parents and development of communication skills and techniques to support families is included. Students learn the value and necessity of developing a partnership between parents and the child care teacher and/or center. Required for all options except CDA. Spring.

ECE 1163 Program Management (3-0-3)
Covers general management concepts, personnel, legal concerns, financial record keeping, food management, and management of daily operations. Includes study of local, state, and federal regulations for child care facilities, guidelines for conducting a community needs assessment, location of child care facility, components of the facility design, facility space arrangements, storage needs, surfaces and materials for indoor facilities, and listening techniques useful in finding, applying for, and getting a job. It includes an introduction to self-improvement and non-verbal communications.
Required for CDA, Owner/Director, and Associate Degree Options. Fall.

ECE 1223 Infant/Toddler Curriculum (3-0-3)
Preparation and procedures for working as nannies, teachers, and family day care providers, providers for ill or fragile children, and parents of very young children. Covers materials and activities for young children and provision of optimal health and safe environments for infants and toddlers. Prerequisite or corequisite: ECE 1113 Child Development. Required for all options except CDA. Fall.

ECE 1133 Child Guidance (3-0-3)
Explores the factors which affect the behavior and guidance techniques in-group child care settings. Units on development factors, indirect guidance, direct guidance, and strategies will be studied. Prerequisite: ECE 1113 Child Development. Required for all options except CDA. Spring.

ECE 1253 Curriculum Development (3-0-3)
Presentation of a wide variety of classroom activities for child care. Designed to promote creative expression in the areas of art, creative play, dramatic play, and movement activities. Prerequisite: ECE 1113 Child Development. Required for all options including CDA. Spring.

ECE 1173 Methods & Materials (3-0-3)
Practical "hands-on" experiences to develop materials and illustrative methods related to the study of child care. Production of a collection of illustrative materials pertinent to the child

care profession including specific themes to be used in a child care center. Required for Teachers and Associate Degree options. Fall.

ECE 1403 Nanny Orientation (1-6-3)
Nanny orientation is the study of developmental needs of children, interaction with parents and employers, family dynamics, professionalism, personal development and social skills, physical care of children, and domestic tasks and care of the children's environment. Designed to provide lab experiences in a child care center under the supervision of the staff. Required for Nanny option only. Spring.

ECE 1363 Internship for Nanny (0-9-3)
Intensive hands-on experience working directly with children within the family setting. Planning, implementing, and evaluating directed experiences for age appropriate development. Observation and recording of this are included. Prerequisite: Must have a minimum of 70% (C) in all course work before enrolling in Internship. Required for Nanny option only. Summer.

ECE 1353 Internship for Teacher or Owner/Director (0-9-3)
Internship provides an opportunity to obtain additional experiences in a child care setting. Appropriate training stations and supervision will be provided in cooperation with work site directors. Prerequisite: Must have a minimum of 70% (C) in all course work before enrolling in Internship. Required for Teacher and Owner/Director options. Summer**.**

ECE 1301 CDA Documentation (0-3-1)
This course will focus on the completion of CDA competency goals, professional resource file, and field advising visits. An advisor will complete the CDA Observation instrument as a part of this course. Students are to enroll in this course concurrently with their final CDA class. Spring.

ECE 1283 Special Needs (3-0-3)
A survey of the most frequent kinds of disabilities likely to be encountered in child care. Includes name recognition of common syndromes, acceptable professional attitudes, ways of communicating with parents, use of equipment helpful in management, and when and how to refer special needs children. Required for all options. Spring.

EARTH SCIENCE

ESCI 1091-1093 Earth Science Honors' Study
(1-3 variable credits)
Special Studies in Earth Science, Astronomy, Meteorology, or Oceanography on a one-to-one basis with the instructor. Available by request upon meeting Honors' Study Program requirements listed in current catalog.

ESCI 1104 Earth Science (3-2-4)
Provides the student with a survey of the earth, including concepts from geology, astronomy, meteorology, plate tectonics, and physical geography. Offered a minimum of once a year. Lab Fee.

ESCI 1151 Astronomy Lab (0-2-1)

This laboratory course is designed for students who have successfully completed ESCI 1153 Astronomy, formerly listed in the GCCC catalog which is no longer offered. See PHYS 1124 for current astronomy listing. This introductory lab will reinforce concepts previously studied pertaining to the Solar System, Stars, Galaxies, Cluster, the Universe, and Cosmology, as well as the physics, chemistry and biology by which these operate. Prerequisite: ESCI 1153 Astronomy, Spring. Lab Fee

ESCI 2244 Meteorology (3-2-4)
Introduces the student to a study of weather, physics of the atmosphere, and associated phenomena. Available upon sufficient student demand. Lab Fee.

ESCI 2254 Oceanography (3-2-4)
Provides the student with a broad survey of the ocean sciences, fundamental concepts of the biological, chemical, geological, and physical processes of the sea and air-sea interactions. Available upon sufficient student demand. Lab Fee.

ESCI 2263 Environmental Science (3-0-3)
This course provides an introduction to the most important concepts in the study of the environment. This course combines ideas from the natural sciences with environmental ethics, environmental economics, environmental law, environmental impact, and environmental planning. The student will be provided with the knowledge and insight to understand the general idea of how nature works and the interconnectedness between people and the environment. Available at least once a year.

ECONOMICS

ECON 2203 Macroeconomics (3-0-3)
Designed as the introductory course to basic economic concepts, tools, reasoning, and methods of analysis relating to the economizing problem and capitalism. The course concentrates on basic topics of the determinants of employment and prices; measuring national income;
monetary and fiscal policy; and money and banking. Fall, Spring.

ECON 2213 Microeconomics (3-0-3)
Continues Macroeconomics with emphasis on the microeconomic topics of theories of consumer behavior; cost and price; and production, consumption and distribution of goods between consumers, producers, and resource suppliers in market models of pure competition and imperfectly competitive markets. Prerequisite: ECON 2203-Macroeconomics with a grade of "C" or better. Spring or available upon sufficient student demand.

EDUCATION

EDUC 2243 Foundation of Education (3-0-3)
Study of various educational policies, practices, and trends; learning objectives; the nature of teaching; professional ethics; history of education, and teacher liabilities. Ten (10) hours of public school observation is required. Education methods courses for Arkansas State Teacher Certification will not be offered for special study credit in the Communication and Arts Division. Prerequisite: ENG 1113-English Composition I. Spring.

EDUC 2263 Introduction to K-12 Technology (3-0-3)
This course introduces future teachers to the different technologies used by classroom teachers. Instruction will include e-mail, presentation software, web, BlackBoard, digital camera, and scanners. Prerequisites: OFAD 1002 Keyboarding I with a grade of "C" or better or equivalent and CIS 1001 Introduction to Computing I or CIS 1263 Microcomputer Operating. Lab Fee.

EMERGENCY MEDICAL SERVICES-PARAMEDIC

EMSP 1203 Emergency Respiratory Support (3-0-3)
Examines the etiology, pathophysiology, and clinical features and treatment of respiratory emergencies. The course includes various techniques and equipment used by the paramedic. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program.

EMSP 1303 Emergency Cardiac Care (3-0-3)
Presents techniques used by the paramedic in providing emergency care to patients with cardiac disorders and dysrhythmias. Emphasis is placed on acute and chronic disease processes, including appropriate pharmacological intervention, electrocardiography, and telemetry. Also included are various simulations dealing with cardiac-related emergencies. Prerequisite: Permission of the instructor.

EMSP 1403 Pharmacology (3-0-3)
Examines the actions, indications, precautions, dosage, and administration of medications and intravenous fluids. Emphasis is placed on drugs carried on Mobile Intensive Care Units, fluid and drug therapy, legal controls, dosage calculation, and metric conversions. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program.

EMSP 1601 Etymology (1-0-1)
Medical terminology is introduced in this course by the use of prefixes, suffixes, root words, and abbreviations, in order to build a vocabulary that will allow for communication with other professionals and enhance one's overall job performance. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program. Lab fee.

EMSP 1603 Patient Assessment (3-0-3)
Includes history taking, physical examination, applying the principles of anatomy, physiology, and etymology to detecting, defining, and describing abnormal changes and processes in the body. Also, triage and scene assessment and control are emphasized. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program.

EMSP 2203 Medical-Surgical Emergencies (1-6-3)
Recognition, management, and pathophysiology involved in the care of various medical-surgical emergencies. Techniques of trauma management are examined. Pharmacology pertinent to the treatment of abnormal, metabolic, structural, and toxic conditions is included. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program.

EMSP 2303 Clinical Practicum (0-18-3)

Rotations through clinical settings allow for further sharpening of paramedic skills and other patient care techniques. Areas of experience include, but are not limited to: (1) OR, (2) ICU and CCU, (3) Emergency Department, (4) Pediatrics, (5) Labor and Delivery. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program. Lab Fee.

EMSP 2402 Anatomy and Physiology (2-0-2)
Presents basic anatomy and physiology beginning with cellular structure and function and progressing to systems applications. It provides the student with knowledge of normal and abnormal body anatomy and processes. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program. Lab Fee.

EMSP 2403 Field Internship (0-27-3)
In the field internship, students apply their knowledge, techniques, and abilities in actual field situations. All activities are supervised by physicians, registered nurses, and certified paramedics. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program. EMSP 2503 Emergency Medical Service-Paramedic Refresher Course (3-0-3) The Emergency Medical Service-Paramedic Refresher Course is designed to refresh the Emergency Medical Service-Paramedic in all areas of emergency medical technology including advanced life support. The course follows the EMT-Paramedic Refresher Training Program, National Standard Curriculum of the US Department of Transportation; and meets the requirements for refresher training established by the Arkansas Department of Health and National Registry of EMT-Paramedics for recertification. Prerequisite: current certification as an EMT-Paramedic and permission of the instructor. Lab Fee. Fall & Spring.

EMSP 2603 Advanced Cardiac Life Support (3-0-3)
Focuses on the knowledge and skills necessary to provide emergency cardiac care. Lectures presenting didactic material concerning arrhythmias, defibrillation, airway control and ventilation, pharmacology, intravenous techniques, myocardial infarction and sudden cardiac death, acid-base and resuscitation of infants and children are provided. These lectures are followed by practical teaching stations to integrate the knowledge and skills needed. Prerequisite: Permission of the instructor. Lab Fee.

EMSP 2702 Advanced Medical-Surgical Laboratory (1-3-2)
Laboratory simulations of field exercises performed by a functioning paramedic are practiced in this course. Incorporates the knowledge of all previous courses. Prerequisite: Concurrent enrollment with EMSP 2802 - Specific Topics of Emergency Medicine required, Permission of the instructor, and acceptance into the Paramedic Program is required.

EMSP 2801 Special Study (2-0-2)
This course is targeted at refining specific clinical skills in the hospital. Course must be arranged in consultation with program director. Current malpractice insurance is required.

EMSP 2802 Specific Topics of Emergency Medicine (1-3-2)
Deals with the following two topics in individualized and seminar format. a) Legal Implications of Emergency Medicine - This seminar provides an introduction to the legal aspects of emergency medicine, including basic principles of law, malpractice, consent, and contracts, b) Emergency Psychiatric Intervention -This seminar examines methods used by

the paramedic intervening in behavior emergencies, drug/alcohol abuse, and attempted suicide. Instruction includes legal considerations and case studies. Prerequisite: Permission of the instructor, and acceptance into the Paramedic Program.

EMERGENCY MEDICAL TECHNICIAN

EMT 1501 Basic Life Support for Health Care Providers (1-0-1)
The classes range from training limited to one-rescuer Cardio-Pulmonary Resuscitation to training, which consists of one and two rescuer Cardio-Pulmonary Resuscitation on the adult and infant obstructed airway techniques of the adult and infant. Also included are introduction to the respiratory system and mouth-to-mouth resuscitation of the adult, child and infant; instruction of the heart and circulatory system and its functions; and risk factors of coronary heart disease. The hours of this course range from four to eighteen classroom hours, depending on variation of training. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

EMT 1353 Emergency Medical Technician - First Responder (3-0-3)
The 48 hour first responder course is designed for individuals, industrial personnel, day care personnel, and many other functions which require rapid response to accident victims. The course includes training in cardiopulmonary resuscitation, immobilization of fractured bones, obstructed airways, control of life-threatening bleeding, and accidental poisonings. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

EMT 1376 Emergency Medical Technician - Basic
(4-10-6)
The basic level Emergency Medical Technician class is designed for training individuals to rapidly recognize, assess, and treat medical and trauma-related emergencies. This course was designed by the Department of Transportation and is taught under its standard guidelines. The course involves training in Cardio-Pulmonary Resuscitation, application and use of military anti-shock trousers (MAST), identifying signs and symptoms of shock; internal and external life-threatening bleeding, immobilization of fractured bones, including spinal injuries and head trauma; emergency childbirth; pediatric emergencies; gaining access to victims entrapped; radio communications; as well as water rescue techniques, and automobile extrication. The length of this course is 228 hours and provides six college credit hours. This course is beneficial to both individuals and industrial personnel, and is a prerequisite to the Emergency Medical Technician-Intermediate or Paramedic course. Prerequisite: Must be 18 years old, have a GED or high school diploma, have no physical handicaps which would preclude participation in all program aspects, and have no record of felony convictions. Fall and Spring.

EMT 1401 Emergency Medical Technician - Basic Refresher Course (1-0-1)
The Emergency Medical Technician-Basic Refresher course is designed to meet the requirements of the Arkansas Department of Health and the National Registry of Emergency Medical Technicians for bi-annual refresher training. The course is designed to update persons already certified at the EMT-Basic level in new trends in EMS and to refresh skills already learned. The course length is 24 contact hours. Condition of registration is student proof of EMT certification by the Arkansas Department of Health, by another state's EMS accreditation agency, or National Registry of EMT certification; and the permission of the

instructor. Fall and Spring.

ENGINEERING

(See also Computer Information Science Technology)

EGR 1303 Machine Blueprint Reading (3-0-3)
Knowledge course in basic blueprinting and print reading or increased knowledge in industrial drawings intended for technical students, adult workers and apprentices. Available upon sufficient student demand.

EGR 1603 Computer-Aided Drafting (3-0-3)
Computer-Aided Drafting offers hands-on learning of the basic operations of AutoCAD Release 12. The course includes basic drawing techniques; advanced editing; blocking; creation of symbols libraries, macros, and menus; attribute and data extraction; and 3D techniques. Fall, Spring.

ENGLISH

ENG 1113 English Composition I (3-0-3)
Writing paragraphs and expository themes to give the student practice in communication. Emphasizes good writing techniques and correct grammatical construction, enabling the student to think coherently, write clearly and effectively, and read more efficiently. Prerequisite: Pre-Test; or a grade of "C" or better in Writing II (PCLC 0053) and/or a comprehension score of 11.0 on the exit test for Reading Improvement (PCLC 0023). Fall, Spring, Summer.

ENG 1123 English Composition II (3-0-3)
Continuation of English Composition I. Study of good writing and rhetorical style. Students develop research skills through writing a formal, documented paper. Prerequisite: ENG 1113-English Composition I with a grade of "C" or better. Fall, Spring, Summer.

ENG 1133 Technical Report Writing (3-0-3)
Technical Report Writing is designed for students pursuing careers in technical and vocational fields. Technical papers include process analysis, description of a mechanism, definition, analysis by partition, comparison/contrast, cause/effect. Considerable research is expected for technical papers, articles, summaries, and a full research report, all of which are on topics related to the student's major. Use of visuals and technical paper layout are covered. Grammar, mechanics, usage are covered as needed. Fall, Spring, Summer upon sufficient student demand.

ENG 1143 Introduction to the Novel (3-0-3)
A beginning course in reading and understanding of the novel, focusing upon strategies for analysis. The purpose of the course is to make the student comfortable and confident in the reading of the novel. Available upon sufficient student demand.

ENG 1153 Introduction to Poetry (3-0-3)
A beginning course in the reading of poetry, designed to acquaint students with the language and form of poetry. The purpose of the course is to make the student comfortable

and confident in the reading of poetry. Available upon sufficient student demand.

ENG 1163 Introduction to Drama (3-0-3)
Critical reading of selected traditional and contemporary plays, focusing on plot, character, dramatic conventions, and language. The purpose of the course is to make the student comfortable and confident in the reading of drama. Available upon sufficient student demand.

ENG 1173 Introduction to the Short Story (3-0-3)
A beginning course to introduce the major short story writers and the techniques, terms, and elements that these writers employ. The student will also learn to write about literature effectively. Prerequisite: Pre-test. Available upon sufficient student demand.

ENG 1183 Introduction to Literature (3-0-3)
A beginning course in reading and analysis of fiction, poetry, and drama. The purpose of the course is to have the student become comfortable in the reading of literature. The instructor may choose to focus on a particular genre. Prerequisite: Pre-test. Available upon sufficient student demand.

ENG 1193 English as a Second Language (3-0-3)

An English language course designed for the student whose native language is not English. Using a communicative approach, this course focuses on Basic English grammar while helping students improve their speaking, reading, and writing skills. The course objective is that students obtain a level of proficiency in the English language that prepares them to function in American society by emphasizing good communication and daily living skills. Available upon sufficient student demand. **Non-transferable at some colleges.**

ENG 2223 American Literature I (3-0-3)
Survey of American poetry, fiction, and essays from 1620 to 1860. Provides historical, biographical, and formal approaches to these works of American literature. Prerequisite: Pre-test. Available upon sufficient demand.

ENG 2233 American Literature II (3-0-3)
Survey of American poetry, fiction, essays, and drama from 1860 to the present. Provides historical, biographical, and formal approaches to these works of American literature. Prerequisite: Pre-test. Available upon sufficient demand.

ENG 2243 English Literature I (3-0-3)
Survey of English literature from the Anglo-Saxon period through the eighteenth century. Prerequisite: Pre-test. Available upon sufficient student demand.

ENG 2253 English Literature II (3-0-3)
Survey of English literature from the Romantics to contemporary writers, with emphasis on major figures. Prerequisite: Pre-test. Available upon sufficient student demand.

ENG 2273 World Literature I (3-0-3)
Survey of master works of literature of the world from the ancient period through the Renaissance. Prerequisite: Reading test. Fall, Spring, Summer.

ENG 2283 World Literature II (3-0-3)
Reading and discussion of master works of world literature from the seventeenth century to modern times. Prerequisite: Reading test. Fall, Spring, Summer.

ENG 2291-2296 English: Special Problems
(Variable Credits)
Organized class or individual instruction to meet special literary/writing needs.

ENG 2393 Creative Writing I (3-0-3)
The writing of poetry and fiction. No prerequisite. Available once each year.

