HOME ECONOMICS (HEC)

HEC 140 PRINCIPLES OF NUTRITION 3 Hrs.
PREREQUISITE: None.
This course introduces students to the principles of nutrition and the role and functions of nutrients in man's food. Basic information concerning food selection and nutrition as a factor in health, ecology, and economy is included. Implications of nutrition for children may be stressed.

HUMANITIES (HUM)

HUM 298 DIRECTED STUDIES IN HUMANITIES 3 Hrs.
PREREQUISITE: None.
This course provides an opportunity for the student to study selected topics in the area of the humanities under the supervision of a qualified instructor. The specific topics will be determined by the interests of the students and faculty and the course may be repeated for credit. This course is open to all students.

INDUSTRIAL ELECTRONICS (ILT)

ILT 100 APPLIED ELECTRONIC COMPUTATIONS 3 Hrs.
PREREQUISITE: None.
This course is an applied mathematics and algebra course for students in electronics or similar programs. Topics include decimals, fractions, negative numbers, powers and roots, the metric systems, logarithms, applied trigonometry, and algebra. Upon completion, the student will be able to perform applied mathematics calculations needed in electronics.

ILT 106 CONCEPTS OF DIRECT CURRENT 5 Hrs.
PREREQUISITE: None
This course provides a study of basic concepts and application of direct current (DC). Specific topics include but are not limited to: an introduction to electrical theory, units and electrical measurement, DC electrical components, and constructing various types of DC circuits. Students gain hands-on experience through various laboratory problems. Emphasis is placed on the use of scientific calculators and the operation of common test equipment used to analyze and troubleshoot DC circuits and to prove the theories taught during classroom instruction.

ILT 107 CONCEPTS OF ALTERNATING CURRENT 5 Hrs.
PREREQUISITE: None
This course provides a study of basic concepts and application of alternating current (AC). Specific topics include but are not limited to: an introduction to AC electrical theory, AC electrical measurements, and constructing and measuring various types of AC circuits. Students gain hands-on experience through various laboratory problems. Emphasis is placed on the use of scientific calculators and the operation of various test equipment used to analyze and troubleshoot AC circuits.

ILT 111 CONCEPTS OF SOLID STATE ELECTRONICS 5 Hrs.
PREREQUISITE: ILT 107
This course is an introduction to semiconductor fundamentals and applications to the electronic devices. Course covers the basic operations and applications to include rectifier circuits, transistors, and thyristors. Coverage is given to safety, use, and care with hazardous materials and personal as well as material and environmental considerations. Upon completion, students will be able to construct and test for proper operation of various types of solid state devices.

ILT 112 CONCEPTS OF DIGITAL ELECTRONICS 5 Hrs.
PREREQUISITE: ILT 113
This course provides instruction in digital electronics. Topics include: number systems and codes, a review of Boolean algebra, logic elements, digital circuits, programmable logic circuits, and memory and computing circuits. This course provides laboratory exercises to analyze, construct, test and troubleshoot digital circuits.

ILT 113 CONCEPTS OF ELECTRONIC CIRCUITS 3 Hrs.
PREREQUISITE: ILT 107
This course covers the commonly utilized circuits found in all areas of electronics. These include various rectifiers, filters, voltage regulating circuits, operational amplifier circuits, ICs, and oscillator circuits. Upon completion, students will be able to construct and test various types of electronic circuits.

ILT 115 ADVANCED INDUSTRIAL CONTROLS 3 Hrs.
PREREQUISITE: ILT 107
COREQUISITE: ILT 116
This course emphasizes the fundamentals and applications of solid state motor starters. Topics include DC drives, AC variable frequency drives, thyristers, sequences circuits and closed loop control including PID process control. Upon completion, students should be able to apply principles of solid state motor starters.

ILT 116 ADVANCED INDUSTRIAL CONTROLS LAB 2 Hrs.
PREREQUISITE: ILT 107
COREQUISITE: ILT 115
This lab emphasis DC drives, AC variable frequency drives, thyristers, sequences circuits and closed loop control including PID process control. Upon completion, students should be able to apply principles of solid state motor starters.

ILT 121 SEMICONDUCTOR ELECTRONIC CIRCUITS II 3 Hrs.
PREREQUISITE: None.
This course provides a study of electronic circuits. Topics are designed to explain circuits using solid state devices in a variety of circuit configurations, biasing and classes of operations of amplifiers. Upon completion, the student will be able to design bipolar and unipolar transistors, thyristors, optoelectronics devices, and integrated circuits.

ILT 122 SEMICONDUCTOR ELECTRONIC CIRCUITS II LAB 2 Hrs.
PREREQUISITE: None.
This lab focuses on solid state devices in a variety of circuit configurations, biasing and classes of operations of amplifiers. Upon completion, the student will be able to design bipolar and unipolar transistors, thyristors, optoelectronics devices, and integrated circuits.

ILT 125 DIGITAL COMMUNICATIONS 3 Hrs.
PREREQUISITE: None.
This course provides the electronics technician with sufficient background in data and digital communications to enter this rapidly expanding field. It includes telephone systems, error detection and correction, data link protocols, modems, multiple-channel systems, network architecture, fiber-optic communications, and data communications applications. Upon completion, the student should be able to describe the operation of various digital communications circuits and calculate all parameters.
ILT 126  DIGITAL COMMUNICATIONS LAB  2 Hrs.
PREREQUISITE: None.
This course provides experimentation to verify theories of digital communication. Upon completion of this course and Digital Communications, the student should be able to construct various digital communications circuits and make necessary measurements and adjustments.

ILT 127  MICROCOMPUTER FUNDAMENTALS  3 Hrs.
PREREQUISITE: None.
This course provides the student with knowledge in installation of, and familiarization with, the basic assemblies in microcomputer systems. Topics include DOS, hard drives and floppy drives, dip switches, and RAM. Upon completion, the student should be able to use DOS, format hard drives, floppy drives, configure circuit boards functions, and install RAM.

ILT 128  MICROCOMPUTER FUNDAMENTALS LAB  2 Hrs.
PREREQUISITE: None.
This lab focuses on the installation of basic assemblies in microcomputer systems. Topics include DOS, hard drives and floppy drives, dip switches, and RAM. Upon completion, the student should be able to use DOS, format hard drives, floppy drives, configure circuit boards functions and install RAM.

ILT 129  PERSONAL COMPUTER (PC) HARDWARE  3 Hrs.
PREREQUISITE: None.
This course covers PC Hardware terminology, component purpose, configuration, pricing and selecting components and systems for assembling, repairing, and upgrading IBM compatible computers. Upon completion, the student should be able to describe the basic systems of a PC and be able to perform disassembly and assembly of same.

ILT 130  PERSONAL COMPUTER SOFTWARE INSTALLATION AND MAINTENANCE  3 Hrs.
PREREQUISITE: None.
This course will cover installation and maintenance for operating systems and application software on personal computers. Upon completion, the student should be able to install and maintain common software packages found on personal computers.

ILT 131  PERSONAL COMPUTER (PC) PROBLEM DETERMINATION  3 Hrs.
PREREQUISITE: None.
This course will cover various hardware and software tools for diagnosing failures of personal compatible computers. Upon completion, the student should be able to diagnose and prescribe the repair steps for a faulty personal computer.

ILT 135  LOCAL AREA NETWORKS (LANS)  3 Hrs.
PREREQUISITE: None.
This course provides the student with knowledge of planning, installation, maintenance, and administration of local area networks. Upon completion, the student should be able to install and setup a basic local area network.

ILT 136  MICROCOMPUTER INTERFACING  3 Hrs.
PREREQUISITE: None.
This course focuses on microcomputer interfacing. Topics include memory circuits including RAM, ROM, EPROM, and EEPROM. Upon completion, the student should be able to perform programming operation, and handshaking techniques, and perform interfacing synchronous and asynchronous data communications.

ILT 137  MICROCOMPUTER INTERFACING LAB  2 Hrs.
PREREQUISITE: None.
This lab emphasizes memory circuits including RAM, ROM, EPROM, EEPROM. Upon completion, the student should be able to perform programming operations, and handshaking techniques and perform interfacing synchronous and asynchronous data communications.

ILT 148  AUTOMATIC CONTROLS SYSTEMS  3 Hrs.
PREREQUISITE: ILT 107
COREQUISITE: ILT 149
This course emphasizes automatic control systems and sub-systems. Topics include robotics, programmable hydraulics, pneumatic, microprocessors, variable-speed drives, transducers, and related control circuitry with emphasis on troubleshooting the total system. Upon completion, the student should be able to apply principles of automatic control systems.

ILT 149  AUTOMATIC CONTROLS SYSTEMS LAB  2 Hrs.
PREREQUISITE: ILT 107
COREQUISITE: ILT 148
This lab emphasizes robotics, programmable hydraulics/pneumatic, microprocessors, variable-speed drives, transducers, and related control circuitry with emphasis on troubleshooting the total system. Upon completion, the student should be able to apply principles of automatic control systems.

ILT 164  CIRCUIT FABRICATION I  1 Hr.
PREREQUISITE: None
This course provides instruction in fabrication of functional circuits and is an introduction to device construction and fabrication. Utilizing discrete components, students will fabricate functional circuits. Topics include soldering, cable construction, coaxial cable connection and termination, component mounting cases, and chassis, printed circuit board design, layout, fabrication, and repair, as well as soldering techniques, care of tools, wire splicing, wire wrapping, connector maintenance, and related shop safety. Upon completion of this course, students should be able to perform basic circuit and project construction.