ENG 2693 Creative Writing II (3-0-3)
In this course, students write in the genre of choice: poetry, fiction, non-fiction, drama, etc. Students will learn advanced critique methods, including editorial symbols. They will also learn how to submit their work for publication. Prerequisite: Creative Writing I. Available upon sufficient student demand.

FILM

FLM 1103 Introduction to Film Art (3-0-3)
A survey course on film as an art form with an emphasis on the technical/creative aspects. Screenings and discussion of selected films and a film journal will be required.

FLM 1203 Film Comedy (3-0-3)
A study of cinematic comedy from a historical perspective of the American Cinema from its early origins to
contemporary expressions. Students will be required to attend screenings and keep a film journal.

FLM 1603 Film Directors/Actors (3-0-3)
Through viewing and discussion, students will learn the artistry of particular directors and actors. They will come to understand how various styles affect the movement and interpretation of film. Prerequisite: Introduction to Film or instructor permission. Available upon sufficient student demand.

FLM 1901-1906 Special Study Projects
(Variable credits)
An in-depth study of some particular aspect of the cinema. Prerequisite: Permission of the instructor.

FIRE PROTECTION

FIRE 1003 Introduction to Fire Protection (3-0-3)
The history and philosophy of fire protection, review and analysis of fire losses, introduction to fire protection agencies, current technological developments, and career possibilities. Fall of odd-numbered years, except for home study arrangements.

FIRE 1023 Organization and Administration of Fire Department (3-0-3)

Principles of organization and administration, personnel management and training, communications, records, reports, and public relations of fire protection agencies. Spring of even-numbered years, except for home study arrangements.

FIRE 1033 Fire Suppression: Strategy, Tactics, and Equipment (3-0-3)
Special methods of teaching tactical concepts relative
to extinguishing all classes of fire from grass/brush to vehicle and modern buildings are covered. Forms of extinguishing equipment and compounds, as well as development, are stressed. Spring of odd-numbered years, except for home study arrangements.

FIRE 1083 Firefighter I (3-0-3)
This course is the first step in meeting three National Fire Protection Association regulations that pinpoint the skills necessary for effective fire protection and personal safety for firefighters. The material covers fifteen modules available at all fire stations throughout the State. College faculty associated with the technical portion of the degree plan should evaluate the students' work on modular material. Registration through the College or through the Arkansas Fire Academy is required.

FIRE 1091-1096 Fire Protection: Home Study (1-6 Variable Credits)
Special course or home study in Fire Protection are offered on demand. Students may plan individual projects/ research with an instructor. Prerequisite: Permission of instructor.

FIRE 2013 Fire Apparatus and Fire Hydraulics (3-0-3)
Evaluation of modern fire apparatus, operating principles of pumps, pumper, aerial trucks, elevating platforms, and special equipment; maintenance of apparatus, principles of hydraulics, solution of problems invading fire streams. Fall of even numbered years, except for home study arrangements.

FIRE 2023 Fire Laws, Codes, and Ordinances (3-0-3)
This course is designed to acquaint the student with buildings and fire codes. Course also helps to develop skills of investigation, detection, recognition, and preservation of evidence, as well as court demeanor and procedures. Fall of even-numbered years, except for home study arrangements.

FIRE 2033 Private Fire Protection Systems and Equipment (3-0-3)
Involves installation standards and design of sprinkler systems, study of protection and alarm devices, relationship of water supply, extinguishing materials, insurance standards, alarm systems, special hazardous situations, and related topics. Spring of odd-numbered years, except for home study arrangements.

FIRE 2043 Hazardous Materials (3-0-3)
Identification, handling, and fire-fighting practices of explosives, toxic substances, and radioactive materials in storage or in transit. Spring of even-numbered years, except for home study arrangements.

FIRE 2053 Industrial Fire Prevention/Suppression (3-0-3)
Fundamental study of industrial fire hazards. Learn laws and codes that are involved in risk. Learn how to conduct job safety analysis and develop industrial safety records. Identify methods of eliminating hazards and protecting lives during fires.

FIRE 2073 Arson Investigation (3-0-3)
Conduct investigation of fires by determining the origin and cause of a given fire and prepare the necessary forms, sketches and reports to record the facts determined in an investigation. Identify common motives and identify, collect, and preserve evidence. Prerequisite: Permission of Instructor. Available upon sufficient student demand.

FIRE 2083 Firefighter II (3-0-3)
Continuation of additional modular material with a prerequisite of Firefighter I. Registration through the College or through the Arkansas Fire Academy is required.

FIRE 2103 Incident Command System (ICS) (3-0-3)
This course is designed to acquaint the student with the use, deployment, implementation and the ability to function within an Incident Command System. Learning the structure and expandable nature of ICS, an understanding of skills necessary to effectively use ICS and scenario practice on applying ICS to real emergency situations.

FORESTRY

FORT 1103 Introduction to Forestry (3-0-3)
Provides the beginning student with a general review of the field of forestry, and a preview of the areas to be studied by the forestry major. Topics included measurement, protection, utilization, preservation, and forest management. Available upon sufficient student demand.

FRENCH

Students who have taken a foreign language course in high school may receive college credit. If a student enrolls for the first language course at National Park Community College at a level beyond the beginning classes, the maximum of six hours' credit may be earned for beginning classes bypassed. When the student finishes the course with a grade of "C" or better, the college will award college credit for the courses bypassed.

FREN 1103 Beginning French I (3-0-3)
First semester course in fundamentals of French: vocabulary, pronunciation, oral comprehension, grammar, and composition. Exercises in writing, listening and speaking. Some computer exercises. Fall.

FREN 1113 Beginning French II (3-0-3)
Continuation of Beginning French I. Prerequisite: Beginning French I or equivalent. Spring.

GEOGRAPHY

GEOG 1103 Introduction to Geography (3-0-3)
Presents the nature of geographic study; illustrates world conditions with emphasis on cultural and environmental issues; introduces map reading; and examines basic concepts.

Offered at least one semester per year.

GEOG 1123 Conservation (3-0-3)
Basic concepts in supply, exploration, and use of
minerals and natural resources. Emphasis on complex relations between the individual and the physical environment, and the policies of ecology. Special attention to ecology of Arkansas. Available upon sufficient student demand.

GEOG 1193 Special Study (3-0-3)
Individual study of various areas in geography; course to be worked out by the student with the instructor's guidance. Permission of the Division Chairperson and instructor required before registration is allowed.

GEOLOGY

GEOL 1104 Physical Geology (3-2-4)
Introduces the student to the field of physical geology in general, such as the geologic environment, geologic processes shaping the surface of the earth, plate tectonics, crust, and the interior of the earth. Offered a minimum of once a year. Lab Fee.

GEOL 1114 Historical Geology (3-2-4)
Interpretation of the earth's history, origin of the earth, evolutions of the continents and oceans, geologic time, and evolution of life. Fossils, rocks, and geologic maps are studied in the laboratory. Available upon sufficient student demand. Lab fee.

GEOL 1504 Arkansas Geology (3-2-4)
This course includes a brief study of physical and historical geology concepts with the main emphasis of the course on the physical and historical geological aspects of the six physiographic divisions of Arkansas. Those divisions are Ozark Plateau/Arkansas Valley, Ouachita Mountains, Gulf Coast, Mississippi Embayment, Crowley's Ridge, and the New Madrid Fault zone. Available upon sufficient student demand. Lab fee.

GRAPHIC DESIGN

GRD 1103 Advertising I (3-3-3)
This is the introductory course in graphic arts for the two-year program in graphic design. Basic studio techniques involved in paste-up and layout will be practiced by the students, using their own designs with the goal of producing camera-ready art and copy. Some lettering and typography will also be studied. Fall, Spring.

GRD 1113 Advertising II (3-3-3)
This continuation of Advertising I will find the student working on projects in illustration, color separation, and three-dimensional package design. The basic skills used in Advertising I will continue to be used and more complex problems introduced. Prerequisite: GRD 1103-Advertising I. Fall, Spring. Lab Fee

GRD 1133 Free Hand Studio I (3-0-3)
FreeHand, a drawing and design program, is one of a triad of software programs that cur-

rently create a standard in the graphic design industry. Students will learn the techniques possible with the tools in FreeHand by designing pages demonstrating each tools function.

GRD 1143 Adobe Illustrator (3-0-3)
The oldest of the drawing and design programs, Adobe Illustrator has again become the illustration program most used by professionals. Students will explore all the tools of Illustrator while preparing a book with their examples to illustrate each technique they are assigned to master. The program uses lines, shapes, and freehand tools as well as color fills and blends to create high resolution vector graphics.

GRD 1153 Photoshop Studio I (3-0-3)
PhotoShop is the premiere photographic manipulation and retouch program for publishers and designers. Students will become familiar with many of the image-altering filters and the multifaceted layers of manipulation possible with this highly creative program using both traditional and digital black and white and color photographs.

GRD 1163 Silkscreen I (3-3-3)
This course enables the student to learn a method of making art prints in any number of colors without elaborate equipment. The students will learn to build their own frames and will study many techniques from hand-cut stencils to photo-direct screen printing. Spring.

GRD 1183 Desktop Publishing (QuarkXPress) and Design I (3-0-3)
This course is designed to give a fundamental proficiency in desktop publishing and design to students in the Graphic Design Program and interested member of the community. As a foundation course in computerized design and layout, the class will explore the programs that are industry standards for the Apple Macintosh computer and discover the pros and cons of those programs. Students will also learn how to implement them on a basic level. Lab Fee.

GRD 2003 Lettering/Calligraphy (3-3-3)
This one semester course will give the students a foundation in hand lettering techniques and a history of lettering styles which should benefit their knowledge of the origins of contemporary type faces. In addition to producing lettering for their commercial art projects, the students will also study free calligraphic techniques. Spring.

GRD 2013 Art Direction (3-3-3)
This course is designed to give the students a knowledge of the procedures of an advertising agency. The students will be responsible for the creation of campaigns using art and copy, and they will study problems such as distribution, client relations, product image, and art selection. Prerequisite: GRD 2023-Production and Layout I. Fall, Spring. Lab Fee.

GRD 2023 Production and Layout I (3-3-3)
This course will involve the student in the production of camera-ready art and copy for brochures, catalogues, and magazine and newspaper advertisements. The students will have the opportunity to be involved in actual work experience and have their designs printed while learning to use professional process cameras, photo typesetting equipment, and large and small format photography. Prerequisite: GRD 1113-Advertising Design II. Fall, Spring. Lab Fee.

GRD 2033 Production and Layout II (3-3-3)
In this continuation of Production and Layout I, the students will be working with more

advanced production techniques with an emphasis on completing work for their personal portfolios. Prerequisite: GRD 2023-Production and Layout I. Fall, Spring. Lab Fee.

GRD 2043 Commercial Illustration (3-3-3)
Both product and editorial illustration assignments will be presented to the students. Projects will include work with pen and ink, airbrush, color separations, and black and white color photography. Fall, Spring. Lab Fee.

GRD 2053 Package Design (3-3-3)
In this one semester course the student will be concerned with designing for three-dimensional packaging and point of purchase advertisements. In addition to complete comprehensives on each assignment, copies of the package or ad will be constructed. Available upon sufficient student demand. Lab Fee.

GRD 2063 The Design and Printing of the Book (3-0-3)
This course will give the student the opportunity to work with the studio class to produce a small quarter-bound book using traditional letterpress methods. The student will study and practice all the techniques necessary for illustrating, setting printing, and binding a limited edition.

GRD 2073 Advertising Design For the Small Business (3-0-3)
This course, offered through the Graphic Design program, gives owners and employees of small businesses, members of organizations who are responsible for newsletters, and employees of businesses who must deal with the specification of advertising, catalogs, and brochures an opportunity to learn the fundamentals of advertising design, type specification, techniques of print media production, and graphic arts terminology. Class members will work in a graphic design studio with the latest equipment, but there will be an emphasis on using the equipment found in the typical office in combination with graphics materials readily available in the community to produce quality advertising with a minimum of expense. In order to facilitate participation by the business community, the class will be held on one afternoon per week for one semester. Lab Fee.

GRD 2083 Designing for the Internet
An introductory course that explores the necessary ingredients of a good web page and how to design a web page both mechanically and aesthetically to accomplish the purpose of the page. Emphasis will be on the fundamental structure of a web page and the basic tools of design and construction. Prerequisite: Photoshop Studio

GRD 2133 FreeHand Studio II (3-0-3)
Students who have mastered the basic tools in the FreeHand Studio I class will be able to use those skills to design illustrations and other graphic art pieces in this studio class. The emphasis will be on innovative solutions to the assigned projects and the quality of the portfolio presentation.

GRD 2153 Photoshop Studio II (3-0-3)
For students having completed PhotoShop Studio, this course offers the opportunity to experiment creatively with these newly learned skills. Students will work within a series of assignments that go beyond basic techniques to the creation of multi-layered artwork.

GRD 2163 Silkscreen II (3-3-3)
Continuation of Silkscreen I gives the students the opportunity to expand technical skills. Students may use typesetting and process cameras to produce compositions. Prerequisite: GRD 1163 Silkscreen I. Spring. Lab Fee.

GRD 2183 Desktop Publishing and Design II (QuarkXpress) (3-0-3)
QuarkXpress on Macintosh computers is an industry standard in the design and publishing fields. This course builds on skills learned in Desktop Publishing and Design I and gives the student the opportunity to use Quark in more detail, including color applications. Students will design ads, newsletters, booklets, business cards, posters, flyers and logos.

GRD 2293 Advanced Lettering/Calligraphy (3-0-3)
This course offers the student with some background in lettering skills the opportunity to learn new lettering styles and calligraphic alphabets. Available upon sufficient student demand.

GRD 2591-2596 Special Studies in Graphic Design
(1 - 6 variable Credits)
Individual study of various topics and concepts in graphic design. Course content and objectives to be developed and approved by the instructor and student. The instructor will assign appropriate course credit. Pre-requisite. Permission of the instructor. Available upon sufficient student demand.

HEALTH INFORMATION TECHNOLOGY

HIT 1014 Basic Diagnostic & Procedure Coding (2-2-4)
To develop an understanding of coding and classification systems in order to assign valid diagnostic and/or procedure codes. It will include validation of coded clinical information and case mix/severity of illness data. Co-requisite: ALH 1203, BIOL 1224, HIT 2004. Fall

HIT 1113 Health Data Content (2-2-3)
Standards for patient and health care data; data collection issues and documentation requirements; data access and retention. Prerequisite: CIS 1013-Information Systems I with a "C" or better. Fall, Spring.

HIT 1212 Legal Aspects of Health Information (2-0-2)
Consents, authorization for release of information, confidentiality, subpoenas, and other legal aspects of health information. Spring.

HIT 2002 Health Care Quality Management (2-0-2)
Improving organization performance through quality assessment, utilization review, risk management, and medical staff credentialing. Prerequisite: HIT 1113-Health Data Content, HIT 2102-Health Statistics with a "C" or better.; Corequisite CIS 2013-Information Systems II. Fall.

HIT 2004 Fundamentals of Medical Science (4-0-4)
Disease process, pharmacology, diagnostic and treatment methodologies for: all body systems. Includes computer-assisted instruction. Pre-requisite: ALH 1203-Medical Terminology; BIOL 1114 General Biology with a "C" or better; Corequisite BIOL 1224-Basic Human Anatomy & Physiology. Fall.

HIT 2014 Intermediate Diagnosis and Procedure Coding (2-2-4)
Intermediate diagnosis coding to include: Case studies using more complex code assignments with ICD-9-CM. Case studies using more complex code assignments with ICD-9-CM. Intermediate Procedure coding: RBRVS, APCs, ASC examples sued including professional fee billing examples in coding. Case studies and more complex code assignments using CPT and HCPCS Level II codes. Procedure coding for inpatients.

HIT 2102 Basic Health Statistics (1-2-2)
Computation, interpretation of hospital rates and percentages, report generation and data display, introduction to research. Prerequisites: CIS 1013-Information Systems I with a "C" or better. Spring.

HIT 2203 Reimbursement Methods (2-2-3)
Course includes a study of the uses of coded data and health information in reimbursement and payment systems appropriate to all health care settings and managed care. Charge master maintenance, identify fraudulent billing practices. Prerequisite: HIT 1014 Basic Diagnostic & Procedure Coding with a "C" or better. Spring.

HIT 2213 Computers in Health Care (1-2-3)
Basic Introduction to computerized health information systems, computer-based patient records, automated registries and applications in Health Information Technology. Pre-requisite: HIT 1113 Health Data Content with a "C" or better. Corequisite: CIS 2013-Information Systems II. Fall.

HIT 2222 Directed Practice I (0-8-2)
Professional practice experiences in acute care, ambulatory care, rehabilitation, long-term care, and home health. Emphasis on record assembly & analysis, file management, release of information, statistics, indexes & registers, and special projects. Pre-requisite: Permission of instructor. Limited enrollment. Travel required. Fall.

HIT 2402 Directed Practice II (0-8-2)
Professional practice experiences in acute care, ambulatory care, behavioral health, and cancer registry. Emphasis on ICD-9-CM coding & DRG assignment, CPT coding, quality management, supervisory principles, medical staff & hospital committees, and special projects. Pre-requisite: Permission of instructor. Limited enrollment. Travel required. Spring.

HIT 2503 Supervision in HIT (3-0-3)
Supervisory principles for the health information management department, including monitoring adherence to budgets, staffing schedules, policies, procedures, and productivity standards. Prerequisite: HIT 1113 Health Data Content with a "C" or better and permission of instructor. Spring.

HIT 2703 Coding Practicum (0-6-3)
Supervised coding experience in hospitals, clinics, and other health care facilities. Liability insurance is required. Travel may be required. Prerequisite: Permission of instructor. Summer.

HIT 2901-2903 Special Study in HIT (1-3 variable credits)

Individual study of a particular area of health information technology. Course content proposal and course objectives to be developed by the student and submitted to the instructor for approval and assignment of appropriate course credit. Prerequisite: Completion of 30 college level credits with GPA 3.5. Permission of instructor. Fall/Spring.

HEALTH, PHYSICAL EDUCATION AND RECREATION (also see Physical Education)

HPR 1102 Life Fitness Concepts (1-1-2)
Basic concepts of physical activity as they relate to healthy living. One lecture a week, one laboratory per week. Fall, Spring. Lab Fee.

HPR 1103 Public Safety Diver (3-0-3)
The Public Safety Diver program is an open water certification which meets and exceeds the standards as set forth by the Recreational Scuba Training Council and its ANSI committee. It emphasizes the specific responsibilities of public safety diving which are broader in scope than that of open water recreation diving. Available upon sufficient student demand.

HPR 1113 Personal Safety and First Aid (3-0-3)
Basic principles of personal safety and safety education; safety programs as they apply to the school, home and working environment, legal aspects, and methods of responding to basic emergency response. American Red Cross First Aid and CPR. Spring.

HPR 1211 Recreation Programming I (1-0-1)
This course is an introduction to recreation program planning, supervision, and evaluation. The study emphasized is theory, principles, and leadership techniques of working with individuals and groups in a variety of settings, including the community, institutions, and camps. Fall.

HPR 1216 Fundamentals of Landscaping and Turf Management
Students learn the fundamentals of horticulture, Turf grass and landscape as they apply to plant growth, development, and culture. Identification of ornamental trees, shrubs, palms, bedding plants, groundcovers, herbaceous plants, ferns, and warm-seasoned turf grasses commonly grown in the this zone. Students will also learn the cultural requirements of the plants introduced in the course. Identification and physiology, morphology, and cultural requirements of turf grass are studied. Turf grass establishment and maintenance are also emphasized. Students will also learn the introduction to basic principles of soil science. The physics, chemistry, and biology of soil are covered in this course. Other topics to be covered are soil genesis and classification, soil fertility and plant nutrient, plant growth media, and soil's natural ecosystems. Students will learn how to identify plant diseases, insect pests, and weeds commonly found attacking ornamentals, turf, and food crops. Emphasis is on control methods and pesticide safety. Students will learn to introduction to irrigation systems commonly used on golf courses and landscape facilities. Irrigation principles, systems and components, installation, a design are studied. Students are introduced to basic hydraulics and irrigation repair, troubleshooting, and maintenance. Career opportunities in the field of horticulture will also be explored," hands- on" experience in horticultural skills..)
`

HPR 1301 Outdoor Recreational Activities (1-0-1)

This course presents concepts and activities of Outdoor Recreational Activities. The course includes activities such as sailing, scuba, hiking, camping, canoeing, hunting, fishing, horseback riding, bicycling, and other outdoor recreational activities. One lecture, one lab per week. Fall.

HPR 1703 Leadership in Recreation, Hospitality, and Tourism (3-0-3)
This course deals with the theories, the techniques, and recurrent problems of leadership in recreation, hospitality and tourism. Students learn leadership skills in the planning, organization, conducting of the organizational needs in a service industry.

HPR 1803 Promotion and Production of Programs and Events (3-0-3)
The development of an understanding of requirements for the production and promotion of events with an emphasis on advertising and publicity, insurance, scheduling, security, and co-sponsorships of both commercial and non-profit events. Fall.

HPR 2003 Adventure Games and Group Problem Solving (3-0-3)
Students will learn, through new games, methods of leadership, risk level awareness, trust, group decision-making, planning and implementation, as well as rapid adjustment skills. Students will work together using the resources of the group to accomplish tasks and enjoy the method as a recreational activity. Fall.

HPR 2011 Aerobic Instructor Lab Experience
This course requires students to team teach with a Nationally Certified Aerobic Instructor in a community or club based group exercise program two-hours per week for six consecutive weeks. Prior to team teaching the student will physically practice group exercise instruction two hours per week for ten consecutive weeks with an AFAA Certified Aerobic Instructor.

HPR 2012 Aerobic Instructor Certification Course (1-0-1)
The student will become an AFAA Certified Aerobic Instructor. The AFAA Primary Certification exam will be offered at the end of the course.

HPR 2203 Introduction to Natural and Historical Interpretation (3-0-3)
Introduction to Natural and Historical Interpretation is designed to acquaint the student with the concepts of environmental and historical interpretation through a practical approach. Students will use computer-assisted learning programs and develop audio-visual techniques, nature trail development techniques, develop nature oriented activities and study actual practices used in the field as demonstrated by National Parks Services, Arkansas State Parks, Arkansas Game and Fish Department and Garvan Woodland Gardens.

HPR 2211 Recreation Programming II (1-0-1)
This course is a continuation of recreation program planning, supervision, and evaluation. The study emphasizes a more in-depth study of theory, principles, and leadership techniques of working with individuals and groups in a variety of settings, including the community, institutions, and camps. Prerequisite: HPR 1202. Spring.

HPR 2213 Marketing of Leisure Services (3-0-3)
Application of economic and marketing principles to leisure service delivery systems, including procedures for developing marketing plans for recreation agencies.

Emphasis on organizing and analyzing the marketing process and planning the marketing mix, including product, price, place, and promotion. For recreation hospitality and tourism majors with limited background in economics and marketing. This subject develops a comprehensive awareness of marketing in the leisure environment. It gives students the opportunity to develop applied skills in the construction of a marketing plan and the management of the marketing mix in the leisure industry.

HPR 2302 Fitness Trainer Field Placement Experience
This class will consist of a minimum of 250 hours and not less than 10 consecutive weeks of working with clients in any of the following capacities: community or health club fitness floor trainer, aerobics instructor, and/or personal trainer.

HPR 2403 Commercial Recreation, Tourism and Hospitality Enterprises (3-0-3)
This course has an emphasis on existing recreational, tourism and hospitality enterprises within the area. It also emphasizes an in-depth study on demographics, advertising promotion, and staff development. Students will develop a network of relationships with the chamber of commerce and the advertising and promotion commissions, as well as other enterprises in the leisure industry.

HPR 2406 Field Placement Experience (200 clock hours - 6 SSCH)
Field Placement Experience requirements within the Associate of Applied Science Degrees in Recreation will consist of a minimum of 200 hours, or not less than 10 consecutive weeks of field placement experience in a clinical, residential, community, or commercial-based recreational programs under an on-site agency field placement supervisor and Director of the Associate of Applied Science Degree Program.

HPR 2663 Motor Development and Skill Acquisition (3-0-3)
Deals with contemporary motor development and movement theory. Development hierarchies, physiological aspects of development, motor learning models, perception, feedback and psychological factors affecting performance. Available upon sufficient student demand. Fall

HPR 2903 Special Studies in Leisure Services (3-0-3)
Individual study of a particular area of the health, physical education and recreation field. Course content proposal and course objectives to be developed by the student and submitted to the instructor for approval. Prerequisite: Permission of Instructor. Available upon sufficient student demand.

HEATING VENTILATION AND AIR CONDITIONING

HVC 1013 Schematics (3-0-3)
This course is designed for the student to learn to read, draw, and interpret wiring diagrams and place the circuitry in operative arrangements with electrical and electronic symbols. Also included is the study of the distribution mediums such as duct design and sizing. Fall

HVC 1014 Basic Electricity (3-3-4)
This course is designed to acquaint the student with the theory and practice of using electricity as it applies to HVC technology. Fall/Spring

HVC 1023 Air Properties (3-0-3)
This course is designed for the study of air properties and the instrumentation to meet the environmental needs of structures, residential and commercial, and the factors involved in the calculation of heating and cooling loads. Fall

HVC 1043 Heating Technology (2-3-3)
This course is designed to cover the construction, design, operation, and servicing of fossil fuel heating equipment, and heat pumps, both air to air and geothermal. Also included is the thermodynamics of heat flow, humidification, dehumidification, and filtering. Co-requisite: Basic Electricity, Air Properties, and Schematics. Fall

HVC 1074 Air Conditioning Systems (3-3-4)
This course is a comprehensive study of A/C systems and the practical applications and installation of air conditioning units. Testing procedures, parts removal, and installation are covered in depth. Prerequisite: Basic Electricity, Air Properties, and Schematics. Spring

HVC 1033 Introduction to Air Conditioning (3-0-3)
This course is designed to teach the principles of the basic refrigeration cycle, including temperature-pressure relationships, evaporation, condensation, heat transfer, and refrigerants. Also included is the identification and use of hand tools, principles of measurement, and safety principles and practices. Fall

HVC 1054 Residential Systems (3-3-4)
This course is a comprehensive study of the major components and control devices and their applications. Testing procedures, parts removal, and installation are covered in depth. Prerequisite: Basic Electricity, Air Properties, and Schematics. Spring

HVC 1064 Refrigeration Systems (3-3-4)
This course is a comprehensive study of mechanical refrigeration systems emphasizing proper service techniques through analysis of the problem. Testing procedures, parts removal, and installation are covered in depth. Prerequisite: Basic Electricity, Air Properties, and Schematics. Spring

HVC 1083 Tubing, Pipe, and Welding (2-3-3)
This course is designed to cover the process of identifying tubing and piping with practical applications in sizing and fitting to different configurations using mechanical fittings, soft soldering, silver brazing, aluminum brazing, and equipment usage. Practical application is provided in the lab. Spring

HISTORY

HIST 1143 Arkansas History (3-0-3)

Designed to acquaint the student with the economic, social and political evolutions of Arkansas from the Spanish and French explorations to the present. "Local color" interrelated to these socio-economic studies will be an integral part of the course: folklore, native art and music, and traditions that have remained a unique part of Arkansas heritage. Available upon sufficient student demand.

HIST 2203 Western Civilization to 1660 (3-0-3)
Study of the rise of early Mediterranean Greek and Roman civilizations, development of medieval Europe, and beginning of the modern era. Course focuses on the interplay of culture, government, society, and ideas. Fall.

HIST 2213 Western Civilization Since 1660 (3-0-3)
Rise of scientific thought, absolutism, the enlightenment, and capitalism; challenges of revolution and nationalism; Marx, Darwin, and Freud; and culture and trauma of 20th century civilization. Spring.

HIST 2223 United States History To 1865 (3-0-3)
Survey of the growth of the United States from early colonial days through the struggle for independence, development of the American mind, and the struggle of nation-making, Jeffersonian politics and Jackson democracy, up through the crisis of Civil War. Fall, Spring.

HIST 2233 United States History Since 1865 (3-0-3)
Overcoming the upheavals of the Civil War, economic growth and industrialism, democracy and empire, and the 20th century issues of world prominence and the struggle for social equality. Fall, Spring.

HIST 2283 The American Civil War (3-0-3)
An analysis of the sectional factors leading to the Civil War and a survey of the political-economic problems in conducting it. Available upon sufficient student demand.

HIST 2291-2296 Special Study (1-6 Variable credit)
Occasionally, on demand, special courses or topics are offered; or students may choose a series of independent, directed readings. Prerequisite: Permission of the instructor. Available upon student eligibility.

HOSPITALITY ADMINISTRATION

HA 1013 Restaurant Orientation/Sanitation & Safety (3-0-3)
A survey of the food service industry to include its history, various food service systems, organization and operations, and franchising. Emphasizes the aspects of sanitation. Designed for those who would like to learn about the food service industry in terms of sanitation and safety. Fall.

HA 1043 Introduction to Hospitality Administration (3-0-3)
The history and development of the hospitality industry which comprises of food, lodging, and tourism management, an introduction to management principles and concepts used in the service industry, and career opportunities in the field. Fall, Spring.

HA 1053 Introduction to Food and Beverage Management (3-0-3)

This course covers the practical skills and knowledge necessary for the effective operation of food and beverage service in a variety of settings. Topics include reservations, greetings and service of guests, styles of service, handling complaints, management responsibilities, and sales and merchandising. Fall.

HA 1063 Hotel Operations (3-0-3)
Provides an overview of the management in the lodging industry. Topics include management & supervision skills, human resources, the front office, housekeeping, food & beverage, safety & security, sales & marketing, facility engineering & maintenance, franchise agreements & management contracts. Designed for those who would like to learn more about the lodging industry. Spring

HA 1073 Hospitality Administration Internship (0-9-3)
This course furnishes participation in a 135 clock hour internship work experience program in a college-approved hospitality operation. Co requisite or Prerequisite: HA 1043-Introduction to Hospitality Administration with a grade of "C" or better. Permission of the instructor is required. Fall, Spring.

HA 1103 Principles of Food Preparation I (3-0-3)
Focus on principles, techniques, and theories of food preparations emphasizing nutritional content, proper use and selection of equipment, while stressing sanitary quality controls and guest accommodations that focus on food production. Fall.

HA 1113 Principles of Food Preparation II (3-0-3)
Focuses on the principles, techniques, and theories of food preparations. Nutritional content, proper use, and selection of equipment, while stressing sanitary quality controls, and guest accommodations that focus on food production are emphasized. Prerequisite: HA 1103 Principles of Food Preparation I or instructor permission.

HA 2213 Beverage Management (3-0-3)
Covers the history and development of wine, beer, and spirits. It includes an introduction to service principles used in the hospitality industry as it relates to Alcohol Safety and the liabilities involved. The course also includes management concepts concerning purchasing, costing, controlling inventory, and professional alcohol service. Spring**.**

HA 2214 Restaurant Management (3-0-3)
Covers the different kinds and characteristics of restaurants and the development of concepts, designs, marketing and business plans. This course will consider financing, legal and tax issues, as well as purchasing, budgeting, staffing, training, and sanitation. It includes an in depth look into service and management principles, customer relations, and their overall importance to succeeding in the restaurant industry. Spring.

HA 2291-2296 Special Study in Hospitality Administration (1-6 variable credits)
Special courses of independent studies in Hospitality Administration are offered on demand. Course content will be worked out by the students with the instructor's guidance. Course may be repeated for additional credit if subject content changes. Prerequisite: Permission of the instructor and the Division Chair.

INDUSTRIAL ELECTRONICS

ELT 1153 Electronic Circuits Fundamentals (3-0-3)
Selected concepts of DC and AC circuits as applied to Industrial Control Electronics. Fall, Spring.

ELT 1163 Industrial Wiring Methods (3-0-3)
Selected topics of the National Electric Code needed for power and control of auxiliary equipment. Emphasizing wiring fundamentals and metal conduit fabrication techniques. Fall, Spring.

ELT 1263 Programmable Logic Controllers I (3-0-3)
A study of the fundamental architecture both in hardware and software of 8, 16, and 32 bit microprocessors as used in programmable logic controllers. Fall, Spring.

ELT 1233 Instrumentation (3-0-3)
This course illustrates the practical applications of sensors used in industrial process control such as: heat, pressure, position, stress and strain are also covered. Fall, Spring.

ELT 1254 Electronic Devices (3-1-4)
A study of active devices such as: diodes, bi-polar junction transistors, field effect transistors and other devices found in Industrial Control Electronics systems.
Corequisites: ELT1154 Electronic Circuits Fundamentals. Fall and Spring.

ELT 1364 Programmable Logic Controllers II (3-1-4)
An advanced study of programmable logic controller operation using commercial equipment and fraction horsepower electric motors. Prerequisite: ELT1264 Program Logic Controllers I. Spring.

JOURNALISM

JRNL 1103 Writing for the Mass Media I (3-0-3)
A beginning course for students interested in broadcasting, print journalism or public relations. Designed to teach basic skills in gathering information and writing news stories. Fall, Spring.

JRNL 1111 Journalism Practicum I (0-2-1)
This course gives students practical experience in journalism. Upon completion of this course, students should have basic knowledge of at least one aspect of newspaper production. Students signing up for this course should contact the instructor to arrange a work schedule. Fall, Spring.

JRNL 1213 Writing for the Mass Media II (3-0-3)
Continuation of Writing for the Mass Media I. Skills taught include research techniques for reporters, editing, news interpretation and investigative reporting. Fall, Spring.

JRNL 1243 Introduction to the Mass Media (3-0-3)
Designed to give interested students a working knowledge of mass communications media. Includes a general description and survey of various media and current theories of mass communication. Includes history and trends of newspapers, magazines, radio, motion pic-

tures, television, recording industry and the internet. Fall, Spring.

JRNL 2111 Journalism Practicum II (1-0-1)
Continuation of Journalism Practicum I. This course gives students practical experience in journalism. Upon completion of this course, students should have basic knowledge of at least one aspect of newspaper production. Students signing up for this course should contact the instructor to arrange a work schedule. Fall, Spring.

JRNL 2203 Feature Writing (3-0-3)
Designed for students interested in writing feature articles for mass communications media, with emphasis on magazine and newspaper features. Types and styles of features are discussed, as well as markets for feature writing. Spring.

LEARNING ACCELERATION DIVISION

(Note: For courses in the Learning Acceleration Division with the PCL designation, please turn to the Pre-College Level Courses section.)

LAD 1201 Introduction to Adaptive Equipment for People with Disabilities (1-0-1)
A one-hour college credit course designed to introduce students to adaptive equipment technology for persons with disabilities. The special studies class will teach the basics of Voice Activated Computer systems (Dragon Dictate and Dragon Naturally Speaking), how to use the software and how to apply it to word processing concepts, the Internet, and spreadsheets. In addition, the basics of adaptive equipment for persons with visual impairments will be introduced to include ZOOM Text Computer Print Enlargement Systems, a Voice Synthesizer Systems. Closed Circuit TV Systems, and an introduction to utilizing a Braille printer. Students will be required to complete lab work and to schedule two(1) hour sessions for 10 weeks with the instructor. Purchase of a book will be not be required. However, a notebook of assignments and completed lab work will be required.

LAD 1301 Notetaking and Research (1-0-1)
Notetaking and Research is a one-hour elective. It is designed to assist general education students in the development and application of note-taking and research skills (online, as well as traditional). The five-week course will focus on effective notetaking, research as a thinking process, taxonomy of research, the research process, using the research process on-line, developing a thesis and formulating questions, and planning research on a thesis. Available upon sufficient student demand. Fall, Spring.

LAD 1401 Critical Thinking (1-0-1)
Critical Thinking is a one-hour elective. It is designed to assist general education students in the development and application of critical thinking skills. The five-week course will focus on understanding habits of mind and individuality, evaluating both short and long arguments, recognizing faulty logic, applying critical thinking to both in-class and out-of-class evidence, and expressing ideas persuasively. Available upon sufficient student demand. Fall, Spring.

LAD 1501 Advanced Study Skills (1-0-1)
This course is a one-hour elective. It is designed to assist general education students with the skills needed for success in college academics. The five-week course will focus on five skills: Study Environments and Learning Styles, Time Management, Advanced Reading

Strategies, Memory Techniques, and Test Taking Skills.
Available upon sufficient student demand. Fall, Spring.

LAD 1603 Mastering the College Experience (3-0-3)
Mastering the College Experience is an elective course designed to assist general education students with the transition from pre-college or work place learning strategies to the environment of college academics. Available upon sufficient student demand. Fall, Spring. Prerequisite: ACT score of 19 or equivalent. Telecourse.

MANUFACTURING TECHNOLOGY

MMFG 1143 Industrial Safety (3-0-3)
This course covers the principles of industrial safety. Emphasis is placed on industrial safety, OSHA, and environmental regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment. Fall, Spring.