ILT 166  MOTORS AND TRANSFORMERS I  3 Hrs.
PREREQUISITE: ILT 107
This course covers motor operation, motor types, motor components, motor feeder and branch circuits. Topics include motor protection and motor control circuits. The lab enables to test motors, transformer types, and testing for input and output voltage. Upon completion, students should be able to test motors, transformer types, and testing for input and output voltage.

ILT 167  AC/DC MACHINERY AND CONTROLS I  3 Hrs.
PREREQUISITE: ILT 107
This course provides the student with knowledge in AC/DC machinery and controls. Topics include the characteristics and operating principles of the different types of AC/DC generators and motors, manual and automatic starters and controllers. The lab enables students to test, troubleshoot and repair AC/DC Machinery and controls. Upon completion, the student will be able to apply practical skills in AC/DC machinery.

ILT 169  HYDRAULICS/PNEUMATICS  3 Hrs.
PREREQUISITE: None
This course provides an introduction to hydraulics/pneumatics. Topics include hydraulic pumps, pneumatic compressors work and system components such as valves, filters, regulators, actuators, accumulators, and lubricators. The lab enables students to test,
troubleshoot and repair hydraulic pumps, pneumatic compressors, work and system components such as valves, filters, regulators, actuators, accumulators, and lubricators. Upon completion, students will be able to apply principles of hydraulic/pneumatics.

ILT 180 SPECIAL TOPICS 3 Hrs.
PREREQUISITE: None.
This course is designed to allow students an opportunity to study directly-related topics of particular interest which require the application of technical knowledge and technical skills. Emphasis is placed on the application of skills and knowledge with practical experiences. Upon completion, the student should be able to solve job related problems using technical skills and knowledge.

ILT 194 PROGRAMMABLE LOGIC CONTROLLERS I 3 Hrs.
PREREQUISITE: ILT 107
This course focuses on the use of PLCs. Topics include operation, programming procedures, fault isolation procedures, and methods of entering, executing, debugging, and changing programs. This lab enables students to practice operations, programming procedures, fault isolation procedures, and methods of entering, executing, debugging, and changing programs. Upon completion, students should be able to apply principles of operations and programming of programmable logic controllers.

ILT 195 TROUBLESHOOTING TECHNIQUES I 3 Hrs.
PREREQUISITE: ILT 107
This course focuses on the systematic approach to solving problems. Emphasis is placed on the instrument failures and their interaction with process downtime. Upon completion, students will be able to solve problems on a process simulator or in an actual setting.

ILT 197 MOTOR CONTROLS I 3 Hrs.
PREREQUISITE: ILT 107
This course covers the use of motor control symbols, magnetic motor starters, running overload protection, push-button stations, sizing of magnetic motor starters and overload protection, and complex ladder diagrams of motor control circuits. Topics include sizing magnetic starters and overload protection, the use of push-button stations, ladder diagrams, and magnetic motor starters in control of electric motors, wye-delta starting, part start winding, and resistor starting and electric starting devices. Upon overload protection, interpret ladder diagrams using push-button stations and understand complex motor control diagrams.

ILT 201 INDUSTRIAL ELECTRONICS 3 Hrs.
PREREQUISITE: None.
This course covers applications of electronics in the industry with a major emphasis on microprocessors as applied to data acquisition and machine control. Topics include A/D and D/A conversion, signal conditioning, sensors and transducers, control devices, stepper motors, and microprocessor interfacing. Upon completion, the student should be able to describe the operation of various sensors, signal conditioning, A/D and D/A conversion, and control devices, as well as, perform necessary calculations.

ILT 202 INDUSTRIAL ELECTRONICS LAB 2 Hrs.
PREREQUISITE: None.
This course demonstrates the concepts, devices, and applications of electronics in industrial processes. Upon completion, the student should be able to construct, evaluate, and calibrate basic industrial sensing, and control circuits.

ILT 205 MICROPROCESSORS 3 Hrs.
PREREQUISITE: None.
This course introduces microprocessors and explores their applications. The course emphasizes programming and interfacing the microprocessor chip. Upon completion, the student should be able to perform binary arithmetic, perform computer arithmetic, describe the basic operation procedures for a microprocessor system, and write programs for a basic microprocessor.

ILT 206 MICROPROCESSORS LAB 2 Hrs.
PREREQUISITE: None.
This course provides familiarization of microprocessor instruction sets. Experiments in programming and interfacing provide an understanding of microprocessor theory. Upon completion, the student should be able to program and interface a basic microprocessor system.

ILT 207 MICROCONTROLLER FUNDAMENTALS 3 Hrs.
PREREQUISITE: None.
Microcontroller fundamentals focuses on microcontrollers embedded systems typically used in industrial process and control environments. A survey of industrial microcontrollers from small scale to large scale integration solutions and their programming methods as it relates to motor controllers, HVAC control systems, automotive and avionic control systems, robotic interfacing, and data acquisition and communications will be conducted. Students completing this course will be able to identify key components of a microcontroller embedded system and create specific programming requirements using the native programming language of the microcontroller.

ILT 211 TROUBLESHOOTING TECHNIQUES 3 Hrs.
PREREQUISITE: None.
This course focuses on the systematic approach to solving problems. Emphasis is placed on instrument failures and their interaction with process downtime. Upon completion, the student should be able to solve problems on a process simulator or in an actual setting.

ILT 216 INDUSTRIAL ROBOTICS 3 Hrs.
PREREQUISITE: ILT 107
COREQUISITE: ILT 217
This course covers principles of electro-mechanical devices. Topics include the principles, concepts, and techniques involved in interfacing microcomputers to various electro-mechanical devices to produce geographical movement. Upon completion, the student should be able to apply the principles of electro-mechanical devices.

ILT 217 INDUSTRIAL ROBOTICS LAB 2 Hrs.
PREREQUISITE: ILT 107
COREQUISITE: ILT 216
This lab covers the principles, concepts, and techniques involved in interfacing microcomputers to various electro-mechanical devices to produce geographical movement. Upon completion, the student should be able to apply the principles of electro-mechanical devices.

ILT 220 ELECTRO-OPTICS 3 Hrs.
PREREQUISITE: None.
This course provides a study of fiber optics principles. Topics include optical components, the physics of light, radiation measurements, fiber optic applications, light sources, optic receivers, transmitters and sensors, fiber optic systems, data transfer systems concepts, and systems troubleshooting. Upon completion, the student should be able to apply principles of fiber optics.
ILT 221 ELECTRO-OPTICS LAB 2 Hrs.
PREREQUISITE: None.
This lab enables students to apply principles of fiber optics.

ILT 222 ADVANCED PROGRAMMABLE LOGIC CONTROLLERS 3 Hrs.
PREREQUISITE: ILT 194
COREQUISITE: ILT 223
This course focuses on advanced PLCs. Topics include operations, programming procedures, fault isolation procedures, and methods of entering, executing, debugging, and changing programs. Upon completion, the student should be able to apply principles of operations and programming of advanced PLCs.

ILT 223 ADVANCED PROGRAMMABLE LOGIC CONTROLLERS LAB 2 Hrs.
PREREQUISITE: ILT 194
COREQUISITE: ILT 222
This lab emphasizes advanced PLCs. Topics include operations, programming procedures, fault isolation procedures, and methods of entering, executing, debugging, and changing programs. Upon completion, the student should be able to apply principles of operations and programming of advanced PLCs.

ILT 224 ELECTRONIC COMMUNICATIONS 3 Hrs.
PREREQUISITE: None.
This course provides the student with knowledge in electronic circuits used in amplitude, frequency, and phase modulation communication systems. Topics include modulation and detection techniques, antennas and transmission lines. Upon completion, the student should be able to apply principles of filters, oscillators, classes of amplifiers, and resonance.

ILT 225 ELECTRONIC COMMUNICATIONS LAB 2 Hrs.
PREREQUISITE: None.
This lab focuses on electronic circuits used in amplitude, frequency, and phase modulation communication systems. Topics include modulation and detection techniques, antennas and transmission lines. Upon completion, the student should be able to apply principles of filters, oscillators, classes of amplifiers, and resonance.

ILT 228 FCC GENERAL RADIOTELEPHONE LICENSE PREP 3 Hrs.
PREREQUISITE: ILT 113
This course includes the information necessary for the successful completion of the Federal Communication Commission’s General Radiotelephone License Examination. A comprehensive coverage of rules, regulations, and electronic theory is accomplished. Upon completion, the student should understand the preparation necessary to successfully complete the exam process.

ILT 229 PC REPAIR 3 Hrs.
PREREQUISITE: None.
This course covers the repair of personal computers including hardware and software problems. Proper procedures for circuit card handling and replacement, installation of various drives, and installation of software are covered. This course helps prepare the student for the A+ certification. Upon completion, the student should be able to explain the proper procedures used in handling and replacing circuit cards, drives, memory, and installing software.

ILT 230 COMPUTER REPAIR LAB 2 Hrs.
PREREQUISITE: None.
This course allows the student to practice using the proper procedure discussed in the theory course. The student will repair computers following the proper procedures covered. This course will help prepare the student for the A+ certification. Upon completion, the student should be able to repair a personal computer.

ILT 239 CERTIFICATION PREPARATION 3 Hrs.
PREREQUISITE: ILT 112
This course includes the review necessary before attempting technician certification examinations given by various non-government certifying organizations and pre-employment tests given by employers. Upon completion of this course students should understand the preparations necessary to successfully complete the exam process.

ILT 251 RF COMMUNICATIONS 3 Hrs.
PREREQUISITE: None
This course provides a study of the transmission and receiving of analog communication signals that are used in radio, television, and radio frequency (F.R.) communication applications. Emphasis is placed on circuits that produce, transmit, and receive RF signals used in radio, television, and RF communication. Upon completion, students will be able to apply RF communication principles in the transmission and receiving of radio, television, and RF communication signals.

ILT 252 DIGITAL COMMUNICATIONS 3 Hrs.
PREREQUISITE: None
This course provides a study of the transmission and receiving digital communication signals that are used in radio, television, and digital communication applications. Emphasis is placed on circuits that produce, transmit, and receive digital signals used in radio, television, and digital communication. Upon completion, students will be able to apply digital communication principles in the transmission and receiving of radio, television, and digital communication signals.

ILT 256 CERTIFICATION PREPARATION 3 Hrs.
PREREQUISITE: ILT 112
This course provides an overview of electrical/electronics principles to prepare the student for the CET exam. Upon completion, students should be able to pass the CET exam and be classified as a national certified electronic technician.

ILT 262 INDEPENDENT STUDY 2 Hrs.
PREREQUISITE: None.
This course is designed to allow the student to independently study various topics related to instrumentation technology. Emphasis is placed on the refinement or advancement of a particular skill or skills. Upon completion, the student should be able to perform specific job related functions according to standard operating procedures.

ILT 268 SPECIAL TOPICS 3 Hrs.
PREREQUISITE: None.
This course is designed to allow students an opportunity to study directly-related topics of particular interest which require the application of technical knowledge and skills. Emphasis is placed on the application of skills and knowledge with practical experiences. Upon completion, the student should be able to solve job related problems using technical skills and knowledge.

ILT 291 COOPERATIVE EDUCATION 3 Hrs.
PREREQUISITE: None.
This course provides students work experience with a college-approved employer in an area directly related to the student’s program of study. Emphasis is placed on integrating classroom experiences with work experience. Upon completion, the student should be able
to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

ILT 292 COOPERATIVE EDUCATION 3 Hrs. PREREQUISITE: None
This course provides students work experience with a college-approved employer in an area directly related to the student's program of study. Emphasis is placed on integrating classroom experiences with work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

ILT 293 COOPERATIVE EDUCATION 3 Hrs. PREREQUISITE: None
This course provides students work experience with a college-approved employer in an area directly related to the student's program of study. Emphasis is placed on integrating classroom experiences with work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

INDUSTRIAL MAINTENANCE TECHNOLOGY (INT)

INT 117 PRINCIPLES OF INDUSTRIAL MECHANICS 3 Hrs. PREREQUISITE: None
This course provides instruction in basic physics concepts applicable to mechanics of industrial production equipment. Topics include the basic application of mechanical principles with emphasis on power transmission, specific mechanical components, alignment, and tension. Upon completion, students will be able to perform basic troubleshooting, repair and maintenance functions on industrial production equipment.

INT 118 FUNDAMENTALS OF INDUSTRIAL HYDRAULICS AND PNEUMATICS 3 Hrs. PREREQUISITE: None
This course includes the fundamental concepts and theories for the safe operation of hydraulic and pneumatic systems used with industrial production equipment. Topics include the physical concepts, theories, laws, air flow characteristics, actuators, valves, accumulators, symbols, circuitry, filters, servicing safety, and preventive maintenance and the application of these concepts to perform work. Upon completion, students should be able to service and perform preventive maintenance functions on hydraulic and pneumatic systems.

INT 123 CONCEPTS OF SOLID STATE ELECTRONICS 3 Hrs. PREREQUISITE: None
This course provides an introduction to semiconductor fundamentals and applications to the electronic devices. Course covers the basic operations and applications to include rectifier circuits, transistors, and thyristors. Coverage is given to safety, use, and care with hazardous materials and personal as well as material and environmental considerations. Upon completion students will be able to construct and test for proper operation of various types of solid state devices.

INT 126 PREVENTIVE MAINTENANCE 3 Hrs. PREREQUISITE: None
This course focuses on the concepts and applications of preventive maintenance. Topics include the introduction of alignment equipment, job safety, tool safety, preventive maintenance concepts, procedures, tasks, and predictive maintenance concepts. Upon course completion, students will demonstrate the ability to apply proper preventive maintenance and explain predictive maintenance concepts.

INT 127 PRINCIPLES OF INDUSTRIAL PUMPS AND PIPING SYSTEMS 3 Hrs. PREREQUISITE: None
This course provides instruction in the fundamental concepts of industrial pumps and piping systems. Topics include pump identification, operation, and installation, maintenance and troubleshooting, and piping systems, and their installation. Upon course completion, students will be able to install, maintain, and troubleshoot industrial pumps and piping systems.

INT 151 MACHINE SHOP FUNDAMENTALS 3 Hrs. PREREQUISITE: None
This course focuses on metal cutting machines used to make parts and tools. Topics include lathes, mills, drills, and presses. Upon completion, the student will have the ability to use precision measurement instruments and to read mechanical drawings.

INT 207 INDUSTRIAL AUTOMATIC CONTROLS 3 Hrs. PREREQUISITE: None
This course focuses on the function of automatic controllers in different modes: on-off, proportional, reset, derivative, ratio, and cascade. Topics include operation of pneumatic, electronic, and computer process control equipment; service of basic process equipment and instrumentation; correct operation and maintenance of valves and pumps; recognizing patterns from data; developing and interpreting control charts; determining control limits; and performing root cause analysis. Upon completion, the student should be able to write start-up and shut-down procedures, operate, monitor, and control continuous and batch model plants.

INT 221 DC FUNDAMENTALS 3 Hrs. PREREQUISITE: None
This course provides a study of atomic theory, direct current (DC), properties of conductors and insulators, direct current characteristics of series, parallel, and series parallel circuits. Inductors and capacitors are introduced and their effects on DC circuits are examined. Students are prepared to analyze complex DC circuits, solve for unknown circuits variables and to use basic electronic test equipment.

INT 223 AC FUNDAMENTALS 3 Hrs. PREREQUISITE: None
This course provides a study of the theory of alternating current (AC). Students are prepared to analyze complex AC circuit configurations with resistor, capacitors, and inductors in series and parallel combinations. Upon completion, students should be able to design AC circuits and explain the function of alternating circuits such as RLC, impedance, phase relationships and power factor.

INT 234 PRINCIPLES OF INDUSTRIAL MAINTENANCE WELDING AND METAL CUTTING TECHNIQUES 3 Hrs. PREREQUISITE: None
This course provides instruction in the fundamentals of acetylene cutting and the basics of welding needed for the maintenance and repair of industrial production equipment. Topics include oxy-fuel safety, choice of cutting equipment, proper cutting angles, equipment setup, cutting place and pipe, hand tools, types of metal welding machines, rod and welding joints, and common welding passes and beads. Upon
course completion, students will demonstrate the ability to perform metal welding and cutting techniques necessary for repairing and maintaining industrial equipment.

**INT 260** **MATHEMATICS FOR INDUSTRIAL TECHNICIANS** 3 Hrs.
PREREQUISITE: None.
This course is designed to provide an understanding of basic mathematical concepts used in an industrial setting. Topics include the arithmetic of whole numbers, fractions, and decimals, basic ratio, proportion, and percent, and application problems in industrial maintenance.

**INT 261** **BLUEPRINT READING FOR INDUSTRIAL TECHNICIANS** 3 Hrs.
PREREQUISITE: None.
This course is designed to provide the student a comprehensive understanding of blueprint reading. Topics include identifying types of lines and symbols used in mechanical drawings; recognition and interpretation of various types of views, tolerance, and dimensions.

**INT 266** **INDUSTRIAL MAINTENANCE CUTTING/WELDING** 2 Hrs.
PREREQUISITE: None
This course provides instruction in the fundamentals of acetylene cutting and the basic SMAW (stick) welding. Topics covered are acetylene torch cutting equipment, safety and use; welding safety, welding hand tools, type of welding machines and welding rods, determining types of metal, welding passes, beads, and joints.

**INT 284** **APPLIED PRINCIPLES OF PROGRAMMABLE CONTROLLERS** 2 Hrs.
PREREQUISITE: None
This course provides a comprehensive study in the theory and application of specific models of programmable logic controllers. Topics include hardware configuration, memory and addressing, detail function of software, instruction types, system troubleshooting, and simple programming techniques.

**INT 288** **ADVANCED PRINCIPLES OF PROGRAMMABLE CONTROLLERS** 2 Hrs.
PREREQUISITE: None.
This course provides instruction in the advanced theory, application, and programming techniques of a specific programmable logic controller, including the hardware/software layout, addressing, communication, and machine interface. In addition, the course covers instruction in timing and memory considerations, and their effects on program and machine performance.

**INTERDISCIPLINARY STUDIES (IDS)**

**IDS 100** **CAREER PLANNING AND PERSONAL DEVELOPMENT** 3 Hrs.
PREREQUISITE: None.
This course is designed to provide an awareness of and preparation for the world of work. It provides direction in career planning by evaluating individual interest, values, skills, and personality needs to set career goals and establish strategies to achieve those goals.