MMFG 1153 Hydraulics (3-0-3)
This course will cover the basic concepts of hydraulics and hydraulic operation in an industry setting. Fall, Spring.

MMFG 1204 Machine Technology I (2-6-4)
This course introduces machining operations as they relate to the manufacturing industry. Topics include shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Lab fee. Fall, Spring.

MARINE REPAIR TECHNOLOGY

MAR 1302 2 & 4 Cycle Lab (0-9-3)
Practical application lab for 2 and 4 cycle theory class. Students will have hands on training in disassembly of 2 and 4 cycle engines. Co requisites: MAR 1303 2 & 4 Cycle Theory. Fall.

MAR 1303 2 & 4 Cycle Theory (3-0-3)
This class covers the theory of operation of both 2 cycle and 4 cycle engines and their application to the marine industry. Items covered in this class will be engine identification and parts look up, history of the outboard motor, stern drive and inboard application, parts identification for both outboard and stern drive. Also covered will be basic theory of fuel delivery, ignition, and drive systems. Practical application lab required. Co requisite: MAR 1302 2 & 4 Cycle Lab. Fall.

MAR 1223 Fiberglass (3-0-3)
This is a course of study in the use and repair of structural fiberglass as applied to the marine industry. Students will study the history of fiberglass usage in the marine industry, molding and repair techniques, and the different types of resins and glass. Spring.

MAR 1504 Electrical Systems I (3-3-4)
This course is a basic study of electricity and electrical systems as applied to the marine industry. Areas of study will be AC and DC electricity, ignition systems, starting and charg-

ing systems, and boat electrical systems and wiring. Fall.

MAR 1524 Electrical Systems II (3-3-4)
This course is a continuing study of the fundamentals of basic electricity and magnetism in marine engines. Course covers various types of manual and electrical starters, circuitry, charging and circuits, batteries, motor starting, ignition systems, and magnetos. Prerequisite: MAR 1504 Electrical Systems I. Spring.

MAR 1602 Major Overhaul Lab (0-9-3)
This course includes Practical lab for major overhaul class. Student will have hands on training in overhaul of outboard engines and gear cases as well as stern drive units and transom assemblies. Co requisite: MAR 1604 Major Overhaul. Spring.

MAR 1603 Off Season Boat Maintenance (3-0-3)
This course covers basic theory of operation, general maintenance of boat and engine systems and cleaning trailer maintenance and off season storage. Fall.

MAR 1604 Major Overhaul (3-3-4)
This course covers the disassembling, repair and reassembly of power heads, lower units and out drives. It includes inspection testing and service of the power and drive components of marine engines. Safety is emphasized. Co requisite: MAR 1602 Major Overhaul Lab. Spring.

MAR 1703 Service and Routine Maintenance (3-0-3)
This course covers the service and maintenance of marine products, such as, oil changes, water pump service, off season storage, decommissioning, cleaning and interior care. Safety is emphasized. Fall.

MAR 1903 Fuel Systems (3-0-3)
This class covers fuel systems as applied to the marine industry. Course of study will be outboard carburetion, outboard EFI and Direct Fuel Injection, Stern Drive Fuel Systems, Carburetion 2V and 4V, Throttle Body Injection and Multi Port Injection. Fall.

MATHEMATICS

MATH 1003 Intermediate Algebra (3-0-3)
This course includes the following topics: properties of numbers; fundamental operations with algebraic expressions; polynomials; systems of equations; ratio and proportion; factoring; functions; graphs; solutions of linear inequalities; and linear and quadratic equations. Pre-requisite: Placement test scores or PCLM0074 with a "C" or better. Credit earned not applicable for the Associate of Arts or the Associate of Science degrees. Fall, Spring, and Summer.

MATH 1013 Mathematics for General Education (3-0-3)
This college level course is as sophisticated as College Algebra but does not include the traditional pre-calculus topics of College Algebra. Four units of study include: Problem Solving & Algebra; Sequences, Series & Financial Management; Geometry & Measurement; and Probability & Statistics. A TI-83+ calculator is recommended. Designed for students whose degree plans do not require additional courses in mathematics, students interested in

transferring credits from this course should consult the registrar's office at the receiving institution to confirm acceptance. Prerequisite: MATH 1003 - Intermediate Algebra (C or better) or two years of high school algebra and compliance with State/NPCC placement test standards. Fall, Spring.

MATH 1123 College Algebra (3-0-3)
College Algebra provides the student with a foundation in problem solving in these topics: functions, graphing techniques, polynomial, rational exponential, and logarithmic functions; systems of equations and inequalities, matrices, and determinats, sequences and series, and the binomial theorem. Concepts and problem solving are presented from both the traditional and graphing calculator approaches. A graphing calculator is required, and the TI-83+ calculator is recommended. Prerequisite: MATH 1003-Intermediate Algebra ("C" or better) or two years of high school algebra and compliance with state/NPCC placement test standards. Fall, Spring, Summer.

MATH 1133 Trigonometry (3-0-3)
Introduces the student to the study of trigonometric functions; angles and their measures, right triangles, oblique triangles, and the graphs of trigonometric functions; identities and trigonometric equations; inverse functions; vectors and complex numbers and polar coordinates. The use of the TI-83+ and available computer software is included in the course. Prerequisite: Two years of high school algebra or equivalent or MATH 1123-College Algebra taken previously or concurrently with this course. Fall, Spring, Summer.

MATH 1191-1193 Mathematics Honors' Study
(1-3 variable credits)
Special studies in math or topics of study which are offered only upon demand. Individual programs are arranged with the instructor upon meeting Honors' Study Program requirements in current catalog.

MATH 1293 Introduction to Statistics (3-0-3)
Introduces the student to elementary statistical concepts using a basic algebra background. Topics include: organizing and analyzing data, probability, normal distribution, central limit theorem, hypothesis testing, confidence intervals, regression-correlation, Chi-Square and ANOVA (basic). Prerequisite: Intermediate Algebra (with a C or better) or High School Algebra II (with a C or better) and compliance with state/NPCC placement tests or Instructor approval. Available upon sufficient student demand.

MATH 2215 Calculus I (5-0-5)
Calculus I includes the study of Analytic Geometry; functions; limits and continuity; the derivative; the integral; and selections from logarithmic and exponential functions if time permits. The use of the TI-83+ graphing calculator and or computer software packages as tools for visualization of functions and for problem solving will be an integral part of the course. Prerequisites: MATH 1123-College Algebra or high school Algebra II and MATH 1133-Trigonometry taken previously or concurrently with this course. Available upon sufficient student demand.

MATH 2225 Calculus II (5-0-5)
Calculus II includes the study of inverse functions, techniques and applications using integration, sequences and series, and parametric and polar curves, vectors, lines and planes. The

TI-83+ graphing calculator and or computer software packages for problem solving and visualization of functions will be an integral part of the course. Prerequisite: MATH 2215-Calculus I and MATH 1133-Trigonometry. Available upon sufficient student demand.

MATH 2233 Number Systems for Elementary Education Majors I (3-0-3)
Introduces the prospective elementary teacher to deductive reasoning, set theory, numeration systems (bases), the real number system and its subsystems, number theory, and geometry. Prerequisite: A grade of "C" or better in Intermediate Algebra or passing an NPCC pretest. Fall.

MATH 2243 Number Systems for Elementary Education Majors II (3-0-3)
Continuation of Number Systems for Elementary Education Majors I, which is not necessarily a prerequisite. Prerequisite: A grade of "C" or better in Number Systems l. Spring.

MATH 2255 Calculus III (5-0-5)
Continuation of Calculus II. Topics include further applications of the integral, indeterminate forms, infinite series, partial derivatives, multiple integrals, and solid analytic geometry. Prerequisite: MATH 2225-Calculus II. Available upon sufficient student demand.

MATH 2273 Basic Concepts of Statistics and Probability (3-0-3)
This course examines the basic concepts and methods of the statistics and probability which underlie the elementary and middle school curriculum. Statistics will e presented as a problem solving process involving question formation, data collection, data representation, data analysis, and interpretation of results. discrete probability models will e studies using both mathematical approaches and simulations.

MEDICAL LABORATORY TECHNOLOGY

MLT 1002 Phlebotomy (1-2-2)
Students become familiar with the equipment and procedures to collect blood samples, the proper approach to patients, and will practice techniques until proficient. The organization and operation of laboratories in a variety of institutions will be taught. Prerequisites: High school GPA of 2.5 or above or GED 450 or above, 12th grade reading ability. Potential students must complete application form and be admitted to program. Available upon sufficient student demand. Lab Fee.

MLT 1022 Serology/Immunology (1-3-2)
Theory of antibody production and antigen-antibody reactions. Tests for syphilis, rheumatoid arthritis, bacterial and viral infections, pregnancy, and others are performed. Prerequisites: ALH 1302-Introduction to Health Science and MLT 2002-Introduction to Medical Laboratory Technology or equivalent. Summer. Lab Fee.

MLT 1024 Hematology (2-6-4)
Cellular elements of the blood, the blood-forming organs, and the theory of blood formation. Blood collection and handling. Routine blood counts, morphology of cells, and differentials of white cells. Additional emphasis on the study of anemias, leukemias, and other blood dyscrasias, plus additional lectures and/or demonstrations on automation in hematology. Includes studies in coagulation. Prerequisites: ALH 1302-Introduction to Health Science and MLT 2002-Introduction to Medical Laboratory Technology or equivalent.

Summer. Lab Fee.

MLT 1202 Phlebotomy for EMT/Paramedics (1-3-2)
During a six week course of study, students will become familiar with all equipment and procedures for IV diagnostic testing, will learn the proper approach to patients, and will practice techniques until proficient. Prerequisite: Admission to EMT/Paramedic program or its prior completion. Potential students must complete an application from the College and have the permission of the Education Coordinator with a recommendation for admission. Classes are limited to twenty (20) students. A waiting list will be maintained from which students will be admitted on a first-come, first-served basis. Lab fee.

MLT 2002 Introduction to Medical Laboratory Technology (1-2-2)
Emphasis on job-related problems and experiences in the clinical laboratory, with a review of current techniques in testing, instrumentation, personnel practices, and governmental/legal aspects. Suitable for continuing education requirements. Prerequisites: MLT 1002-Phlebotomy, ALH 1302-Introduction to Health Science or experience in a clinical laboratory, and permission of the instructor. Available upon sufficient student demand. Lab Fee.

MLT 2006 Clinical Applications in Phlebotomy
(0-24-6)
Increased proficiency in phlebotomy techniques. Responsibilities of the phlebotomist in the medical laboratory and total patient care. Available upon sufficient student demand. Prerequisite: MLT 2002. Lab fee.

MLT 2015 Pathogenic Microbiology (3-4-5)
Culture media, morphology of bacteria, relation of bacteria to diseases, transmission of infections, preparation of smears from various sources, stains and staining procedures, classification of bacteria, study of bacteria of clinical importance, isolation and identification of bacteria, preparation of material for parasites which affect humans, and preparation and study of material for disease-causing fungi. Prerequisite: ALH 1302-Introduction to Health Science, and MLT 1022-Serology/Immunology. Fall. Lab Fee.

MLT 2024 Immunohematology (1.5-5-4)
Identification of blood groups; identification of subgroups of ABO and Rh systems; cross-matching and blood banking techniques in accordance with AABB recommendations; investigation of hemolytic disease of the newborn; antibody detection and identification; donating, processing, and storage of blood. Prerequisite: ALH 1302-Introduction to Health Science, MLT 2002-Introduction to Medical Laboratory Technology, MLT 1024-Hematology, and MLT 1022-Serology/Immunology. Fall. Lab Fee.

MLT 2032 Clinical Microscopy (1-3-2)
Chemical, macroscopic, and microscopic study and analysis of the urine for normal and abnormal constituents. Further practice with the microscope and its utilization in other laboratory procedures. Prerequisites: ALH 1302-Introduction to Health Science and MLT 2002-Introduction to Medical Laboratory Technology or equivalent. Fall. Lab Fee.

MLT 2034 Clinical Chemistry (2-6-4)
Presence and quantity of chemical substances in the blood and other body fluids; instru-

mentation, including the principles of instruments and their use; performance of such tests as blood sugar, electrolytes, calcium, enzymatic determinations, and liver and kidney functions. Special emphasis on quality control. Prerequisite: ALH 1302-Introduction to Health Science and MLT 2002-Introduction to Medical Laboratory Technology or equivalent. Fall. Lab Fee.

MLT 2114 Clinical Application Microbiology (0-12-4)
Increased proficiency in bacteriology, mycology, and parasitology techniques. Responsibilities of the medical laboratory technician in the medical laboratory and total patient care. Prerequisite: MLT 2015-Pathogenic Microbiology. Spring. Lab Fee.

MLT 2123 Clinical Application Immunohematology (0-9-3)
Increased proficiency in the techniques of blood banking and serology. Responsibilities of the medical laboratory technician in the medical laboratory and total patient care. Prerequisite: MLT 2024-Immunohematology. Spring. Lab Fee.

MLT 2134 Clinical Application Chemistry (0-12-4)
Increased proficiency in chemistry. Responsibilities of the medical laboratory technician in the medical laboratory and total patient care. Prerequisite: MLT 2034-Clinical Chemistry. Spring. Lab Fee.

MLT 2154 Clinical Application Hematology (0-12-4)
Increased proficiency in hematology, coagulation, urinalysis, and the collection of blood specimens. Responsibilities of the medical laboratory technician in the medical laboratory and total patient care. Prerequisite: MLT 1024-Hematology, MLT 2032-Clinical Microscopy. Spring. Lab Fee.

MUSIC

MUS 1111 Music Education: Strings (1-0-1)
Study of the elementary playing techniques, teaching procedures, and materials for the stringed instruments will be conducted on a private lesson basis. Prerequisite: Permission of instructor. Lab Fee.

MUS 1113 Music Theory I (3-0-3)
To be taken concurrently with Ear Training I. All fundamentals of music, major and minor scales, key signature, intervals, note value, and meter signature. Part writing using primary and some secondary triads. Prerequisite: Permission of the instructor. Fall.

MUS 1123 Music Theory II (3-0-3)
To be taken concurrently with Ear Training II. Continuation of Music Theory I. Triads and Seventh chords, non-harmonic tones, and modulations to closely related keys are studied. Models are harmonized and figured basses are realized. Prerequisite: MUS 1113-Music Theory I and MUS 1131-Ear Training I. Spring.

MUS 1131 Ear Training I (0-2-1)
Rhythmic reading, sight singing, ear training, dictation, and keyboard harmony. (Concurrent with Music Theory I). Prerequisite: Permission of the instructor. Available upon sufficient student demand.

MUS 1141 Ear Training II (0-2-1)
Continuation of Ear Training I. (Concurrent with Music Theory II.) Prerequisite: MUS 1131-Ear Training I. Available upon sufficient student demand.

MUS 1161 Community College Choir I (0-2-1)
This course is designed for community members and college students who wish to participate in special public music performances sponsored by the College. Permission of the instructor through audition is usually required.

MUS 1163 Music History I (3-0-3)
This course traces the forms, styles, and composers of music in western civilization in the 18th, 19th, and 20th centuries. Available upon sufficient student demand.

MUS 1171 Community College Choir II (-0-2-1)
Continuation of Community College Choir I.

MUS 1173 Music History II (3-0-3)
This course traces the forms, styles, and composers of music in western civilization before the 18th century. Available upon sufficient student demand.

MUS 1201 Community Band Ensemble (1-0-1)
The Hot Springs Community Band (HSCB) is dedicated not only to the preservation and continuation of the "community band" tradition, but also to the on-going promotion of musical education and performance opportunities for local students. Musicians of all ages who believe their instrumental skills are adequate are welcome to participate in weekly evening rehearsals and scheduled performances. The HSCB awards honoraria to its high school members who qualify for All-Region or All-State Band status.

MUS 1213 Music Appreciation (3-0-3)
Music, its origin and development. A library of recorded instrumental and vocal music is used to illustrate. The course seeks to relate music to the other arts, literature, and the social sciences. A foundation to the appreciation of music. Fall, Spring.

MUS 1311 Class Voice I (0-2-1)
Group instruction in the basics of singing. Group and individual application of proper breathing, phrasing, and correct vocal production. For anyone who wants to improve his or her singing ability. Previous music training is helpful, but not essential. Fall, Spring.

MUS 1321 Class Voice II (0-2-1)
Continuation of Class Voice I.

MUS 1331 Class Piano I (0-2-1)
Group instruction in piano to familiarize the beginning student with the keyboard. For anyone who wishes to learn to play the piano. Prior keyboard experience is not necessary. Fall, Spring.

MUS 1341 Class Piano II (0-2-1)
Continuation of Class Piano I.

MUS 1351 Class Guitar (0-2-1)
Group instruction for both beginning and experienced students. Covers the rudiments of music and proper technique of memorization and performance on the guitar. Although the classic guitar will be emphasized, all styles will be covered, including popular song accompaniment, blues improvisation, and the use of the plectrum. Fall, Spring.

MUS 1361 Woodwind Ensemble (0-2-1)
Group instruction utilizing a variety of flutes (Piccolo, C Flute, Alto and Bass) in a group choir setting. A variety of musical styles are utilized and public performances
are required. The course incorporates ear training as well as pitch and tone blending. Musicianship is developed through repertoire, techniques, harmony styles, and rhythmic variations. Fall, Spring.

MUS 1431 Vocal Jazz Ensemble I (0-2-1)
National Park Community College "Soundwaves" membership through audition only. This group performs a variety of musical styles including "Pop/Show Choir". Several public performances each semester.

MUS 1441 Vocal Jazz Choir II (0-2-1)
Continuation of Ensemble Choir I. Fall.

MUS 1451 National Park Community College Singers I (0-2-1)
A group of mixed voices which performs throughout the year for area churches, civic clubs, and schools. Prerequisite: Permission of the instructor. Fall, Spring.

MUS 1461 National Park Community Singers II (0-2-1)
Continuation of NPCC Singers I. Fall, Spring.

MUS 1511-1513 Private Voice I (1-3 Variable Credits)
Individual instruction in singing for beginning and advanced students. Development in all phases of performance: techniques, style, musicianship, interpretation, and repertoire. A jury examination and/or a public recital may be required. Prerequisite: Permission of the instructor. Fall, Spring. Lab Fee.