**IDS 114** **INTERDISCIPLINARY SEMINAR: CURRENT TOPICS IN HUMAN CONCERNS** 1-2 Hrs.
PREREQUISITE: None.
This course is a seminar/discussion course designed to provide an opportunity for the student to conduct an in-depth investigation of selected topics. The particular topic selected will include issues from two or more disciplines and is determined by faculty and student interest. Classroom experiences emphasize and help develop skills in organizing and presenting information as well as explaining and defending ideas and conclusions. An oral seminar presentation is required. IDS 114 may be repeated for credit.

**IDS 200** **COLLEGE SCHOLARS BOWL WORKSHOP** 1 Hr.
PREREQUISITE: None.
This course offers the student preparation, practice, and participation in the College Scholars Bowl Program and competition. IDS 200 may be repeated for credit.

**IDS 299** **DIRECTED STUDIES IN LEADERSHIP** 1-2 Hrs.
PREREQUISITE: None.
This course provides training and experience in leadership techniques and practice. The student is required to serve in leadership positions on campus or in the community. IDS 299 may be repeated for credit.

**LIBRARY SCIENCE (LBS)**

**LBS 100** **INTRODUCTION TO LIBRARY USE I** 1 Hr.
PREREQUISITE: None.
This course provides instruction in the use of the library. Emphasis is placed on the use of the library catalog, periodical indexes, bibliographic sources, and general reference materials.

**LBS 101** **INTRODUCTION TO LIBRARY USE II** 1 Hr.
PREREQUISITE: None.
This course provides instruction in the use of the library. Emphasis is placed on basic library skills, including use of library catalogs, reference sources, current information sources, and indexes.

**MACHINE TOOL TECHNOLOGY (MTT)**

**MTT 100** **MACHINING TECHNOLOGY I** 6 Hrs.
PREREQUISITE: None.
This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students will be able to perform the basic operation of measuring, layout, drilling, sawing, turning, and milling.

**MTT 103** **MACHINING TECHNOLOGY II** 6 Hrs.
PREREQUISITE: None.
This course provides additional instruction and practice in the use of measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools, including the selection of work holding devices, speeds, feeds, cutting tools and coolants. Upon completion, students should be able to perform basic procedures of precision grinding and advanced operations of measuring, layout, drilling, sawing, turning, and milling.

**MTT 104** **EDM AND METALLURGY** 3 Hrs.
PREREQUISITE: None.
Students study the theory of operation and safety in operation of various EDM machines. Students learn metal characteristics, metal finishing and the heat treatment of metals.

**MTT 105** **EDM AND METALLURGY LAB** 3 Hrs.
PREREQUISITE: None.
Students learn to set-up and safely operate an EDM machine. Students learn to identify safely heat treat different metals.
MTT 107  MACHINING CALCULATIONS I  3 Hrs.  
PREREQUISITE: None  
This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations.

MTT 108  MACHINE HANDBOOK FUNCTIONS I  3 Hrs.  
PREREQUISITE: None  
This course covers the machinists' handbook. Emphasis is placed on formulas, tables, usage and related information. Upon completion, students should be able to use the handbook in the calculation and set up of machine tools.

MTT 109  ORIENTATION TO COMPUTER ASSISTED MANUFACTURING  3 Hrs.  
PREREQUISITE: None.  
This course is preparation for the more advanced CAM courses. Emphasis is placed on computer parts and accessories, DOS fundamentals, file management, graphics programming, and standard (CAM) machine codes. Upon completion, the student should be able to apply basic computer functions to machine tool projects.

MTT 110  INTRODUCTION TO INJECTION MOLDING  3 Hrs.  
PREREQUISITE: None.  
Students learn the fundamentals of injection molding operations, including molding terminology, machine part identification, operating safety, machine controls and machine startup and shutdown. Students are taught to identify common part defects such as short shots, flash, warp, surface defects, color changes and shrinkage. Students learn the properties of commonly used molding materials.

MTT 126  BASIC BLUEPRINT READING FOR MACHINISTS  3 Hrs.  
PREREQUISITE: None  
This course covers the basic principles of blueprint reading and sketching. Topics include multiview drawings; interpretation of conventional lines; and dimensions, notes, and thread notations. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches.

MTT 127  METROLOGY  3 Hrs.  
PREREQUISITE: None  
This course introduces the use of precision measuring instruments. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion students should be able to demonstrate correct use of measuring instruments.

MTT 129  LATHE OPERATIONS  6 Hrs.  
PREREQUISITE: None  
This course includes more advanced lathe practices such as taper turning, threading, boring, and set-up procedures. Emphasis is placed on safety procedures and the machinist responsibility in the set-up and operation of lathes. Upon completion, students should be able to apply lathe techniques to produce tool projects.

MTT 131  INTERMEDIATE BLUEPRINT READING  3 Hrs.  
PREREQUISITE: None.  
The purpose of this course is for students to further apply knowledge and skills with reading and interpreting blue prints for machining operations. Specific topics include: calculating missing dimensions from drawings, drawing different views of an object, knowledge of features and types of threads and fasteners used in mechanical objects, types of surface requirements on blueprints, and interpreting blueprints for casting and weldments.

MTT 136  MILLING OPERATIONS  6 Hrs.  
PREREQUISITE: None  
This course provides basic knowledge of milling machines. Emphasis is placed on types of milling machines and their uses, cutting speed, feed calculations, and set-up procedures. Upon completion, students should be able to apply milling techniques to produce machine tool projects.

MTT 146  PRECISION GRINDING MACHINES I  6 Hrs.  
PREREQUISITE: None  
This course is the study of precision grinding machines and their operations. The course will also focus on the different types of grinding machines, different setup procedures, grinding wheel characteristics and selection, and surface finish requirements and characteristics.

MTT 152  METALLURGY  3 Hrs.  
PREREQUISITE: None.  
This course covers the production, properties, testing, classification, microstructure, and heat treating effects of ferrous and non-ferrous metals. Topics include the iron-carbon phase diagram, ITT diagram, ANSI code, quenching, senescing, and other processes concerning metallurgical transformations. Upon completion, the student should be able to understand the iron-carbon phase diagram, ITT diagram, microstructure images, and other phenomena concerning the behavior of metals.

MTT 181/182/281/282 SPECIAL TOPICS IN MACHINE TOOL TECHNOLOGY  1-3 Hrs.  
PREREQUISITE: None.  
This course is a guided independent study of special projects in machine tool technology. Emphasis is placed on the student's needs. Upon completion, the student should be able to demonstrate skills developed to meet specific needs.

MASS COMMUNICATIONS (MCM)

MCM 100  INTRODUCTION TO MASS COMMUNICATION  3 Hrs.  
PREREQUISITE: RDG 084 or equivalent placement score.  
This course provides the student with general study of mass communication and journalism. This course includes theory, development, regulation, operation, and effects upon society.

PREREQUISITE: RDG 084 or equivalent placement score.  
These courses offer practical experience in journalism skills through working on the staff of student publications.

MCM 120  INTRODUCTION TO JOURNALISM  3 Hrs.  
PREREQUISITE: None.  
A first writing course in journalism, this course features journalistic style, copy reading, story types, headlines, typography, and page make-up.

MCM 130  NEWS REPORTING  3 Hrs.  
PREREQUISITE: RDG 084 or equivalent placement score.  
This course includes instruction and practice in news gathering and news writing techniques, including methodology, observation, interviews, and use of sources.
MCM 200 NEWS PHOTOGRAPHY 3 Hrs.
PREREQUISITE: None.
COREQUISITE: ENG 101
This course includes practice in camera techniques, film developing, and print making for newspapers and other publications.

MCM 230 SURVEY OF ADVERTISING 3 Hrs.
PREREQUISITE: None.
COREQUISITE: ENG 101
This course includes instruction in the structure and functions of the advertising agency and the elements of effective advertisement.

MCM 240 INTRODUCTION TO PUBLIC RELATIONS 3 Hrs.
PREREQUISITE: None.
COREQUISITE: ENG 101
This course is an introduction to public relations techniques, including the grouping of publics, publication strategies, and preparation of publicity for various media.

MATHEMATICS (MTH or MAH)

MAH 101 INTRODUCTORY MATHEMATICS I 3 Hrs.
PREREQUISITE: None.
This course is a comprehensive review of arithmetic with basic algebra designed to meet the needs of certificate and diploma programs. Topics include business and industry related arithmetic and geometric skills used in measurement, ratio and proportion, exponents and roots, applications of percent, linear equations, formulas, and statistics. Upon completion, the student should be able to solve practical problems in his or her specific occupational areas of study. This is a course designed for the student seeking a certificate and does not meet the general core requirement for mathematics.

MTH 080 MATHEMATICS LABORATORY 1-2 Hrs.
PREREQUISITE: None.
This course is designed to offer supplemental help to students in mathematics. Students work in a laboratory situation with qualified instructors. This course may be repeated as needed. Emphasis is on arithmetic and algebra as determined by the individual need of the student.

MTH 090 BASIC MATHEMATICS 4 Hrs.
PREREQUISITE: None.
This is a developmental course reviewing mathematical principles and computations designed to help the student’s mathematical proficiency for selected curriculum entrance.