MUS 1521-1523 Private Voice II (1-3 Variable Credits)
Continuation of Private Voice I. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 1531-1533 Private Piano I (1-3 Variable Credits)
Private piano lessons for those who have mastered the keyboard and can read music. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 1541-1543 Private Piano II (1-3 Variable Credits)
Continuation of Private Piano I. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 1551-1553 Private Organ I (1-3 Variable Credits)

Individual instruction in organ for beginning and advanced students. Development in all phases of performance: technique, style, musicianship, interpretation, and repertoire. A jury examination and/or public recital may be required. Prerequisite: Permission of the instructor. Fall, Spring. Lab Fee.

MUS 1561-1563 Private Organ II (1-3 Variable Credits)
Continuation of Private Organ I. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 1611-1613 Private Woodwind I (1-3 Variable Credits)
Individual instruction for those who can play a woodwind instrument and read music. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 1621-1623 Private Woodwind II (1-3 Variable Credits)
Continuation of Woodwind I. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 1631-1633 Private Brass I(1-3 Variable credits)
Individual instruction for those who can play a brass instrument and read music. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 1641-1643 Private Brass II (1-3 Variable Credits)
Continuation of Private Brass I. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 1711-1713 Private Strings I (1-3 Variable Credits)
Private instruction for violin and other stringed instruments. Development in all phases of performance: technique, style, musicianship, interpretation and repertoire. Permission of instructor. Available upon sufficient student demand. Lab Fee.

MUS 1721-1723 Private Strings II (1-3 Variable Credits)
Continuation of Private Strings I. Permission of instructor. Available upon sufficient student demand. Lab Fee.

MUS 1731-1733 Private Guitar (1-3 Variable Credits)
Individual instruction to prepare the student in classic
guitar performance, technique, style, musicianship, interpretation, and repertoire. Minimum requirements are a basic music ability, a good attitude, and a playable classic guitar. A jury examination and/or public recital may be required. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2161 Community College Choir III (0-2-1)
Continuation of Community College Choir II.

MUS 2171 Community College Choir IV (0-2-1)
Continuation of Community College Choir III.

MUS 2213 Public School Music (3-0-3)
An activities approach designed to give future classroom teachers a background in basic music fundamentals needed in their preparation to teach general music in elementary school. Education methods courses for Arkansas State Teacher Certification will not be offered for independent study credit in the Division of Communication and Arts. Spring.

MUS 2431 Vocal Jazz Ensemble III (0-2-1)
Continuation of Vocal Jazz Ensemble II. Fall.

MUS 2441 Vocal Jazz Ensemble IV (0-2-1)
Continuation of Vocal Jazz Ensemble III. Fall.

MUS 2451 National Park Community College Singers III (0-2-1)
Continuation of National Park Community College Singers II. Fall, Spring.

MUS 2461 National Park Community College Singers IV (0-2-1)
Continuation of National Park Community College Singers III. Fall, Spring.

MUS 2511-2513 Private Voice III (1-3 Variable Credits)
Continuation of Private Voice II. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2523 Private Voice IV (1-3 Variable Credits)
Continuation of Private Voice III. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2531-2533 Private Piano III (1-3 Variable Credits)
Continuation of Private Piano II. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2541-2543 Private Piano IV (1-3 Variable Credits)
Continuation of Private Piano III. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2551-2553 Private Organ III (1-3 Variable Credits)
Continuation of Private Organ II. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2561-2563 Private Organ IV (1-3 Variable Credits)
Continuation of Private Organ III. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2611-2613 Private Woodwind III (1-3 Variable Credits)
Continuation of Private Woodwind II. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2621-2623 Private Woodwind IV (1-3 Variable Credits)
Continuation of Private Woodwind III. Prerequisite: Permission of the instructor. Available

upon sufficient student demand. Lab Fee.

MUS 2631-2633 Private Brass III (1-3 Variable Credits)
Continuation of Private Brass II. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2641-2643 Private Brass IV (1-3 Variable Credits)
Continuation of Private Brass III. Prerequisite: Permission of the instructor. Available upon sufficient student demand. Lab Fee.

MUS 2711-2713 Private Strings III (1-3 Variable Credits)
Continuation of Private Strings II. Permission of instructor. Available upon sufficient student demand. Lab Fee.

MUS 2721-2723 Private Strings IV (1-3 Variable Credits)
Continuation of Private Strings III. Permission of instructor. Available upon sufficient student demand. Lab Fee.

NURSING

NUR 1001 Critical Thinking Applications I (1-0-1)
This course will provide opportunities for the first semester nursing student to practice critical thinking and decision making skills in simulated patient care situations within a laboratory setting. Nursing skills and procedures, within a nursing process format, will be utilized to stimulate the student to think critically, problem solve, and make decisions while applying fundamental principles. Since NUR 1001 is taught concurrently with NUR 1108, all students must satisfactorily pass NUR 1001 in order to progress to the 2nd semester nursing course, NUR 1208. Corequisite: NUR 1108-Nursing Process I. Prerequisite or Corequisite: BIOL 2224-Anatomy & Physiology I, MATH 1123-College Algebra. Fall

NUR 1108 Nursing Process I (4-12-8)
Nursing Process I provides an introduction to curricular concepts, role responsibilities and development of fundamental knowledge and nursing skills. The nursing process is introduced as the method for patient care planning. Student behaviors include learning to identify human responses to physical, emotional, intellectual, social, and spiritual dimensions. Opportunities will be provided for the student to demonstrate fundamental nursing skills in the clinical and laboratory settings. Morning, afternoon, and/or evening hours may be scheduled for clinical experience. A medication calculation test will be given. Each student will be required to achieve a 90% on the calculation test to pass the course. Prerequisite: Departmental approval. Prerequisite or Corequisite: BIOL 2224 Anatomy & Physiology I, Math 1123 College Algebra. Fall. Lab Fee. Corequisite: NUR 1001 Critical Thinking Applications I.

NUR 1201 Critical Thinking Applications II (1-0-1)
Focus of this course is to practice critical thinking and decision making skills in simulated medical-surgical patient care situations. Nursing skills and patient situations, within the nursing process format, will be utilized to stimulate the student to think critically, problem solve, and make decisions while applying principles. Knowledge and skills from NUR 1001 and NUR 1108 are reinforced and related to new content and skills. Prerequisite: NUR 1108

Nursing Process I, NUR 1001 Critical Thinking Application I or NUR 1302 Current Concepts in Nursing, BIOL 2224 Anatomy and Physiology I, MATH 1123 College Algebra. Corequisite: NUR 1208 Nursing Process II, BIOL 2234 Anatomy and Physiology II. Fall. Lab Fee.

NUR 1208 Nursing Process II (4-12-8)
Focus of Nursing Process II is on the identification and clustering of human responses in order to implement the 5 step Nursing Process in selected medical-surgical situations with adult patients. NPCC curricular concepts continue to be built upon. A unit on Gerontological Nursing is included. Knowledge and skills from previous courses are reinforced and related to new content. Clinical experiences are scheduled involving morning, afternoon or evening hours. Prerequisite: NUR 1108 Nursing Process I, NUR 1001 Critical Thinking Applications I, or NUR 1302 Current Concepts in Nursing, BIOL 2224 Anatomy and Physiology I, MATH 1123 College Algebra. Corequisites: NUR 1201 Critical Thinking Applications II, BIOL 2234 *Anatomy and Physiology II. Fall. Lab Fee.
*See biology requirements for BIOL 2234 Anatomy and Physiology II.

NUR 1216 Accelerated Nursing (5-3-6)
Nursing 1216 focuses on the identification and clustering of human responses in order to fully implement the 5-step nursing process in selected medical-surgical situations with adult clients. Curricular concepts that contribute to development of the RN role continue to be built upon. There is a gerontological emphasis that includes a unit on health care of the older adult. Consideration is given to factors that influence adult development and health factors such as age, beliefs, resources, and cultural background. Prerequisite and Corequisites vary depending on semester of enrollment. Spring: Prerequisites include BIOL 2224 Anatomy and Physiology I, MATH 1123 College Algebra. Corequisites: NUR 1302 Current Concepts in Nursing, BIOL 2234 *Anatomy and Physiology II. Summer Prequisites include all general education courses in the AS degree plan except General Psychology and Introduction to Sociology. Spring or Summer Lab Fee.

NUR 1302 Current Concepts in Nursing (2-0-2)
The focus of this two-credit hour, web-enhanced course is to introduce the LPN/LPTN to concepts related to the transition and socialization toward associate degree (A.D.) education and the Registered Nurse role. The course provides learning in relation to the NPCC Nursing Philosophy and an introduction to NPCC A.D. Nursing curricular concepts. Selected NUR 1108 topics are examined in an effort to develop the LPN/LPTN knowledge base to a level consistent with that of the RN student entering NUR 1208/1216. A major focus is the use of the nursing process in relation to physical, emotional, social, intellectual, and spiritual responses. There is no clinical component to the course. Prerequisite: Graduation from a state approved PN or PTN educational program, Unencumbered LPN/LPTN license in all states registered (must include Arkansas), Officially admitted to the NPCC Nursing Program or with departmental approval, Minimum of 90% score on the Dosage Calculation Exam, and Evidence of completion of HIPAA and Blood-Born Pathogen education or successful completion of the HIPAA and Blood-Borne Pathogen modules within the course materials, or a nursing student transferring from an accredited nursing program. Prerequisite: BIOL 2224-Anatomy & Physiology I, MATH 1123-College Algebra. or departmental approval. Spring and Summer.

NUR 2107 Nursing Process III (4-9-7)

This course continues to integrate curricular concepts with focus on patient responses with specific long and short term health problems in the areas of maternal and children's health. Student behaviors include use of the nursing process in/with specified nursing diagnoses in relation to patients and families. Areas of health maintenance and promotion are also examined. Knowledge and skills from previous courses are reinforced and
related to new content. Clinical experiences will focus on patient responses in the area of maternal-child health primarily in acute care settings. This course provides opportunity for the student to expand their knowledge with the self-selection of clinical experiences. Experiences will be scheduled involving either morning, afternoon, or evening hours. Prerequisites: NUR 1208 Nursing Process II, NUR 1201 Critical Thinking Applications II, BIOL 2244 Microbiology, BIOL 2234 Anatomy & Physiology II, BIOL 2224 Anatomy & Physiology I, and MATH 1123 College Algebra. Corequisite or prerequisite: NUR 2303 Nursing Process IV. Fall. Lab Fee.

NUR 2203 Nursing Issues and Trends (3-0-3)
This course is designed for the exploration of topics pertinent to successful transition to the roles of the Registered Nurse. Social, political, educational, and professional trends influencing the future of nursing are examined. Opportunity is offered for the students to analyze their own growth in areas of Effective Communication, Nursing Management, Delegation, Ethical-legal Issues, Critical Thinking, Initiating and Managing Change, Cost Effectiveness, Values Clarification, Caring for Self and Caring for the Profession of Nursing. Corequisite: NUR 2210.

NUR 2210 Nursing Process V (6-12-10)
The focus of this course is on human responses to physical, emotional, intellectual, social and spiritual functioning throughout the life span, with an emphasis on middle and later years. Curricular concepts are expanded and student behaviors are centered on acquiring new knowledge and skills while providing preventative, acute and restorative care in selected medical-surgical hospital units and home health. Students use the nursing process to demonstrate the synthesis of knowledge and skills acquired in previous courses. Prerequisite: NUR 2107 Nursing Process III, NUR 2303 Nursing Process IV. Corequisite: NUR 2203.

NUR 2303 Nursing Process IV (2-3-3)
This course continues to apply curricular concepts with focus on acute and chronic needs in the area of mental health. Student behaviors include the application of the nursing process with emphasis on the emotional-intellectual-social-spiritual responses of the patient and family. Principles and practice of psychiatric-mental health nursing are integrated through classroom and clinical experiences. A variety of agencies are utilized to focus on patient responses and nursing roles. Prerequisite: NUR 1208 Nursing Process II, NUR 1201 Critical Thinking Application II, BIOL 2224 Anatomy & Physiology I, BIOL 2234 Anatomy and Physiology II, BIOL 2244 Microbiology, MATH 1123 College Algebra. Corequisite or prerequisite: NUR 2107 Nursing Process III, PSYC 1103 General Psychology. Fall. Lab Fee.

NUR 2304 Health Assessment
This web-enhanced course is designed for Registered Nurses preparing for a bachelors degree in nursing (or with instructor permission). Complete assessment of all body systems will be explored with emphasis on physical examination techniques. Spring, Fall.

NUR 2901 -2906 Special Study in Nursing (1 - 6 variable credit)
Individual study of a particular area of nursing. Course content proposal and course objectives to be developed by the student or group of students and instructor, depending on the identified need and/or interest of the student. The Division Chair of Nursing will make assignment of appropriate course credit. Prerequisite: Completion of 8 hours of nursing. Fall/Spring

SUR 1103 Surgical Technology I (3-0-3)
This course is an introduction to the principles, procedures and techniques of surgical procedures with emphasis on surgical asepsis. This course introduces concepts of professional ethics, communication techniques, and legal requirements. This course is designed as content/theory only with no clinical component. Prerequisite: Departmental approval.

SUR 1105 Surgical Technology I (3-6-5)
This course is an introduction to the principles, procedures and techniques of surgical procedures with emphasis on surgical asepsis. This course introduces concepts of professional ethics, communication techniques, and legal requirements. Opportunities are provided for the student to demonstrate basic skills in the clinical and laboratory setting. Students are introduced to the physical environment of the operating suite and will have experiences in the care and use of instruments and surgical supplies, as well as the opportunity to scrub for surgical procedures. Prerequisite: Departmental approval.

SUR 1123 Surgical Technology II (3-0-3)
The course will build upon the knowledge of Surgical Technology I. The student will continue to build
knowledge of roles and responsibilities of the surgical scrub tech, particularly in related to specialized surgeries. This course is designed as content/theory only with no clinical component. Prerequisite: Departmental approval.

SUR 1125 Surgical Technology II (3-6-5)
The course will build upon the knowledge of Surgical Technology I. The student will continue to build knowledge of roles and responsibilities of the surgical scrub tech, particularly in related to specialized surgeries. Opportunities are provided for the student to increase their skills in the clinical setting with growing ability to function as a member of the operating team. Clinical Prerequisite: Departmental approval.

MA 1102 Medication Aide (0-3-2)
This course is designed as the practicum for the medication aide to administer medications in the skills lab setting and the nursing home setting. Content will focus on the application of knowledge from MA 1103. Students will have the opportunity to practice the role of medication aide un the supervision of the instructor and preceptor. Students will successfully complete 90 hours of practicum. Grade will be Pass or Fail. Prerequisite: Department approval. Corequisite: MAC - 1103

MA 1103 Medication Aide (3-0-3)
This course is an introduction to the principles and concepts related to the administration of approved medications by a medication aide in the nursing home environment. Safety issues related to medication administration and common effects of medication is present-

ed. Students must also register for the clinical companion course to be eligible to write the state certification exam. PREREQUISITE: Departmental approval. COREQUISITE: MAC-1102

OFFICE ADMINISTRATION

OFAD 1001 Introduction to Word Processing (1-0-1)
Introductory course designed to orient the student to the essential skills of a word processing program on a personal computer. This course involves hands-on experience at the keyboard console. Prerequisite: Formal keyboarding course strongly recommended. Available upon sufficient student demand. Lab Fee.

OFAD 1002 Keyboarding I (3-0-2)
Designed to develop basic keyboarding skills essential to the touch system. Includes development of proper keyboarding techniques, drills to develop speed and accuracy, and solving simple keying problems. Not open to students who have had one or more semesters of keyboarding except with the consent of the instructor. Outside practice required. Fall, Spring. Lab Fee.

OFAD 1003 Records Management (3-0-3)
This course develops an understanding of the specific
filing concepts and their applications. The course is designed to give students an in-depth coverage of alphabetic, subject, numeric, and geographic filing procedures; equipment; supplies; records management organization, maintenance and administration; and the values and attitudes appropriate for a records management professional. Records retrieval is reinforced using both manual and electronic (Access software) methods. Prerequisite: OFAD 1002-Keyboarding I with a grade of "C" or better, or equivalent and CIS 1013-Information Systems I. Available upon sufficient demand.

OFAD 1012 Keyboarding II (3-0-2)
Continuation of development of correct techniques, speed, and accuracy and an introduction to letter writing, outlines, manuscripts, and composing. Outside practice required. Prerequisite: OFAD 1002-Keyboarding I with a grade of "C" or better, or equivalent. Fall, Spring. Lab Fee.

OFAD 1053 Business Math with Calculators (3-0-3)
Review of basic arithmetic calculations, decimals, percentages, discussion of discounts, simple and compound interest, credit cards, home mortgages, taxes, fire and auto insurance, payrolls, graphs, and other business-related computations. Prerequisite: PCL 0063 Basic Math with a grade of "C" or better, or ACT 18, or the numerical equivalent on the COMPASS test. Fall, Spring.

OFAD 1083 Word Processing I (3-0-3)
The student will learn to create, edit, format, save, and print documents; learn to manage documents and enhance documents with customized features such as fonts, tabs, and writing tools such as spelling checker, grammar checker, and a thesaurus; learn to create multiple-page documents with elements such as headers, footers, footnotes, and endnotes; move text within and between documents; and prepare form documents with personalized infor-

mation. Prerequisite: OFAD 1012-Keyboarding II with a grade of "C" or better, or equivalent. Fall, Spring. Lab fee.

OFAD 1071 Introduction to Transcription (1-0-1)
Instruction and practice in the operation of transcribing machines using the personal computer. Includes
preparation of business documents from machine recorded materials and a review of basic language skills with emphasis on correct spelling, punctuation, grammar, and proofreading skills. Prerequisite: OFAD 1012-Keyboarding II with a grade of "C" or better or equivalent, recommend OFAD 1133-Business English with a grade of "C" or better. Available upon sufficient student demand. Lab Fee.

OFAD 1081 Medical Office Procedures (1-0-1)
Designed to give the student a basic understanding of the day-to-day tasks performed in a medical office setting. Using custom-designed software, the student will complete various business tasks similar to those performed in a medical office. Prerequisite: OFAD 1002 Keyboarding I with a grade of "C" or better, or equivalent. Fall, Spring. Lab Fee.

OFAD 1093 Machine Transcription (3-0-3)
Develops productive machine transcription skills through combined use of word processing and transcription equipment. Study includes realistic transcribing experiences in language skills, document formatting, editing, proofreading, and decision making. Prerequisite: OFAD 1133-Business English with a grade of "C" or better and OFAD 1083-Word Processing I with a grade of "C" or better. Spring. Lab Fee.

OFAD 1123 Keyboarding III (3-0-3)
Develops both speed and accuracy through further development of techniques. Emphasis on special problems in letter arrangement, tabulated reports, problems in centering, rough drafts, and manuscript writing. Outside practice required. Prerequisite: OFAD 1012-Keyboarding II with a grade of "C" or better, or equivalent. Available upon sufficient student demand. Lab Fee.

OFAD 1133 Business English (3-0-3)
Provides a review of the essential principles of English grammar, style, and usage, as well as an overview of current practices in business communications. Fall, Spring.

OFAD 1173 Legal Office Transcription and Procedures (3-0-3)
Designed to teach basic legal terminology and formatting skills of legal correspondence and documents directly from tape into mailable form. This course also includes a special study of the types of activities most often performed by the legal secretary in a general law office. Prerequisite: OFAD 1093-Machine Transcription with a grade of "C" or better and OFAD 1083-Word Processing I with a grade of "C" or better or skill equivalent, and OFAD 1133-Business English with a grade of "C" or better. Available upon sufficient student demand. Lab Fee.

OFAD 1203 Business Practices and Procedures (3-0-3)
This course is designed to give students an understanding of basic procedures for business offices including telephone techniques, scheduling/contact management, and records management. Students receive hands-on practice using photocopiers, fax machines, scanners,

telephones, digital cameras and pocket pc's. In addition, professional ethics and business conduct are introduced and reinforced throughout the course. Fall, Spring. Lab Fee.

OFAD 2023 Keyboarding IV (3-0-3)
Special emphasis on increasing speed and accuracy of problem typing. Study includes problem solving of the type found in a general business office, a technical office, a professional office, and an executive office. Outside practice required. Prerequisite: OFAD 1123-Keyboarding III with a grade of "C" or better, or equivalent, and OFAD 2053-Word Processing II with a grade of "C" or better. Available upon sufficient student demand. Lab Fee.

OFAD 2053 Word Processing II (3-0-3)
The student will learn to add special features to documents and enhance the visual display of documents with macros, templates, graphic features, Draw, format text into columns, tables, charts; organize text with the outline, sort and select features; automate the formatting of text using styles; and create tables of contents, indexes and tables of authorities. Prerequisite: OFAD 1083-Word Processing I with a grade of "C" or better. Recommended: OFAD 1133-Business English with a grade of "C" or better. Spring, or upon sufficient student demand. Lab fee.

OFAD 2063 Office Procedures (3-0-3)
Provides the capstone for the college-trained office administrative position. Emphasis is on development of decision-making abilities and good human relations skills. Prerequisites: OFAD 1093-Machine Transcription, OFAD 1133-Business English with a grade of "C" or better and CIS 1013-Information Systems I with a grade of "C" or better. Available upon sufficient student demand. Lab Fee.

OFAD 2073 Administrative Office Management (3-0-3)
Study of the process of planning, organizing, and controlling of all the information-related activities and of leading or directing people to attain the objectives of the organization, keeping in mind the benefits of progressively more powerful technologies, equipment and concepts. Fall, Spring.

OFAD 2083 Word Processing Skills Lab (2-2-3)
Integration of expanded word processing applications with desktop publishing, spreadsheets, data bases, and graphics applications. Prerequisite: OFAD 2053-Word Processing II with a grade of "C" or better. Available upon sufficient student demand. Lab Fee.

OFAD 2291-2293 Special Study in Office Administration (1-3 Variable Credits)
Special courses or independent studies in office administration are offered on demand. Students may plan individual projects and research in consultation with the instructor. Permission of the instructor and the Division Chair. May be repeated for credit when topics vary.

OFAD 2393 Office Support Internship (1-9-3)
Office Support Internship is an opportunity to enhance and reinforce classroom instruction with on-the-job work experience. Appropriate training stations will be developed, and supervision will be provided by instructors and site personnel. Students are required to complete 135 clock hours of supervised experience during the term. Prerequisites: All

classes for the Office Support Technical Certificate must be completed before a student is eligible to enroll in the Office Support Internship. Students must have maintained a "C" average in these classes.

ORIENTATION

ORT 1101 Freshman Orientation (1-0-1)
This one day course is designed to orient students to the programs and services offered at NPCC. Topics of the day include Secrets to Success, Student Services, and a welcome to campus by a faculty member. A comprehensive campus tour is included in the day's activities, as is lunch. Points will be awarded for activities that students accomplish during their first semester. The activities are designed to further acquaint students with the campus and various departments. This course is required for all first-time, full-time students at NPCC.

ORT 1201 Success Seminar (1-0-1)
This course is designed to assist general education students with the skills needed for success in both college academics and life after college. The five-week course will focus on you as a learner and participant in college society. However, we will also examine your strengths, values, and motivations. Specifically, we will be concerned with understanding yourself as a learner in every area of your life, information and cultural literacy, college demeanor, and the habits of mind that characterize the college experience. This is a required course for all first-time, full-time students who are not enrolled in vocational programs. Students in vocational programs who take TECH 1102 Technical Communications in their first semester will not be required to take ORT 1201.

PHILOSOPHY

PHIL 1093 Special Study (3-0-3)
Individual research on worthy projects of personal interest in specialized area determined by instructor and student.

PHIL 1123 Introduction to Philosophy (3-0-3)
Examination of critical questions of human existence such as free will versus determinism, the nature of knowledge, and the basis for moral judgment. Reading and discussion of works by classical and contemporary philosophers. Fall, Spring, Summer.

PHIL 1133 Fundamentals of Ethics (3-0-3)
A study of the philosophical bases for moral judgment and an application of those principles to problems in contemporary society. Fall, Spring, Summer.

PHIL 1603 Logic (3-0-3)
A structured study of deduction, induction, the scope of logic, and its relationship with language and communication. Available upon sufficient student demand.

PHOTOGRAPHY

PHOT 1103 Introduction to Photography (3-0-3)
A course designed to give the student a mastery of basic photographic techniques and a creative outlet to be used and enjoyed throughout life. Topics of study include camera basics,

photographic theory, negative development, printing and enlargement of negatives, and print enhancement and presentation. Fall, Spring. Lab Fee.

PHOT 1113 Intermediate Photography (3-0-3)
Continuation of Introduction to Photography. Includes advanced printmaking and introduction to color. Prerequisite: PHOT 1103-Introduction to Photography. Fall, Spring. Lab Fee.

PHOT 1143 Video Production I (3-0-3)
This is a studio class in videoproduction techniques designed to give the student an introduction to the disciplines involved in the preproduction, production and post-production work necessary to create a digital video presentation. This class is concerned with production work for documentaries, commercials, industrial film. and independent films rather than broadcast television practices. Study will include script preparation, storyboards, camera operation, lighting, sound acquisition, and video and sound editing.

PHOT 1191-1194 Photography: Special Study (1-4 Variable Credits)
This course offers the advanced photography student the opportunity to explore personal directions in the photographic arts.

PHOT 1243 Studio Photography I (3-0-3)
This is a studio course designed to give the student the opportunity to work with professional studio equipment including medium format and large format cameras using both film and digital backs. Both tungsten and HMI lights as well as studio flash systems will be used. The student will learn techniques that are in current use for portrait, product,catalog and advertising photography, while preparing a personal portfolio.Prerequisite: Intermediate Photography, PHOT 1113.

PHOT 2103 Advanced Photography (3-0-3)
Continuation of Intermediate Photography. Prerequisite: PHOT 1113- Intermediate Photography. Available upon sufficient student demand. Lab Fee.

PHOT 2143 Video Production II (3-0-3)
Students will work as a group on a video productions, performing a range of jobs from camera operator to lighting and sound. Post production work will include video and sound editing, music mixing, voice-over, and DVD production. Prerequisite: Video Production I, PHOT 11143.

PHOT 2213 Color Photography (3-0-3)
This course extends the skills learned in Advanced Photography, with an emphasis on color control. Prerequisite: PHOT 2103-Advanced Photography. Available upon sufficient student demand. Lab Fee.

PHOT 2223 Digital Photography (3-0-3)
This Course within the art department deals with the production of digital images from varied sources including images from digital cameras, scanned film, scanned prints, and

scanned objects. The student is not required to own a digital camera, but must have access to a conventional 35 mm. camera. A number of digital cameras
will be made available for studio use. The course is one of exploration, using different means of image input to produce digital prints or negatives. As in all photography classes, there will be an emphasis on concept and composition leading to the production of prints for portfolio presentation.

PHOT 2243 Studio Photography II (3-0-3)
This class will allow the student-dent further practice with medium and large format cameras. Assignments will require more complex imaging techniques including some Photoshop manipulation and more advanced lighting solutions.Prerequisite: Studio Photography I, PHOT 12443

PHOT 2303 Photography Business Practice (3-0-3)
The U.S.Department of Labor reports that more than half the photographers in the country are self-employed. It is therefore extremely important that students are prepared to face the realities of running a studio. Attention will be given to marketing strategies,copyright issues, job estimating, and the day-to-day expenditures required to run an independent business.

PHYSICAL EDUCATION

PE 1031 Introduction to Fencing (0-2-1)
This course is designed to provide a sound basic understanding of the history, rules, etiquette, and safety aspects of the sport of fencing. Will demonstrate basic technical and tactical skills needed for novice level competition through emphasis on basic offense and defense, continuation of attack, compound attacks, and practical bouting.

PE 1051 Beginning Yoga (0-2-1)
For those who wish to master the fundamentals of Hatha Yoga. Emphasis is given to the synchronization of breath and movement and to the understanding of the basic yoga postures. Taught in Vinyasa style (flowing from one posture to the next, inspired by breath) together with some held postures.

PE 1103 Fundamentals of Physical Education (3-0-3)
Emphasizes history, principles, relationship of physical education to general education, professional literature and vocational opportunities. Designed for physical education majors but open to any student. Spring.

PE 1111 Nautilus Conditioning (0-2-1)
Nautilus Conditioning is an individual physical training course designed to enhance one's physical and mental state. This course is designed with four levels of conditioning for muscle groups. Credit may not be earned more than once for each level. All participants must be registered, attend an orientation session and demonstrate an understanding of the physical education principles. All students must follow guidelines for Use of Nautilus

Conditioning Equipment and must sign a Voluntary Assumption of Risk form. Student enrollment limited. Students must provide their own towels and lock for lockers. May be repeated once. Fall, Spring. Lab Fee.

PE 1112 Drivers' Education (1-2-2)
Details basic principles of good driving, including highway courtesy, approved driving practice, responsibility of car owner, the why and how of accidents, and care and economical use of the auto. Course will include six or eight hours behind the wheel and 20 hours observance. Spring, Summer. Lab Fee.

PE 1113 Health and Safety (3-0-3)
Designed to motivate the student toward better health behavior. Emphasizes principles and contemporary issues involved in better individual and community health. Fall, Spring, Summer.

PE 1201 Team Sports (0-2-1)
Consolidates volleyball, softball, basketball, and other team sports. Lab Fee. Available upon sufficient student demand.

PE 1411 Jazz Dance (0-2-1)
This beginning jazz course stresses placement, technique, and rhythm through basic jazz movements and combination work. May be repeated once. Available upon sufficient student demand.

PE 1431 Introduction to Tai Chi (0-2-1)
This soothing practice treats the body and mind to a non-impact, stress-relieving workout. Tai Chi is a combination of Yoga and a moving form of medication. This exercise is said to help circulate energy within the body, reduce stress, improve balance and coordination, increase respiratory function, improve sleep patterns and reduce pain and injury.

PE 1501 Golf (0-2-1)
This course is designed to introduce the game of golf as a life time recreational activity. Students will learn the basics of the stance, the swings, scoring and gain edict. Fall, Spring.

PE 1503 School Health Problems (3-0-3)
Designed for health education coordinators and teachers dealing with personal and school health in grades K-12. Specific attention is directed toward the organization and curriculum of school health programs. Emphasis is placed on understanding the health needs of children, correlation of health and various school subjects, and evaluation of health programs. Prerequisite: PE 1113-Health and Safety. Available upon sufficient student demand.

PE 1511 Aerobics (0-2-1)
An introduction to aerobics, students will learn step and floor exercises. During the semester students should show progress by target heart rate and size of boxes. By the end of the course, students should improve their level of aerobic performance. Available upon sufficient student demand.

PE 1601 Bowling (0-2-1)
Introduces the basic skills and techniques involved in beginning bowling. Included will be the grip, the approach, the release, and the follow through; also, knowledge of the rules, equipment, and strategies pertaining to the game of bowling will be studied. May be repeat-

ed once. Fall, Spring.

PE 1603 Playground Games and Recreation Activities (3-0-3)
This course introduces the student to a variety of developmentally appropriate games and activities. The course targets individuals who will be group leaders in volunteer organizations, physical education instructors, classroom teachers, activities and recreation directors. Spring.

PE 1701 Beginning Tennis (0-2-1)
Introduces fundamentals of tennis. May be repeated once. Available upon sufficient student demand. Lab Fee.

PE 1801 Hiking (0-2-1)
Presents instruction in fundamentals of hiking. Student must be able to walk up inclines. If a student has a physical problem, advice of a physician should be sought. May be repeated once. Fall, Spring.

PE 2002 Theory of Coaching Baseball (2-0-2)
Introduces students to the various philosophies, fundamentals, and techniques involved in coaching the game of baseball. Spring.

PE 2102 Theory of Coaching Softball (2-0-2)
This course is designed to teach and develop the skills and knowledge needed to coach, teach, manage, and umpire the game of softball. This class will prepare students for coaching softball at the Jr. High, High School, College and Community Recreational League levels. Spring.

PE 2202 Theory of Coaching Basketball (2-0-2)
Analyzes offensive and defensive play and integrates various aspects of coaching, such as scouting, conditioning, etc. Fall.

PE 2203 Fundamentals of Recreation (3-0-3)
Emphasizes history, principles, relationship of recreation to physical education, professional literature, and vocational opportunities. Designed for recreation and physical education majors but open to any student. Fall.

PE 2222 Techniques of Athletic Training (2-0-2)
Designed for the athletic trainer or team manager. Considers care and treatment of injuries. Spring of even years.

PE 2303 Sports Officiating (3-0-3)
This course is an introduction to the rules and officiating techniques related to basketball, football, and baseball. Fall.

PE 2401 Scuba (0-2-1)
This course is designed to serve as an introduction to scuba diving. This class will include classroom work and laboratory (pool practice). All students must have instructor's permission and pass a basic swim test. Summer.

PE 2441 Advanced Open Water Diver (0-2-1)
This course is designed to be an introduction to advanced diving techniques. It includes a review of basic scuba skills, natural navigation, compass navigation, night diving, search and light salvage, and deep diving. Prerequisite: Certified open water diver.

PE 2701 Tennis II (0-2-1)
Continuation of Beginning Tennis. Offered upon sufficient student demand. May be repeated once. Lab Fee.

PHYSICS (Also see Engineering)

PHYS 1091-1093 Special Problems in Physical Science (1-3 Variable Credits)
Special studies in Physics, Chemistry, Earth Science, Astronomy, or Physical Science for Elementary Teachers. Individual programs are arranged with the instructor upon meeting Honors' Study Program requirements in current catalog. Fall/Spring/Summer with sufficient demand.

PHYS 1114 Physical Science (3-2-4)
Introduces the basic principles and concepts in the areas of physics, chemistry, earth science, and astronomy. Offered a minimum of once a year. Lab Fee.

PHYS 1123 Physics for the Health Sciences (3-0-3)
Provides an introductory course in Physics for students in the Health Sciences. A study of the basic principles and applications of physics to be used in health related professions. Available upon sufficient student demand.

PHYS 1124 Astronomy (3-2-4)
This course introduces the student to the concepts of the Solar System, Stars, Galaxies, Clusters, the Universe and Cosmology, as well as the physics, chemistry, and biology by which these operate. Offered a minimum of one a year. Lab Fee.

PHYS 1204 General Physics I (3-2-4)
Designed to present students with fundamental laws, principles, and problem solving in mechanics, wave motion, sound, kinetic theory, heat, and thermodynamics. Prerequisite: MATH 1133-Trigonometry taken previously or concurrently with this course. Available upon sufficient student demand. Lab Fee.

PHYS 2204 General Physics II (3-2-4)
Continuation of General Physics I. The study of geometrical and physical optics, electricity and magnetism, atomic and nuclear, and quantum theory. Prerequisite: PHYS 1204-General Physics I. Available upon sufficient student demand. Lab Fee.

PHYS 2223 Physical Science for the Elementary Teacher (3-0-3)
Introduces the prospective elementary teacher to a broad survey of the physical sciences. In this methods course the students are engaged in hands-on laboratory work and current teaching practices of curriculum development, instruction, and assessment. Spring.

POLITICAL SCIENCE

POLS 1113 American National Government (3-0-3)
Studies the historical and modern role of government in American life. Specific attention is given to constitutional development and the various mechanisms of contemporary American politics. Fall, Spring.

POLS 1123 American State and Local Government (3-0-3)
Principles and practices of state, county, and municipal government, their variety across America, and movements toward reform in larger metropolitan governments. Fall.

POLS 2091-2096 Special Study (1-6 Variable Credits)
Individualized study of special topics in political science. Prerequisite: Permission of the instructor.

POTTERY

PTRY 1103 Pottery I (3-3-3)
A program directed toward professional careers in pottery design. Instruction covers forming and shaping by mechanical means and by hand, building and firing kilns, understanding the nature of clay and glazes, and achieving control of all aspects and materials of pottery design. Fall, Spring.

PTRY 1113 Pottery II (3-3-3)
Further study and application of techniques learned in Pottery I. Fall, Spring.

PTRY 2003 Pottery III (3-3-3)
Continuation of Pottery II with emphasis on firing and glazing. Fall, Spring.

PTRY 2016 Special Problems in Pottery (6-0-6)
Independent study in specialized area determined by instructor and student.

PTRY 2113 Pottery IV (3-3-3)
Independent work under direction of the instructor. Prerequisite: Permission of the instructor. Fall, Spring.

PTRY 2121-2126 Kiln Building (1-6 Variable Credits)
Kiln building offers two intense five-week sessions in Studio Workshops. Individual student projects and research documentation required. The first five weeks, students will research every phase of kiln construction. The second five weeks, one of three types of kiln will be constructed: (1) Raku, (2) Updraft, and (3) Downdraft. Available upon sufficient student demand.

PRACTICAL NURSE PROGRAM

PNP 1131 Medical Terminology (1-0-1)
Introduces the student to terms used in nursing. Focus is placed on prefixes, suffixes, & abbreviations commonly used with terminology.

PNP 1212 Legal & Ethical Aspects (2-0-2)
Covers personal development, ethical, legal and social responsibilities as related to the role

of the practical nurse. This course will also incorporate communication skills & the concept of delegation for the practical nurse. Information also includes the various nursing organizations and local, state, and national health resources. Summer.