MTH 098 ELEMENTARY ALGEBRA 4 Hrs.
PREREQUISITE: A grade of S in MTH 090 or equivalent placement score.
This course is a review of the fundamental arithmetic and algebra operations. The topics include the numbers of ordinary arithmetic and their properties; integers and rational numbers; the solving of equations; polynomials and factoring; and an introduction to systems of equations and graphs.

MTH 100 INTERMEDIATE COLLEGE ALGEBRA 3 Hrs.
PREREQUISITE: A grade of S in MTH 098 or equivalent placement score.
This course provides a study of algebraic techniques such as linear equations and inequalities, quadratic equations, systems of equations, and operations with exponents and radicals. Functions and relations are introduced and graphed with special emphasis on linear and quadratic functions. This course does not apply toward the general core requirements for mathematics.

MTH 110 FINITE MATHEMATICS 3 Hrs.
PREREQUISITE: A grade of C or better in MTH 100 or equivalent placement score.
This course is intended to give an overview of topics in finite mathematics together with their applications, and is taken primarily by the student who is not majoring in science, engineering, commerce, or mathematics (i.e., students who are not required to take Calculus). This course will draw on and significantly enhance the student’s arithmetic and algebraic skills. The course includes sets, counting, permutations, combinations, basic probability (including Baye's Theorem), and introduction to statistics (including work with Binomial Distributions and Normal Distributions), matrices and their applications to Markov chains and decision theory. Additional topics may include symbolic logic, linear models, linear programming, the simplex method, and applications.

MTH 112 PRECALCULUS ALGEBRA 3 Hrs.
PREREQUISITE: A grade of C or better in MTH 100 or equivalent placement score.
This course emphasizes the algebra of functions (including polynomial, rational, exponential, and logarithmic functions). The course also covers systems of equations and inequalities, quadratic inequalities, and the binomial theorem. Additional topics may include matrices, Cramer's Rule, and mathematical induction.

MTH 113 PRECALCULUS TRIGONOMETRY 3 Hrs.
PREREQUISITE: A grade of C or better in MTH 112 or equivalent placement score.
This course includes the study of trigonometric (circular functions) and inverse trigonometric functions, and includes extensive work with trigonometric identities and trigonometric equations. The course also covers vectors, complex numbers, DeMoivre's Theorem, and polar coordinates. Additional topics may include conic sections, sequences, and using matrices to solve linear systems.

MTH 116 MATHEMATICAL APPLICATIONS 3 Hrs.
PREREQUISITE: A grade of S in MTH 090 or equivalent placement score.
This course provides practical applications of mathematics and includes selected topics from consumer math and algebra. Some types included are integers, percent, interest, ratio and proportion, metric system, probability, linear equations, and problem solving. This is a terminal course designed for the student seeking an AAS degree and does not meet the general core requirement for mathematics.

MTH 120 CALCULUS AND ITS APPLICATIONS 3 Hrs.
PREREQUISITE: A grade of C or better in MTH 112 or equivalent placement score.
This course is intended to give a broad overview of calculus and is taken primarily by the student majoring in Commerce and Business Administration. It includes differentiation and integration of algebraic, exponential, and logarithmic functions and applications to business and economics. The course should include functions of several variables, partial derivatives (including applications), Lagrange Multipliers, L'Hopital's Rule, and multiple integration (including applications).

MTH 125 CALCULUS I 4 Hrs.
PREREQUISITE: A grade of C or better in MTH 113 or equivalent placement score.
This is the first of three courses in the basic calculus sequence taken primarily by students in science, engineering, and mathematics. Topics include the limit of a function; the derivative of algebraic, trigo-
nometric, exponential, and logarithmic functions; and
the definite integral and its basic applications to area
problems. Applications of the derivative are covered in
detail, including approximations of error using
differentials, maximum and minimum problems, and
curve sketching using calculus.

MTH 126 CALCULUS II 4 Hrs.
PREREQUISITE: A grade of C or better in MTH 125 or equivalent placement score.
This is the second of three courses in the basic calculus sequence. Topics include vectors in the plane and in space, lines and planes in space, applications of integration (such as volume, arc length, work and average value), techniques of integration, infinite series, polar coordinates, and parametric equations.

MTH 227 CALCULUS III 4 Hrs.
PREREQUISITE: A grade of C or better in MTH 126 or equivalent placement score.
This is the third of three courses in the basic calculus sequence. Topics include vector functions, functions of two or more variables, partial derivatives (including applications), quadric surfaces, multiple integration, and vector calculus including Green’s Theorem, Curl and Divergence, surface integrals, and Stokes’ Theorem.

MTH 231 MATH FOR THE ELEMENTARY TEACHER I 3 Hrs.
PREREQUISITE: A grade of C or better in MTH 100 or higher level mathematics course.
This course is designed to provide appropriate insights into mathematics for the student majoring in elementary education and to ensure that students going into elementary education are more proficient at performing basic arithmetic operations. Topics include logic, sets and functions, operations and properties of whole numbers and integers including number theory; use of manipulatives by teachers to demonstrate abstract concepts; and by students while learning these abstract concepts as emphasized in the class. Upon completion, the student is required to demonstrate proficiency in each topic studied as well as to learn teaching techniques that are grade level and subject matter appropriate, and test for mathematical proficiency and the learning of teaching concepts.

MTH 232 MATH FOR THE ELEMENTARY TEACHER II 3 Hrs.
PREREQUISITE: A grade of C or better in MTH 231.
This course is the second of a three-course sequence and is designed to provide appropriate insights into mathematics for students majoring in elementary education and to ensure that students going into elementary education are more proficient at performing basic arithmetic operations. Topics include numerical skills with fractions, decimals and percentages, elementary concepts of probability and statistics, and analytic geometry concepts associated with linear equations and inequalities. The use of manipulatives and calculators in the teaching and learning process is stressed. Upon completion, students will test for mathematical proficiency and the learning of teaching concepts. Students also will demonstrate an appropriate teaching technique by preparing a lesson and teaching it to the class for their final exam grade.

MTH 238 APPLIED DIFFERENTIAL EQUATIONS I 3 Hrs.
COREQUISITE: MTH 227.
An introduction to numerical methods, qualitative behavior of first order differential equations, techniques for solving separable and linear equations analytically, and applications to various models (e.g., populations, motion, chemical mixtures, etc.); techniques for solving higher order linear differential equations with constant coefficients (general theory, undetermined coefficients, reduction of order and the method of variation of parameters), with emphasis on interpreting the behavior of the solutions, and applications to physical models whose governing equations are of higher order; the Laplace transform as a tool for the solution of initial value problems whose inhomogeneous terms are discontinuous.

MILITARY SCIENCE (MSC)

MSC 101 MILITARY SCIENCE I: COLLEGE SURVIVAL SKILLS 2 Hrs.
PREREQUISITE: None
Instruction on enhanced reading, note taking, time management, writing, and memory skills. Role of the Army and its components, customs and traditions of the military, and the organization of the Army.

MSC 101a ADVENTURE TRAINING 2 Hrs.
PREREQUISITE: None
Action oriented alternative to MS 101. Helps you meet everyday adversity and shows you how resourcefulness can help you survive an emergency, ensuring a safe and enriching adventure in the wilderness. Includes First Aid, may reading, orienteering, rifle marksmanship, water survival, repelling, and outdoor wilderness training. Fully substitutes for MS 101 in ROTC curriculum.

MSC 102 MILITARY SCIENCE I: CONTINUATION OF COLLEGE SURVIVAL SKILLS 2 Hrs.
PREREQUISITE: None
Instruction on enhanced thinking, test-taking, and money and relationship skills. Review of MS 101 military skills for students who opted for MS 101a. First aid techniques, concepts of military leadership, and counseling.

MSC 110 PHYSICAL TRAINING 1 Hr.
PREREQUISITE: None
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.

MSC 111 PHYSICAL TRAINING 1 Hr.
PREREQUISITE: None
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.

MSC 112 PHYSICAL TRAINING 1 Hr.
PREREQUISITE: None
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.

MSC 113 PHYSICAL TRAINING 1 Hr.
PREREQUISITE: None
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.

MSC 114 PHYSICAL TRAINING 1 Hr.
PREREQUISITE: None
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.

MSC 115 PHYSICAL TRAINING 1 Hr.
PREREQUISITE: None
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.
MSC 116  PHYSICAL TRAINING  1 Hr.  
PREREQUISITE: None.  
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.  

MSC 117  PHYSICAL TRAINING  1 Hr.  
PREREQUISITE: None.  
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.  

MSC 118  PHYSICAL TRAINING  1 Hr.  
PREREQUISITE: None.  
Instruction on Army Physical Fitness Program. Students must sign health form and have physician approval. Equivalent to a college level PE course.  

MSC 201  GENERAL MILITARY SCIENCE  2 Hrs.  
PREREQUISITE: None.  
Classroom study and hands on application in professional and college related skills. Emphasis on leadership, first aid, oral/written and interpersonal communication skills. Includes principles and techniques considered essential in reading military maps.  

MUSIC (MUL) (MUP) (MUS)  

MUL  SEE LIST CLASS PERFORMANCE INSTRUCTION  1 Hr.  
PREREQUISITE: None.  
Group instruction is available in voice, piano, strings, woodwinds, brass, percussion, and fretted instruments for the student with little or no previous training. Emphasis is placed on the rudiments of music, basic performance technique, and general musicianship skills. Upon completion of one or a sequence of courses, the student should be able to demonstrate a basic proficiency in singing or playing and a knowledge of music fundamentals.  