PNP 1225 Anatomy and Physiology (4-2-5)
Examines the human body and its systems as a foundation for understanding the principles of maintaining positive health as well as understanding deviations from the norm. Each unit in this course involves the study of a major system of the body and the interlocking dependency of one system upon another, with contributions of each system to the well-being of the body as a whole. Integrated campus labs are scheduled. Summer

PNP 1232 Mental Health Nursing (2-0-2)
This course includes an introduction to common conditions of mental illness, prevention of such conditions, and the care of the patient suffering from abnormal mental and emotional responses. (Mental hygiene aspects will be integrated throughout the course.) Summer and Fall

PNP 1308 Basic Concepts of Nursing (4-4-8)
American Heart Association & the National Safety Council Guidelines are followed during CPR & First Aid instruction. Basic Concepts of Nursing includes fundamental principles, skills, and attitudes needed to give nursing care. Emphasis is placed on skill, safety, comfort, & preventive measures for the spread of disease. A development for awareness in responsibility to communicate and document observations using appropriate medical terms are integrated throughout this course of study. Integrated campus lab scheduled for practice and competency demonstrations. Prerequisites: PNP 1131 Medical Terminology, PNP 1212 Legal & Ethical Aspects, PNP 1225 Anatomy and Physiology Concurrent: PNP 1366 for Day program. Concurrent: PNP 1232 Mental Health Nursing for Evening Program. Fall

PNP 1322 Nutrition (2-0-2)
Examines the principles of good nutrition for all age groups and principles of modification for therapeutic purposes. Nutritional concepts will be integrated throughout curriculum. This course will also cover special diets in relation to diseases and disorders of the various body systems. Prerequisites: PNP 1131 Medical Terminology, PNP 1212 Legal & Ethical Aspects, PNP 1225 Anatomy and Physiology Concurrent: PNP 1366 for Day Program. Concurrent: PNP 1351 Medical-Surgical Nursing I, PNP 1342 Pharmacology I, and PNP 1364 Clinical I for Evening Program. Fall and Spring

PNP 1331 Gerontological Nursing (1-0-1)
This course includes the normal aging process in relationship to changes in the body systems and common conditions and characteristics experienced by the older adult. This course also deals with the emotional responses, care facilities and financial status in relation to growing older. With conclusion of gerontological nursing the student will be ready to demonstrate knowledge obtained from the class room activities to the clinical setting. Prerequisites: PNP 1131 Medical Terminology, PNP 1212 Legal & Ethical Aspects, PNP 1232 Mental Health Nursing, PNP 1225 Anatomy and Physiology. Concurrent: PNP 1366 for the Day Program. Concurrent: PNP 1433 Medical Surgical Nursing II, part 1, PNP 1454 Clinical II for the Evening Program. Fall

PNP 1342 Pharmacology I (1-2-1)

This course is designed to give the student the fundamentals of pharmacology. Math concepts include the various systems of measurements used in nursing and conversion between systems, common abbreviations, calculation of drug dosages and specific drug formulas, and using information obtained from drug labels and from physician's orders. This course presents an introduction to pharmacology, drug names, standards, references, principles of drug action, and interactions. The nursing process and patient education in relation to pharmacology is presented. Medication administration includes safety, systems of administration and routes of administration, including intravenous administration. The course will be completed with classifications of medications so that the student will be prepared to begin Pharmacology II. Integrated campus lab is scheduled. Prerequisites: PNP 1131 Medical Terminology, PNP 1212 Legal & Ethical Aspects, PNP 1225 Anatomy and Physiology. Concurrent: PNP 1366 for the Day Program. Concurrent: PNP 1351 Medical Surgical Nursing I, PNP 1322 Nutrition, and PNP 1364 Clinical and Clinical Research for the Evening Program. Fall and Spring

PNP 1351 Medical Surgical Nursing I (1-0-1)
Explores end of life nursing, how to care for the patient and the family. Included, is the care of the patient with cancer. Concepts of this course will be continued in Medical Surgical Nursing II. Prerequisites: PNP 1131 Medical Terminology, PNP 1212 Legal & Ethical Aspects, PNP 1232 Mental Health Nursing, PNP 1225 Anatomy and Physiology. Concurrent: PNP 1366 for the Day Program. Concurrent: PNP 1322 Nutrition, PNP 1342 Pharmacology I, and PNP 1364 Clinical and Clinical Research for the Evening Program. Fall and Spring

PNP 1364 Clinical and Clinical Research I (0-13-4)
Begins the practice of appropriate patient care. Clinical areas will be chosen and supervision provided in cooperation with area health facilities. Rotation plans will provide time in each facet of health care available in local clinical facilities. Clinical Research may be required concerning patient care, medications, treatments and procedures. Clinical experiences include basic nursing principles and skills, and care of the adult patients with Medical and Surgical conditions. Prerequisites: PNP 1131 Medical Terminology, PNP 1212 Legal & Ethical Aspects, PNP 1225 Anatomy and Physiology, PNP 1308 Basic Concepts of Nursing, and PNP 1332 Mental Health Nursing. Concurrent: PNP 1322 Nutrition, PNP 1342 Pharmacology and PNP 1351 Medical-Surgical Nursing I. Spring

PNP 1366 Clinical and Clinical Research I (0-18-6) Begins the practice of appropriate patient care. Clinical areas will be chosen and supervision provided in cooperation with area health facilities. Rotation plans will provide time in each facet of health care available in local clinical facilities. Clinical Research may be required concerning patient care, medications, treatments and procedures. Clinical experiences include care of the geriatric patient, basic nursing principles and skills, and care of the adult patients with Medical and Surgical conditions. Prerequisites: PNP 1131 Medical Terminology, PNP 1212 Legal & Ethical Aspects, PNP 1232 Mental Health Nursing, PNP 1225 Anatomy and Physiology. Concurrent: PNP 1308 Basic Concepts of Nursing, PNP 1331 Gerontological Nursing and PNP 1351 Medical-Surgical Nursing I. Fall

PNP 1412 Maternity Nursing (2-0-2)
Includes the modern aspects of maternity nursing with an emphasis on normal obstetrics.

The components of maternity nursing are anatomy and physiology, communication skills, prenatal care, labor and delivery, postpartum, care of the newborn, and family planning. Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I and PNP 1366 Clinical I. Concurrent: PNP 1458 Clinical II. Spring

PNP 1413 Maternity Nursing (2-3-3)
Includes the modern aspects of maternity nursing with an emphasis on normal obstetrics. The components of maternity nursing are anatomy and physiology, communication skills, prenatal care, labor and delivery, postpartum, care of the newborn, and family planning. Clinical experiences involving the care of woman and infants are included in this course. Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1232 Mental Health Nursing, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I and PNP 1364 Clinical I. Summer

PNP 1422 Nursing of Children (2-0-2)
Includes principles of growth and development from infancy to adolescence. Content will also include behaviors of well and ill children. Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I and PNP 1366 Clinical I. Concurrent: PNP 1458 Clinical II. Spring

PNP 1423 Nursing of Children (2-3-3)
Includes principles of growth and development from infancy to adolescence. Content will also include behaviors of well and ill children. Clinical experiences in the care of well and sick children are included in this course. Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I and PNP 1364 Clinical I. Summer

PNP 1432 Pharmacology II (2-0-2)
This course will continue the course of Pharmacology I, and presents the theory of the purposes, properties, doses, actions and reactions commonly associated with specific drugs. The most commonly used drugs of each type are studied As the student comes in contact with new drugs, the relationship to those that have been studied should become clear. The drugs are presented as they affect body systems. This method makes it more convenient to integrate the material with Medical Surgical Nursing. Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1331 Gerontological Nursing, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I and PNP 1366 or PNP 1364 Clinical I. Concurrent: PNP 1458 Clinical II for Day Program. Concurrent: PNP 1464 Clinical II for the Evening Program

PNP 1433 Medical Surgical Nursing II - Part I (3-0-3)
Covers common conditions of illness. Includes nursing care of patients in acute, sub-acute or convalescent stages of illness of short and long term duration, nutrition and administration of drugs. Builds on concepts from Medical Surgical Nursing I Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I and PNP 1364 Clinical I. Concurrent : PNP 1454 Clinical II. Fall

PNP 1446 Medical Surgical Nursing II (6-0-6)

Covers common conditions of illness. Includes nursing care of patients in acute, sub-acute or convalescent stages of illness of short and long term duration, nutrition and administration of drugs. Builds on concepts from Medical Surgical Nursing I Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1331 Gerontological Nursing, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I and PNP 1366 Clinical I. Concurrent: PNP 1458 Clinical II. Spring

PNP 1454 Clinical and Clinical Research II (0-13-4)
This course is a continuation of clinical experience in various health care settings. Clinical rotations include specialty areas such as operating room, administration of medications, and nursing procedures. Clinical areas will be chosen and supervision provided in cooperation with area health facilities. Rotation plans will cover each facet of health care in the clinical facilities. Research is a requirement of this clinical experience. Includes clinical experience in care of the geriatric patient, and care of the adult patient with Medical Surgical and Mental Health problems. Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1232 Mental Health Nursing, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I, PNP 1364 Clinical I, PNP 1413 Maternity Nursing and PNP 1423 Nursing of Children. Concurrent: PNP 1433 Medical Surgical Nursing II, PNP 1331 Gerontological Nursing. Fall

PNP 1458 Clinical and Clinical Research II (0-24-8) This course is a continuation of clinical experience in various health care settings. Clinical rotations include specialty areas such as operating room, administration of medications, and nursing procedures. Clinical areas will be chosen and supervision provided in cooperation with area health facilities. Rotation plans will cover each facet of health care in the clinical facilities. Research is required before the clinical experience. Includes clinical experience in Maternity Nursing, . Nursing of Children, Medical Surgical Nursing and Mental Health Nursing. Prerequisites: PNP 1308 Basic Concepts of Nursing, PNP 1322 Nutrition, PNP 1331 Gerontological Nursing, PNP 1342 Pharmacology, and PNP 1351 Medical-Surgical Nursing I and PNP 1366 Clinical I. Concurrent: PNP 1412 Maternity Nursing PNP 1422 Nursing of Children, PNP 1446 Medical Surgical Nursing II. Spring

PNP 1464 Clinical and Clinical Research II (0-13-4) Care of patients in a variety of settings is included in this rotation, including administration of medications, and nursing procedures. Clinical areas will be chosen and supervision provided in cooperation with area health facilities. Rotation plans will cover each facet of health care in the clinical facilities. Research is a requirement of this clinical experience. Continues to build on clinical experiences in care of the adult patient with Medical Surgical problems. Prerequisites: PNP 1331 Gerontological Nursing, PNP 1433 Medical Surgical Nursing II, part 1 and PNP 1454 Clinical. Concurrent: PNP 1432 Pharmacology II, PNP 1443 Medical Surgical Nursing II, Part 2. Spring

PNP 1513 Medical Surgical Nursing III (3-0-3)
This course is a continuation of Medical Surgical Nursing concepts. Continues with care of the patient with medical and surgical problems and the required nursing care. Assessment, management, patient education, discharge teaching, drugs, and nutritional needs of these patients are covered. Prerequisites: PNP 1412 or PNP 1413 Maternity Nursing, PNP 1422 or PNP 1423 Nursing of Children, PNP 1446 Medical Surgical Nursing II (evening PN students must have PNP 1433 and 1443) , PNP 1458 Clinical II (evening PN students must

have PNP 1454 & 1464), PNP 1432 Pharmacology II, Concurrent: PNP 1522 Clinical III. Summer

PNP 1522 Clinical III (0-6-2)
Rotation covers the medical and surgical patient with physical and psychological needs. Clinical areas will be chosen and supervision provided in cooperation with area health facilities. Rotation plans will include physician's offices and the home health care setting. This course completes clinical experience related to Nursing of Adult patient with Medical and Surgical Conditions. Prerequisites: PNP 1412 Maternity Nursing, PNP 1422 Nursing of Children, PNP 1446 Medical Surgical Nursing II, PNP 1458 Clinical II, PNP 1432 Pharmacology II, Concurrent: PNP 1513 Medical-Surgical Nursing III. Summer

Graduation Requirement: Practical/Vocational Nursing
Review is a two-day review course for practical nursing students as well as for graduate practical nurses who are preparing to take the NCLEX-PN exam. This is a general review of all program content with the purpose of enhancing the individual student's ability to successfully prepare for the exam. Following the review, the student will take the PN CAT (Computerized Analysis Test).

PRE-COLLEGE LEVEL CLASSES

What Students Need to Know
High school students may not take these classes. After taking the placement test, a student may be asked to enroll in one or more Pre-College Level (PCL) classes. These classes provide the student with a refresher semester before he/she enrolls in college level classes. Students must earn a "C" to pass these classes in order to move into college level studies. Grades given in these classes will count in the Grade Point Average calculation. NPCC gives institutional credit for these classes, so they can be counted for financial aid or veteran's benefits purposes. However, these classes may not be used toward any college certificate or associate degree, not even as an elective.

Requirements for completing the PCL classes vary by certificate or degree plans. Though NPCC requires that students take their pre-college level classes quickly upon entry into the college, some exceptions exist. Counselors will assist students with these decisions during registration.

PCLC 0012 College Study Skills (2-0-2)
This course is required for all students who enroll in two or more PCL classes through the placement testing. Study skills are specific strategies and techniques that improve a student's likelihood of success in college. This class teaches notetaking, time management, improving memory and concentration, test taking skills, and goal setting for college and career. This class helps students learn how to learn. This course includes a required computer component. Students enrolled in PCLC 0013 may be required to attend Freshman Orientation class. Fall, Spring, Summer.

PCLC 0023 Reading Improvement I (3-0-3)
Deals with reading comprehension, vocabulary, and rate. This course is highly individualized and structured around the individual weaknesses of the student. Offered in a laboratory set-

ting. A grade of "C" or better AND an 11.0 comprehension score on the exit test are required to exit this program. Prerequisite: Compliance with State/College Placement Standards. Some students may be required to take a reading tutorial prior to enrolling in Reading Improvement I. Fall, Spring, Summer.

PCLC 0033 Reading Improvement II (3-0-3)
This course is required for all students who do not earn an 11.0 comprehension score on the exit exam for Reading Improvement I (PCLC 0023), even if they achieved a grade of "C" or better for the introductory course. Reading Improvement II is a continuation of Reading Improvement I. Prerequisite: Reading Improvement I. Spring. Available in summer upon sufficient demand.

PCLC 0053 English Writing (3-0-3)
A continuation and review of topics studied in English Writing I in addition to the study of writing strategies such as sentence combining through coordination, subordination, and parallel structure. Basic essay format and various methods of essay development are studied, in preparation for English Composition I. Completion of an exit exam may determine if a student moves on to Composition I. Prerequisite: Placement test. Fall, Spring, Summer.

PCLM 0053 Intensive Basic Math (3-2-3)
This course is for students who have presented placement scores indicating a need for special attention to math preparation for college level math classes. The class will review the same topics as PCLM 0063 (see below) in a more flexible time frame and instructional method. This class will be computer-based and instructor-led. An exit grade of "C" or better for the course accompanied by successful completion9on of an exit exam will qualify a student for Beginning Algebra. Prerequisite: Appropriate placement test scores. Fall, Spring, Summer.

PCLM 0064 Basic Math (4-0-4)
This course is for students who have had no high school algebra and are preparing for Beginning Algebra. The class will review basic arithmetic skills as well as prepare for entry into algebra. Topics usually include: whole numbers, fractions, decimals, percent, ratio and proportion, signed numbers, order of operations, and a brief introduction to algebra. Completion of an exit exam may determine if a student moves on to Beginning Algebra. A final grade of "C" or better and successful completion of the exit exam are required to progress to Beginning Algebra (PCLM 0074). Prerequisite: Appropriate placement test scores. Some students may be required to take an intensive Basic Math class. Fall, Spring, Summer.

PCLM 0074 Beginning Algebra (4-0-4)
This course is for students who have had no high school algebra and are preparing for Intermediate Algebra. The class will review the foundations of algebra and prepare the participant for entry into the intermediate class. Topics usually include: signed numbers, exponents, polynomials, simple linear equations and inequalities, basic factoring, rational expressions, ratio and proportion, quadratic equations by factoring, and the coordinate plane. Completion of an exit exam may determine if a student moves on to Intermediate Algebra. A final grace of "C" or better and successful completion of the exit exam are required for progress to Intermediate Algebra (MATH 1003). Prerequisite: Appropriate placement test scores or successful completion of Basic Math (PCLM 0064) with a "C" or better. Fall,

Spring, Summer.

PSYCHOLOGY

PSYC 1103 General Psychology (3-0-3)
Focus on the scientific study of behavior and its development as a distinct field of study. A survey course which considers the brain, states of consciousness, motivation, emotion, stress, learning, intelligence, personality, abnormal behavior, therapy, and social psychology. Fall, Spring.

PSYC 1123 Applied Psychology (3-0-3)
Study of the application of psychological principles and methods to practical problems of human relationships. Special attention is paid to attitudes, opinions, interpersonal relationships and practical matters in industrial and non-industrial atmospheres. Prerequisite: PSYC 1103-General Psychology. Spring.

PSYC 1153 Human Sexuality (3-0-3)
Exploration of the physical, social, emotional, and political parameters of human sexuality, family planning, love and intimacy, sex and ethics, sex and society, and sex and humanism. Prerequisite: PSYCH 1103-General Psychology. Fall.

PSYC 1163 Child Psychology (3-0-3)
Psychological factors influencing development from the pre-natal period to puberty. Emphasizes interaction of heredity and environmental influences on personality, perception, learning, motivation, cognition and socialization.

PSYC 1173 Psychology of Parenting (3-0-3)
A course dealing with parenting strategies from birth through adolescence, based on sound psychological principles.

PSYC 2013 Developmental Psychology (3-0-3)
Genetic, maturational, and environmental factors are integrated in the study of behavior from infancy through adulthood. Prerequisite: PSYC 1103-General Psychology. Spring.

PSYC 2023 Child Growth & Development (3-0-3)
This course is the study of environmental and hereditary effects on the cognitive, affective, psychomotor and sociolinguistic development of typically and atypically developing children from conception to middle childhood of diverse cultural backgrounds within and outside the United States. These students will be introduced to ways to observe and evaluate children's development and recognize possible delays in development. Practical application of theory is provided through a variety of hands-on experiences and observations. Fall, Spring or upon sufficient student demand.

PSYC 2133 Mental Health (3-0-3)
Study of psychological factors relating to personal adjustment and mental health with emphasis on disorders and the well integrated personality. Opportunity for self examination. Fall.

PSYC 2163 Abnormal Psychology (3-0-3)

Designed to survey the principle forms of abnormal behavior. Causes, symptoms, classification, treatment, and prevention will be addressed. Prerequisite: PSYC 1103-General Psychology. Spring.

PSYC 2183 Readings in Psychology (3-0-3)
Designed to introduce the student to concepts of humanistic psychology via readings and structured experiences with their own individuality. Fall.

PSYC 2291-2296 Special Study (1-6 Variable Credits)
Special courses or topics of study are occasionally offered on demand. Students may plan individual projects and research in consultation with instructor. Prerequisite: Permission of the instructor. Available upon student eligibility.

RADIOGRAPHY

RAD 1302 Introduction to Radiography (1-2-2)
Introduction to the history of radiography, department and hospital organization, ethics and medico-legal considerations, the role of the technologist on the medical team. Discusses the professional organizations of Radiologic Technology and certification, as well as basic radiation protection. Prerequisite: Departmental approval. Fall.

RAD 1403 Radiographic Procedures I (2-2-3)
Instructs in positioning nomenclature, positioning of the chest, abdomen, digestive system, upper extremity, lower extremity, hip, pelvis, and C, T, L, S & C spines. Includes routine positioning. Lecture, skills lab, and demonstration. Prerequisite: Departmental approval. Fall.

RAD 1502 Clinical Education I (2 credits)
Observation and assistance in the clinical setting. Application of theory commensurate with level attained in didactics. Prerequisite: Departmental approval. Fall. Lab Fee.

RAD 1512 Clinical Education II (2 credits)
Continuation of RAD 1502-Clinical Education I. Prerequisite: RAD 1302- Introduction to Radiography, ALH 1302-Introduction to Health Science, RAD 1403- Radiographic Procedures I, RAD 1502-Clinical Education I, Spring. Lab Fee.

RAD 1703 Radiographic Procedures II (2-2-3)
Positioning of the skull, facial bones, mandible, sinuses, orbits, optic foramina, ribs, contrast studies, and portable examinations. Lecture, skills lab, and demonstration. Prerequisite: RAD 1302-Introduction to Radiography, ALH 1302-Introduction to Health Science, RAD 1403-Radiographic Procedures I, RAD 1502-Clinical Education I. Spring.

RAD 1802 Radiographic Exposure (1-2-2)
This course is designed to give students a sound basis for formulating exposure techniques needed to obtain the best technically accurate radiographs for patient diagnosis. Prerequisite: ALH 1203, RAD 1502, RAD 1302, ALH 1302, RAD 1403.

RAD 1803 Radiographic Procedures III (2-2-3)

This course provides instruction in the radiographic positioning of structures and organs of the human body, and is a continuation of Radiographic Procedures II. Positioning for skull, facial bones, mandible, sinuses, orbits, optic foramina, trauma variations, and portable examinations are covered. The course shall provide precise and detailed information on the various positions and will be supplemented with instruction and application in the skills lab and clinical site. The skills lab will be held during the class period.

RAD 1902 Radiation Protection & Biology (1-2-2)
Radiation protection; basic interactions of radiation and matter; quantities and units; biological effects of ionizing radiation; patient, public, and personnel protection are discussed. Methods of detection and protection are demonstrated. Prerequisites: RAD 1302-Introduction to Radiography, ALH 1202-Introduction to Health Science, RAD 1403-Radiographic Procedures I, RAD 1502-Clinical Education I. Spring.

RAD 1903 Clinical Education III (3 credits)
Application of theory commensurate with level attained in didactics. Refinement of skills attained in RAD 1502 and 2503. Prerequisites: RAD 1703-Radiographic Procedures II, RAD 1802-Radiographic Exposure, RAD 1902-Radiographic Protection and Biology, RAD 2502-Clinical Education II. Summer. Lab Fee.

RAD 2291-2294 Independent Study in Radiography
Designed for those students who have between one and four competencies to complete the clinical portion of the program. Clinical laboratory experiences in selected areas of radiography needed by the student for completion of the clinical phase of radiography are emphasized. Permission of the Radiography Program Director is necessary for this course.

R**AD 2303 Radiation Physics (3-0-3**)
This course is a study of basic electricity to include magnetism, magnetic induction, and transformers. Student is introduced to interactions of x-rays with matter, basic x-ray circuits, methods of rectification, construction of x-ray tubes, and methods of radiation detection and measurement. Preventive maintenance to x-ray machines is included. Prerequisite: RAD 1908.

RAD 2503 Advanced Radiographic Procedures (3-0-3)
A study of the special procedures, their contrast media, and the special equipment used therein. Prerequisite: RAD 1908-Clinical Education III. Fall.

RAD 2603 Clinical Education IV (3 credits)
Continuation of RAD 1908-Clinical Education III. Prerequisite: RAD 1908-Clinical Education III. Fall. Lab Fee.

RAD 2703 Clinical Education V (3 credits)
Continuation of RAD 2603-Clinical Education IV. Prerequisite: RAD 2603-Clinical Education IV, RAD 2303-Radiation Physics, RAD 2503-Advanced Radiographic Procedures. Corequisite: MATH 1123-College Algebra, CIS 1013-Information Systems I. Spring. Lab Fee.

RAD 2803 Radiographic Pathology (3-0-3)
General overview of diseases: definition, congenital, trauma, bacterial and viral, disorders of

the bodily systems, degenerative, and neoplastic. Lectures by staff with review of appropriate radiographs. Prerequisite: RAD 2603-Clinical Education IV, RAD 2303-Radiation Physics, RAD 2503-Advanced Radiographic Procedures. Corequisite: MATH 1123-College Algebra, CIS 1013-Information Systems I. Spring.

RAD 2901 Clinical Education VI (1 credit)
Continuation of RAD 2703-Clinical Education V. Prerequisite: RAD 2703- Clinical Education V, RAD 2803-Radiographic Pathology, RAD 2903-Image Quality and Processing. Summer. Lab Fee.

RAD 2903 Image Quality and Processing (3-0-3)
This course will discuss the various aspects of film, screens, cassettes, and processing; their relationships and their influence of radiographic imaging. The concepts and mechanics of quality assurance are covered, as well as evaluation of the quality of radiographs. Prerequisite: RAD 2303, RAD 2503, RAD 2603.

RAD 2913 Radiography Seminar (3-0-3)
this course provides the student with a capstone of course materials presented during the two years of the program. The course will better prepare the student for the American Registry of Radiologic Technologists' examination, which the student may take following completion of the program.

READING

READ 1113 Speed Reading (3-0-3)
This course is designed for students who want to increase their reading rate, develop rate flexibility, acquire a more flexible vocabulary, and increase their powers of comprehension for higher level reading material. Prerequisite: Pre-test. Spring, Summer.

REAL ESTATE

(Business Section of Course Descriptions)

RESIDENTIAL CARPENTRY

RCC 1403 Cabinet Making (3-0-3)
This course uses hands-on projects to include instruction in cabinetry framing, door and drawer construction, and finish. This class also includes countertop installation. Fall, Spring.

RCC 1103 Blueprint Reading (3-0-3)
This course includes instruction in the basic symbols of blueprints, in the various types of blueprints (foundation plan, plot plan, floor plan, elevation plans, roof plans), and in house placement on a lot. Also included is hands-on practice in activities involved in working with blueprints, including preparation of materials list for residential construction. Fall.

RCC 1503 Exterior (3-6-5)
This course includes instruction in exterior finish carpentry. It includes roofing materials, exterior trim, and the selection and installation of materials. It includes practical application

through actual residential construction projects. Spring.

RCC 1305 Floor & Wall (3-6-5)
This course includes instruction in layout principles of wall framing, flooring detail, ceiling joists, construction scaffolding, and methods for framing an entire wall before erection. Construction projects will include framing sills, floor joists, blocking and bridging, rough stairs and stairwells, wall layout, wall bracing, wall openings, ceiling joists, and scaffolding. Fall.

RCC 1204 Pre-Construction (3-6-5)
This course includes instruction in construction principles, tools and their proper use, occupational terminology, and shop and site safety. Pre-construction forming for concrete walls, pillars, floors, steps, foundations, driveways, and patios will be practiced. Also included is the use of the transit, instructions in layout principles, characteristics of concrete and techniques of mixing and placing concrete. Fall.

RCC 1203 Interior (3-6-5)
This course includes instruction in the finish work of carpentry. It includes practical application through installation of baseboards, molding, door and window trimmings; and finishing staircases, door jambs and doors. Spring.

RCC 1404 Roofing (3-6-5)
This course includes instruction in the practical application of residential roof construction. It includes roof coverings, use of the framing square, rafter and truss types, and basic estimation. Spring.

SOCIOLOGY

SOC 1103 Introduction to Sociology (3-0-3)
This course is designed to introduce students to various sociological issues and theory. Sociology is the study of society. Societal issues include the following: family, medicine, deviance, education, culture, inequality, and others. The course will investigate sociological forces from a scientific approach. Research methods are vital to understanding social behavior. Fall, Spring.

SOC 1403 Women in America: Problems & Potentials (3-0-3)
Study of the place of women in society, emphasizing personal growth, work, marriage, and family. Course provides a historical review and values clarification strategies to assist students in making personal choices. Available upon sufficient student demand.

SOC 1603 Aging in America (3-0-3)
A study of the physical, mental, social, emotional, and spiritual adjustments which accompany aging in America. Fall.

SOC 2203 Social Problems (3-0-3)
This course is designed to introduce students to global social problems. Various social problems will be defined, explained, and described in reference to the situation. Some social problems will be Macro (unemployment, poverty, crime, etc.) and other problems will be

Micro (drug abuse, sexual behavior, well-being). Topics studied are based on empirical research. Fall.

SOC 2213 Marriage and the Family (3-0-3)
Focuses on global family issues. Provides an introspective view and empirical research of the family structure, family problems, and family crisis. The course places emphasis on how the legal system, government, and business community have struggled to make decisions about who can be considered part of the family. Spring.

SOC 2291-2296 Special Study (1-6 Variable Credits)
Individual study of various areas in sociology. Course content to be worked out by the student with the instructor's guidance. May be repeated for up to six hours total credit. Prerequisite: Permission of the instructor. Available upon sufficient student demand.

SPANISH

Students who have taken a foreign language course in high school may receive college credit. If a student enrolls for the first language course at National Park Community College at a level beyond the beginning classes, the maximum of six hours' credit may be earned for beginning classes bypassed. When the student finishes the course with a grade of "C" or better, the college will award college credit for the courses bypassed.

SPAN 1103 Beginning Spanish I (3-0-3)
Beginning Spanish I is an introductory course for students with little or no previous knowledge of the
language. this course is designed to develop the four basic language skills in Spanish--listening, speaking, reading, and writing. Emphasis is placed on basic vocabulary, grammatical structures, and cultural aspects of the language. Fall, Spring, Summer.

SPAN 1113 Beginning Spanish II (3-0-3)
Beginning Spanish II is a continuation of Beginning Spanish I. This is a course designed to continue the development of the four basic language skills in Spanish--listening, speaking, reading, and writing. Emphasis is placed on basic to advanced vocabulary, grammatical structures, and cultural aspects of the language. Prerequisite: SPAN 1103-Beginning Spanish I or equivalent. Fall, Spring, Summer.

SPAN 2113 Intermediate Spanish I (3-0-3)
Intermediate Spanish I is an intermediate language course designed to expand student's proficiency in the four language skills in Spanish--listening, speaking, reading, and writing. Emphasis will be placed on reading, writing, and discussing in Spanish along with expanding cultural knowledge. The course will also include the review and perfection of advanced grammatical structures. Prerequisite: SPAN 1113-Beginning Spanish II or equivalent. Fall, Spring, Summer.

SPAN 2123 Intermediate Spanish II (3-0-3)
Intermediate Spanish II is a continuation of Intermediate Spanish I and is designed to expand student's proficiency in the four language skills in Spanish--listening, speaking, reading, and writing. Emphasis will be placed on reading, writing, and discussing in Spanish

along with expanding cultural knowledge. The course will continue the review and perfection of advanced grammatical structures. Prerequisite: SPAN 2113-Intermediate Spanish I or equivalent. Spring, Summer and upon sufficient student demand.

SPEECH

SPCH 1103 Fundamentals of Public Speaking (3-0-3)
Public speaking course designed to introduce the student to the communicative act and provide experience in composing and delivering different types of speeches. Fall, Spring, Summer.

SPCH 1123 Oral Interpretation (3-0-3)
Principles and techniques involved in the analysis and oral reading of basic literature forms: poetry and verse, prose and drama. Available upon sufficient student demand.

SPCH 2003 Persuasive Speaking (3-0-3)
Designed to acquaint the student with persuasive and manipulative techniques used in communication strategies, persuading groups of people to espouse one cause or another, or to take a particular course of action. Understanding of the persuasive process and how best to improve society through peaceful means are course objectives, as the student gains experience in composing, delivering, recognizing, and analyzing persuasive techniques. Prerequisite: SPCH 1103-Fundamentals of Public Speaking. Spring.

SUPERVISORY MANAGEMENT

SUPM 1103 Management/Budgetary Accounting (3-0-3)
This course presents the accountant's approach to measuring and reporting on business activity. Emphasis is placed on analyzing and evaluating business performance from a management perspective. The student evaluates business performance in relation to a budget, including supervisors' role in the budgetary process. It presents the fundamental knowledge of payroll procedures, recordkeeping, laws, and ethical business processes. Spring.

SUPM 1123 Introduction to Supervision (3-0-3)
Designed to give first-line supervisors and students an overview of the field of industrial supervision. Topics include techniques and procedures of general supervision, duties and responsibilities of the foreman, and employer/employee relationships. Attention is given to quality control, accounting, safety, and industrial engineering. Spring

SUPM 1183 Effective Communication (3-0-3)
An intensive study of the planning, leadership, and practice of business-type meetings; planning and practice in the skills of oral communications such as the organization and delivery of short speeches; group discussions; and listening. Emphasis is on the practical aspects of communicating with all levels of personnel and business acquaintances. Fall.

SUPM 2003 Industrial Psychology/Human Awareness (3-0-3)
Designed to assist the student in understanding human motivation, communication, and behavior management. Study topics include normal/abnormal personality development, motivation, management styles, communication skills, group processes, influencing others,

improving interpersonal relationships, and goal setting. Available upon sufficient student demand.

SUPM 2133 Business Labor Law (3-0-3)
Designed to familiarize the student with the structure and operation of the National Labor Relations Act and its administering agency, the National Labor Relations Board, and their impact on employer/employee relations. Available upon sufficient student demand.

TECHNICAL REQUIREMENTS

TECH 1101 Computer Technology (1-0-1)
Fundamentals of computer use applied to the technical industry. Students will review keyboarding, computer hardware and software, word processing, databases, Internet, and e-mail. Course meets the first five weeks of the semester. Fall & Spring.

TECH 1102 Technical Communications (2-0-2)
Designed to develop speaking, reading, writing and human relations skills required in the employment setting. Students will acquire skills in interviewing, public speaking, writing, and applications useful in finding, applying for and getting a job. Course meets the last ten weeks of the semester. Fall & Spring.

TECH 2291-2296 Special Study in Applied Technology (1 -6 variable credits)
Special study is a course that covers various areas in applied technology. Course content will be determined by interest and demand. Credit hours will be determined by the course that is offered and will vary from one credit up to six credits. Course may be repeated for additional credit if subject content changes. Prerequisite: Permission of the technical instructor and the Division Chair.

TECM 1003 Technical Math (3-0-3)
This course covers ratio and proportion, measurement, estimation, interpretation of graphs, basic algebra, formula rearrangement, basic geometry, basic trigonometry, and their application to technical problems.

THEATRE ARTS

TART 1153 Introduction to Theatre (3-0-3)
Survey of the theatre, including kinds of plays, function of actor, director, and designer. Available upon sufficient student demand.

WELDING TECHNOLOGY

WLD 1013 Blueprint Reading (3-0-3)
Basic blueprint reading teaches the student how to understand welding symbols, various blueprint lines, tolerances, dimensioning and strength of material formulas. This course will prepare welders for the rigorous demands placed on them in industry when assembling welded objects large and small. Fall.

WLD 1023 Introduction to Welding (3-0-3)
This course teaches the theory and application of basic oxyacetylene welding and cutting and Shielded Metal Arc Welding (SMAW). Includes safety, setting of equipment, cutting of metals, selection of electrodes, running of welding beads in the flat, vertical, horizontal, and overhead positions. Fall & Spring.

WLD 1034 Position Welding (3-6-5)
A continuation of the study of oxyacetylene cutting, plasma cutting, and the welding of metals in the flat, horizontal, vertical, and overhead positions. Emphasis is on pursuing a welding certification in SMAW as it applies to the D1.1 Structural Welding Code. Practical applications lab reinforces all theory. Fall.

WLD 1043 Metallurgy (3-0-3)
This is an introduction to the technology of metals including the processes of producing them, refining them, working them mechanically, external heat treatments, and adapting them to use in industry. Includes thermal and mechanical processing of metals, particularly through the process of welding in order to meet severely stressed industrial applications. Covers various types of heat treatment such as annealing, hardening, tempering, and the use of various alloys (ferrous and nonferrous) in industry. Fall.

WLD 1254 Inert Gas Welding (3-6-5)
Emphasis of this class is placed on the understanding of inert gas welding as it applies to Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW or MIG), Flux Cored Arc Welding (FCAW), and other processes which use a shielding gas of inert, reactive, or a combination of gases to produce a suitable welding atmosphere. All theory is reinforced through a practical applications lab. Safety is emphasized. Co requisite: WLD 1023 Introduction to Welding. Spring.

WLD 1264 Pipe Welding/Metal Fabrication (3-6-5)
This class is designed to teach the skills used in the welding of transmission piping systems and pressure vessels. Class information also covers methods and calculations for pipe and structural steel fabrication, layout, fit-up, and basic machine shop operations. Emphasis is placed on the need to meet the standards of the API 1104 and ASME codes. Prerequisites: WLD 1023 Introduction to Welding and WLD 1013 Welding and Blueprint Reading. Co requisite: WLD 1254 Inert Gas Welding. Spring.

WLD 1274 Welding Metal Alloys (3-6-5)
A continuation of GMAW, GTAW, and FCAW techniques as they apply to nonferrous metals and special alloys. A Practical applications lab will reinforce all theory. Co requisites: WLD 1023 Introduction to Welding and WLD 1254 Inert Gas Welding. Spring.