MUL 101-02; 201-02  CLASS PIANO I, II, III, IV  
MUL 111-12; 211-12  CLASS VOICE I, II, III, IV  
MUL 141-42; 241-42  CLASS BRASS I, II, III, IV  
MUL 151-52; 251-52  CLASS PERCUSSION I, II, III, IV  
MUL 161-62; 261-62  CLASS FRETDED INSTRUMENTS I, II, III, IV  
MUL 170-171; 270-71  MUSIC WORKSHOP I, II, III, IV  1-3 Hrs.  
PREREQUISITE: Permission of the instructor.  
This course is a seminar clinic in advanced rehearsal/performance techniques. Emphasis is placed on intensive rehearsal techniques required for advanced or specialized performance groups. Upon completion, the student should be able to effectively participate in performances presented by this type of ensemble.  

MUL 172-73; 272-73  MUSICAL THEATRE WORKSHOP I, II, III, IV  1-2 Hrs.  
PREREQUISITE: Permission of the instructor.  
This course includes the study of musical theater history, styles, performance, and technical production. Emphasis is placed on the supervised study, preparation, production, and performances of scenes or complete works of musical theatre. Upon completion, the student should be able to effectively participate in a public presentation of the prepared scenes or work in an assigned performance or technical role.  

MUL 174-75; 274-75  OPERA WORKSHOP I, II, III, IV  1-2 Hrs.  
PREREQUISITE: Permission of the instructor.  
This course includes the study of opera history, styles, performance, and technical production. Emphasis is placed on the supervised study, preparation, production, and performances of scenes or complete works of opera. Upon completion, the student should be able to effectively participate in a public presentation of the prepared scenes or work in an assigned performance or technical role.  

MUL  SEE LIST MUSIC ENSEMBLES  1-2 Hrs.  
PREREQUISITE: Permission of the instructor.  
This course provides an opportunity for the student to participate in a performing ensemble. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Upon completion, the student should be able to effectively participate in performances presented by the ensemble.  

MUL 180-81; 280-81  CHORUS I, II, III, IV  
MUL 182-83; 282-83  VOCAL ENSEMBLE I, II, III, IV  
MUL 184-85; 284-85  JAZZ/SHOW CHOIR I, II, III, IV  
MUL 190-91; 290-91  CONCERT BAND I, II, III, IV  
MUL 192-93-292-93  INSTRUMENTAL ENSEMBLE I, II, III, IV  
MUL 194-95; 294-95  ORCHESTRA I, II, III, IV  
MUL 196-97; 296-9  JAZZ/SHOW BAND I, II, III, IV  
MUL 198-99; 298-99  MARCHING BAND I, II, III, IV  
MUP  SEE LIST INDIVIDUAL PERFORMANCE INSTRUCTION  1-2 Hrs.  
PREREQUISITE: Permission of the instructor.  
Applied study in voice and instrumental areas is limited to 4 semesters of study. Additional study for students may be requested of the instructor. Individual performance instruction is available in keyboard instruments, voice, strings, woodwinds, brass, percussion, and fretted instruments. Emphasis is placed on developing technique, repertoire, and performance skills commensurate with the student's educational goals. The student is required to practice a minimum of five hours per week for each credit hour. Upon completion, the student should be able to effectively perform assigned repertoire and technical studies in an appropriate performance evaluation setting.  

MUP 101-02; 201-02  PRIVATE PIANO I, II, III, IV  
MUP 111-12; 211-12  PRIVATE VOICE I, II, III, IV  
MUP 133-34; 233-34  PRIVATE GUITAR I, II, III, IV  
MUP 141-42; 241-42  PRIVATE FLUTE I, II, III, IV  
MUP 143-44; 243-44  PRIVATE CLARINET I, II, III, IV  
MUP 145-46; 245-46  PRIVATE SAXOPHONE I, II, III, IV  
MUP 151-52; 251-52  PRIVATE OBOE I, II, III, IV  
MUP 161-62; 261-62  PRIVATE TRUMPET I, II, III, IV  
MUP 163-64; 263-64  PRIVATE FRENCH HORN I, II, III, IV  
MUP 165-66; 265-66  PRIVATE MELLOPHONE I, II, III, IV  
MUP 171-72; 271-72  PRIVATE TROMBONE I, II, III, IV  
MUP 173-74; 273-74  PRIVATE EUPHONIUM I, II, III, IV  
MUP 175-76; 275-76  PRIVATE TUBA I, II, III, IV  
MUP 181-82; 281-82  PRIVATE PERCUSSION I, II, III, IV
MUS 100 CONVOCATION 1 Hr.
PREREQUISITE: None.
This course (required for music majors/minors each semester) is designed to expose the student to a variety of repertory styles and to give the student an opportunity to practice individual performance skills. Emphasis is placed on exposure to performances and lectures by guest artists, faculty, or students, and on personal performance(s) in class each semester.

MUS 101 MUSIC APPRECIATION 3 Hrs.
PREREQUISITE: None.
This course is designed for non-music majors and requires no previous musical experience. It is a survey course that incorporates several modes of instruction including lecture, guided listening, and similar experiences involving music. The course will cover a minimum of three (3) stylistic periods, provide a multi-cultural perspective, and include both vocal and instrumental genres. Upon completion, the student should be able to demonstrate a knowledge of music fundamentals, the aesthetic/stylistic characteristics of historical periods, and an aural perception of style and structure in music.

MUS 110 BASIC MUSICIANSHIP 3 Hrs.
PREREQUISITE: Permission of the instructor.
This course is designed to provide rudimentary music knowledge and skills for the student with a limited music background. Topics include a study of notation, rhythm, scales, keys, intervals, chords, and basic sight singing and ear training skills. Upon completion, the student should be able to read and understand musical scores and demonstrate basic sight singing and ear training skills for rhythm, melody, and harmony.

MUS 111 MUSIC THEORY I 3 Hrs.
PREREQUISITE: MUS 110 or equivalent placement score or permission of the instructor.
COREQUISITE: MUS 113, if ear training lab is a separate course.
This course introduces the student to the diatonic harmonic practices in the Common Practice Period. Topics include fundamental musical materials (rhythm, pitch, scales, intervals, diatonic harmonies) and an introduction to the principles of voice leading and harmonic progression. Upon completion, the student should be able to demonstrate a basic competency using diatonic harmony through analysis, writing, sight singing, dictation, and keyboard skills.

MUS 112 MUSIC THEORY II 3 Hrs.
PREREQUISITE: MUS 111.
COREQUISITE: MUS 114, if ear training lab is a separate course.
This course completes the study of diatonic harmonic practices in the Common Practice Period and introduces simple musical forms. Topics include principles of voice leading used in three- and four-part triadic harmony and diatonic seventh chords, non-chord tones, cadences, phrases, and periods. Upon completion, the student should be able to demonstrate competence using diatonic harmony through analysis, writing, sight singing, dictation, and keyboard skills.

MUS 113 MUSIC THEORY LAB I 1 Hr.
PREREQUISITE: MUS 110 or equivalent placement score or permission of the instructor.
COREQUISITE: MUS 111, if ear training lab is a separate course.
This course provides the practical application of basic musical materials through sight singing: melodic, harmonic, and rhythmic dictation; and keyboard harmony. Topics include intervals, simple triads, diatonic stepwise melodies, basic rhythmic patterns in simple and compound meter, and short four-part progressions in root position.

MUS 114 MUSIC THEORY LAB II 1 Hr.
PREREQUISITE: MUS 113.
COREQUISITE: MUS 112, if ear training lab is a separate course.
This course continues the practical application of diatonic musical materials through sight singing: melodic, harmonic, and rhythmic dictation; and keyboard harmony. Topics include intervals, scales, diatonic melodies with triadic arpeggiation, more complex rhythmic patterns in simple and compound meter, and four-part diatonic progressions in all inversions. Upon completion, the student should be able to write, sing, and play all intervals, rhythmic patterns employing syncopations and beat divisions, diatonic melodies, and four-part diatonic progressions.

MUS 115 FUNDAMENTALS OF MUSIC 3 Hrs.
PREREQUISITE: None.
This course provides an overview of church music administration through written documentation. It incorporates several modes of instruction including lecture, guided listening, and similar experiences involving music. The course will cover a minimum of three (3) stylistic periods, provide a multi-cultural perspective, and include both vocal and instrumental genres. Upon completion, the student should be able to demonstrate competence using diatonic harmony through analysis, writing, sight singing, dictation, and keyboard skills.

MUS 116 COMPUTER APPLICATIONS IN MUSIC 2 Hrs.
PREREQUISITE: MUS 111 or equivalent.
This course introduces the use of computers in music. Topics include an introduction to computer skills, MIDI and the application of notation, and sequencing software programs (i.e. Finale, Performer). Upon completion, the student should be able to demonstrate basic competency in the use of computers in music.

MUS 161 DICTION FOR SINGERS 2-3 Hrs.
PREREQUISITE: Permission of the instructor.
This course introduces the basic rules of diction in Italian, French, and German for singers. Emphasis is placed on the use of the International Phonetic Alphabet. Upon completion, the student should be able to sing art songs in Italian, French, and German with correct diction.

MUS 170 INTRODUCTION TO CHURCH MUSIC 2-3 Hrs.
PREREQUISITE: None.
This course provides an overview of church music as a career choice, and includes the organization and operation of a graded church choir program. Topics include an introduction to conducting, rehearsal techniques, administrative skills, and may include a supervised practicum field experience. Upon completion, the student should be able to select, prepare, teach, and conduct a simple anthem for a graded church choir and demonstrate a knowledge of church music administration through written documentation.
MUS 211 MUSIC THEORY III 3 Hrs.
PREREQUISITE: MUS 112.
COREQUISITE: MUS 213, if ear training lab is a separate course.
This course introduces the student to the chromatic harmonic practices in the Common Practice Period. Topics include secondary functions, modulatory techniques, and binary and ternary forms. Upon completion, the student should be able to demonstrate competence using chromatic harmony through analysis, writing, sight singing, dictation, and keyboard skills.

MUS 212 MUSIC THEORY IV 3 Hrs.
PREREQUISITE: MUS 211.
COREQUISITE: MUS 214, if ear training lab is a separate course.
This course completes the study of chromatic harmonic practices in the Common Practice Period and introduces the student to twentieth-century practices. Topics include the Neapolitan and augmented sixth chords, sonata form, late nineteenth-century tonal harmony, and twentieth-century practices and forms. Upon completion, the student should be able to demonstrate competence using chromatic harmony and basic twentieth-century techniques through analysis, writing, sight singing, dictation, and keyboard skills.

MUS 213 MUSIC THEORY LAB III 1 Hr.
PREREQUISITE: MUS 114.
COREQUISITE: MUS 211, if ear training lab is a separate course.
This course provides the practical application of chromatic musical materials through sight singing; melodic, harmonic, and rhythmic dictation; and keyboard harmony. Topics include melodies with simple modulations, complex rhythms in simple and compound meter, and secondary function chords. Upon completion, the student should be able to write, sing, and play modulating melodies, rhythmic patterns with beat subdivisions, and four-part chromatic harmony.

MUS 214 MUSIC THEORY LAB IV 1 Hr.
PREREQUISITE: MUS 213.
COREQUISITE: MUS 212, if ear training lab is a separate course.
This course provides the practical application of chromatic musical materials and simple twentieth-century practices through sight singing; melodic, harmonic, and rhythmic dictation; and keyboard harmony. Topics include chromatic and atonal melodies; complex rhythmic patterns in simple, compound, and asymmetric meters; chromatic chords, and twentieth-century harmony. Upon completion, the student should be able to write, sing, and play chromatic and atonal melodies, complex rhythms and meters, four-part chromatic harmony, and simple twentieth-century chord structures.

MUS 215 COMPOSITION I 1-2 Hrs.
PREREQUISITE: MUS 112 or permission of the instructor.
This course introduces the basic techniques and applications of musical composition. Emphasis is placed on creativity and original thought processes in music. Upon completion, the student should be able to create an original musical composition.

MUS 251 INTRODUCTION TO CONDUCTING 3 Hrs.
PREREQUISITE: MUS 110 or permission of the instructor.
This course introduces the fundamentals of conducting choral and/or instrumental ensembles. Topics include a study of simple and compound meters, score reading, and techniques for conducting effective rehearsals. Upon completion, the student should be able to prepare and conduct a choral and/or instrumental score in a rehearsal or performance setting.

MUS 270 ORGANIZATION OF THE CHURCH MUSIC PROGRAM 2 Hrs.
PREREQUISITE: None.
This course is designed to explore administrative models of a comprehensive church music program. Topics include leadership, administrative structure, music personnel, facilities, equipment, vestments, music library, budgeting, planning, vocal and instrumental ensembles, and scheduling for a music program. Upon completion, the student should be able to demonstrate how to plan, coordinate, and administer a comprehensive church music program.

MUS 271 CHURCH MUSIC LITERATURE 2 Hrs.
PREREQUISITE: MUS 170 or permission of the instructor.
This course provides an historic survey of traditional church music from the 17th century to the present and introduces contemporary Christian styles. Topics include criteria for choosing appropriate music for graded church choirs at easy, medium, and advanced levels of difficulty, and a survey of publishing resources, and cataloging systems. Upon completion, the student should be able to demonstrate a knowledge and understanding of church music literature.

MUS 272 THE CHILDREN’S CHOIR 2 Hrs.
PREREQUISITE: Permission of the instructor.
This course is designed to provide techniques for working with the child’s voice in a choral setting. Topics include working with children’s voices, rehearsal techniques, selecting literature, vestments, and organizing a graded choir program. Upon completion, the student should be able to demonstrate how to plan, coordinate, and administer a graded choir program in a church.

MUS 279 CHURCH MUSIC PRACTICUM 1 Hr.
PREREQUISITE: Permission of the instructor.
This course is designed to explore administrative models of a comprehensive church music program. Upon completion, the student should be able to demonstrate how to plan, coordinate, and administer a graded choir program in a church.

NURSING (NAS) (NUR)

NURSING ASSISTANT (NAS)

NAS 100 LONG TERM CARE NURSING ASSISTANT 4 Hrs.
PREREQUISITE: None.
This course fulfills the seventy-five (75) hour Omnibus Budget Reconciliation Act (OBRA) requirements for training of long-term care nursing assistants in preparation for certification through competency evaluation. Emphasis is placed on the development of the knowledge, attitudes, and skills required of the long-term care nursing assistant. Upon completion, the student should demonstrate satisfactory performance on written examinations and clinical skills. (Clinical laboratory required)
NAS 111 FUNDAMENTALS OF LONG TERM CARE 5 Hrs.
PREREQUISITE: None.
COREQUISITE: NAS 112 and NAS 115
This course provides the student with necessary theory and laboratory experiences for the development of skills required of the long term care nursing assistant. Emphasis is placed on infection control, safety, body mechanics, communications, observation, and personal and restorative care. Upon completion, the student should be able to apply theoretical concepts to care of the resident/client and perform skills in accordance with the Omnibus Budget Reconciliation Act (OBRA) 1987 guidelines. (Laboratory required)

NAS 112 FUNDAMENTALS OF LONG TERM CARE CLINICAL 2 Hrs.
PREREQUISITE: None.
COREQUISITE: NAS 111 and NAS 115
This course is designed to assist the student to develop the knowledge, attitudes, and skills needed to perform basic nursing care safely and efficiently in a supervised long term care clinical setting. Emphasis is placed on the application of knowledge, attitudes, and skills appropriate for the long term care nursing assistant. Upon completion, the student should demonstrate beginning competence in the delivery of care to the client in a long term care facility. (Clinical required)

NAS 113 FUNDAMENTALS OF HOME HEALTH CARE 5 Hrs.
PREREQUISITE: None.
COREQUISITE: NAS 114
This course provides the student with the necessary theory and laboratory experiences for the development of skills required to qualify as a Home Health Aide. Emphasis is placed on the acquisition of skills in communication, observation, mobility, personal care, and infection control necessary to care for the home-bound client of all ages. Upon completion, the student should be able to apply concepts and skills in areas required by the Omnibus Budget Reconciliation Act (OBRA) and the National Association of Home Care. (Laboratory required)

NAS 114 HOME HEALTH AID CLINICAL 2 Hrs.
PREREQUISITE: None.
COREQUISITE: NAS 113.
This course is designed to assist the student to develop knowledge, attitudes, and skills needed to perform basic nursing care safely and efficiently in a supervised home health care clinical setting. Emphasis is placed on application of knowledge, attitudes, and skills needed appropriate for the home health care aide. (Clinical is required) Upon completion, the student will demonstrate beginning competence in care of the client in the home care setting.

NAS 115 CPR and BASIC FIRST AID 2 Hrs.
PREREQUISITE: None
COREQUISITE: NAS 111 and NAS 112
This course is designed to help the student feel more confident and act appropriately in an emergency situation. Emphasis is placed on providing the student with theoretical concepts to develop skills in basic first aid and cardiopulmonary resuscitation. Upon completion, which includes specific competencies in basic life support, the student will receive appropriate course completion documentation.

NUR 101 BODY STRUCTURE AND FUNCTION 4 Hrs.
PREREQUISITE: Acceptance into Practical Nursing Program, Compass Reading score of 76 or higher or ACT score of 17 or higher
COREQUISITE: NUR 102, NUR 103, NUR 104, BIO 201 (Required for AD Track; if elected for PN Track), MTH 116 or higher
This course provides students with basic knowledge of the normal structure and function of the human body. Major content focuses on the interrelations among the organ systems and the relationship of each organ system to homeostasis. Medical terminology is integrated throughout course content. Upon completion of this course, students will be able to demonstrate basic knowledge of body systems, their interrelationships and associated medical terminology.

NUR 102 FUNDAMENTALS OF NURSING 6 Hrs.
PREREQUISITE: Acceptance into Practical Nursing or Associate Degree Nursing Program, Compass Reading score of 76 or higher or ACT score of 17 or higher
COREQUISITE: NUR 101 (if elected for PN Track), NUR 103, NUR 104, BIO 201 (Required for AD Track; if elected PN Track), and MTH 116 or higher
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students learn concepts and theories basic to the art and science of nursing. The role of the nurse as a member of the healthcare team is emphasized. Students are introduced to the concepts of client needs, safety, communication, teaching/learning, critical thinking, ethical-legal, cultural diversity, nursing history, and the program’s philosophy of nursing. Additionally, this course introduces psychomotor nursing skills needed to assist individuals in meeting basic human needs. Skills necessary for maintaining microbial, physical, and psychological safety are introduced along with skills needed in therapeutic interventions. At the conclusion of this course students demonstrate competency in performing basic nursing skills for individuals with common health alterations.

NUR 103 HEALTH ASSESSMENT 1 Hr.
PREREQUISITE: Acceptance into Practical Nursing or Associate Degree Nursing Program, Compass Reading score of 76 or higher or ACT score of 17 or higher
COREQUISITE: NUR 101 (if elected for PN Track), NUR 102, NUR 104, BIO 201 (Required for AD Track; if elected PN Track), and MTH 116 or higher
This course is designed to provide students the opportunity to learn and practice history taking and physical examination skills with individuals of all ages, with emphasis on the adult. The focus is on symptom analysis along with physical, psychosocial, and growth and development assessments. Students will be able to utilize critical thinking skills in identifying health alterations, formulating nursing diagnoses and documenting finding appropriate to nursing.

NUR 104 INTRODUCTION TO PHARMACOLOGY 1 Hr.
PREREQUISITE: Acceptance into Practical Nursing or Associate Degree Nursing Program, Compass Reading score of 76 or higher or ACT score of 17 or higher
COREQUISITE: NUR 101 (if elected for PN Track), NUR 102, NUR 103, BIO 201 (Required for AD Track; if elected PN Track), and MTH 116 or higher
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. This course intro-
duces students to basic principles of pharmacology and the knowledge necessary to safely administer medication. Course content includes legal implications, pharmacokinetics, pharmacodynamics, calculations of drug dosages, medication administration, and an overview of drug classifications. Students will be able to calculate and administer medications.

NUR 105 ADULT NURSING 8 Hrs.
PREREQUISITE: NUR 101 or BIO 201, NUR 102, NUR 103, NUR 104, and MTH 116 or higher
COREQUISITE: ENG 101, BIO 202. (Required for AD Track; if elected PN Track), and NUR 106
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Emphasis is placed on providing care to individuals undergoing surgery, fluid and electrolyte imbalance, and common alterations in respiratory, musculoskeletal, gastrointestinal, cardiovascular, endocrine, and integumentary systems. Nutrition, pharmacology, communication, cultural, and community concepts are integrated.

NUR 106 MATERNAL AND CHILD NURSING 5 Hrs.
PREREQUISITE: NUR 101 or BIO 201, NUR 102, NUR 103, NUR 104, and MTH 116 or higher
COREQUISITE: ENG 101, BIO 202. (Required for AD Track; if elected PN Track), and NUR 105
This course focuses on the role of the nurse in meeting the physiological, psychosocial, cultural and developmental needs of the maternal and child client. Course content includes antepartal, intrapartal, and postpartal care, complications of pregnancy, newborn care, human growth and development, pediatric care, and selected pediatric alterations. Nutrition, pharmacology, cultural diversity, use of technology, communication, anatomy and physiology review, medical terminology, critical thinking, and application of the nursing process are integrated throughout this course. Upon completion of this course students will be able to provide and manage for maternal and pediatric clients in a variety of settings.

NUR 107 ADULT/CHILD NURSING 8 Hrs.
PREREQUISITE: NUR 101 or BIO 201 and BIO 202, NUR 102, NUR 103, NUR 104,NUR 105, NUR 106, MTH 116 or higher, and ENG 101
COREQUISITE: NUR 106 and NUR 109
This course provides students with opportunities to develop competencies necessary to meet the needs of individuals throughout the life span in a safe, legal, and ethical manner using the nursing process in a variety of settings. Emphasis is placed on providing care to individuals experiencing complex alterations in: sensory/perceptual reproductive, endocrine, genitourinary, neurological, immune, cardiovascular, and lower gastrointestinal systems. Additional instruction is provided for care for clients experiencing burns, cancer, and emergent conditions. Nutrition, pharmacology, therapeutic communication, community, cultural diversity, health promotion, error prevention, critical thinking, impacts on maternal and child clients are integrated throughout the course.

NUR 108 PSYCHOSOCIAL NURSING 3 Hrs.
PREREQUISITE: NUR 101 or BIO 201 and BIO 202, NUR 102, NUR 103, NUR 104,NUR 105, NUR 106, MTH 116 or higher, and ENG 101
COREQUISITE: NUR 107 and NUR 109
This course is designed to provide an overview of psychosocial adaptation and coping concepts used when caring for clients with acute and chronic alterations in mental health in a variety of settings. Topics include therapeutic communication skills, normal and abnormal behaviors, treatment modalities, and developmental needs. Upon completion of this course, students will demonstrate the ability to assist clients in maintaining psychosocial integrity through the use of the nursing process.

NUR 109 ROLE TRANSITION FOR THE PRACTICAL NURSE 3 Hrs.
PREREQUISITE: NUR 101 or BIO 201 and BIO 202, NUR 102, NUR 103, NUR 104, NUR 105, NUR 106, MTH 116 or higher, and ENG 101
This course provides students with opportunities to gain knowledge and skills necessary to transition from student to practicing nurse. Content includes a discussion of current issues in health care, practical nursing leadership and management, professional practice issues, and transition into the workplace. Emphasis is placed on NCLEX-PN test-taking skills, computer-assisted simulations and practice tests, development of a prescriptive plan for remediation, and review of selective content specific to the practice of practical nursing.

NUR 200 CONCEPTS OF CAREER MOBILITY 6 Hrs.
PREREQUISITE: MTH 116 or higher, BIO 201, BIO 202, and ENG 101
This course is designed to provide LPN mobility students self-directed opportunities to prepare for placement into the third semester of the ADN program. Emphasis is on assessment and validation of selected theory, process, and skills covered in NUR 102, 103, 104, 105, and 106. Upon successful completion of assessments, students are eligible for entry into NUR 201. Students who successfully complete this course are awarded 15 non-traditional hours at the completion of the LPN mobility curriculum.

NUR 201 NURSING THROUGH THE LIFESPAN I 5 Hrs.
PREREQUISITE: Two-Year Track: BIO 201, BIO 202, and ENG 101
This course builds upon previous instruction and provides additional opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in gastrointestinal, reproductive, sensory, and endocrine systems in a variety of settings. Additional instruction is provided for oncology, mental health, teaching/learning concepts, and advanced dosage calculations. Nutrition, pharmacology, communication, cultural, and community concepts are integrated.

NUR 202 NURSING THROUGH THE LIFESPAN II 6 Hrs.
PREREQUISITE Two-Year Track: BIO 201, BIO 202, BIO 220, NUR 102, NUR 103, NUR 104, NUR 105, NUR 106, MTH 116 or higher, and ENG 101
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in cardiovascular, hematologic, immune, and genitourinary systems in a
NUR 203 NURSING THROUGH THE LIFESPAN III 6 Hrs.
PREREQUISITE Two-Year Track: BIO 201, BIO 202, BIO 220, NUR 102, NUR 103, NUR 104, NUR 105, NUR 106, MTH 116 or higher, ENG 101, SPH 106 or higher, PSY 200, and PSY 210
PREREQUISITE Mobility Track: MTH 116 or higher, BIO 201, BIO 202, BIO 220, ENG 101, NUR 200, SPH 106 or higher, PSY 200, and PSY 210
COREQUISITE: Humanities elective
This course builds upon previous instruction and provides additional opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in cardiovascular, respiratory, and neurological systems in a variety of settings. Additional instruction is provided for selected mental health disorders, selected emergencies, multiple organ dysfunction syndrome and related disorders. Teaching/learning concepts, advanced dosage calculations, nutrition, pharmacology, communication, and community concepts are integrated.

NUR 204 ROLE TRANSITION FOR THE REGISTERED NURSE 4 Hrs.
PREREQUISITE Two-Year Track: BIO 201, BIO 202, BIO 220, NUR 102, NUR 103, NUR 104, NUR 105, NUR 106, MTH 116 or higher, ENG 101, SPH 106 or higher, PSY 200, and PSY 210
PREREQUISITE Mobility Track: MTH 116 or higher, BIO 201, BIO 202, BIO 220, ENG 101, NUR 200, SPH 106 or higher, PSY 200, and PSY 210
COREQUISITE: Humanities elective
This course provides students with opportunities to gain knowledge and skills necessary to transition from student to registered nurse. Content includes current issues in health care, nursing leadership and management, professional practice issues for registered nurses, and transition into the workplace. Additional instruction is provided for preparing for the NCLEX-RN.

OFFICE ADMINISTRATION (OAD)

OAD 101 BEGINNING KEYBOARDING 3 Hrs.
PREREQUISITE: None.
This course is designed to enable the student to use the touch method of keyboarding through classroom instruction and outside lab. Emphasis is on speed and accuracy in keying alphabetic, symbolic, and numeric information using the keyboard. Upon completion, the student should be able to demonstrate proper technique at an acceptable rate of speed and accuracy, as defined by the course syllabus, in the production of basic business documents such as memos, letters, reports, and tables.

OAD 102 SPEED and ACCURACY 3 Hrs.
PREREQUISITE: OAD 101.
This course is designed to build speed while maintaining a high degree of accuracy and accomplishes this through a diagnostic approach of identifying individual keystroking weaknesses and prescribing specific drills to correct those weaknesses. Upon completion, the student should be able to demonstrate proper technique and improve speed and accuracy, as defined by the course syllabus.

OAD 103 INTERMEDIATE KEYBOARDING 3 Hrs.
PREREQUISITE: OAD 101.
This course is designed to assist the student in increasing speed and accuracy using the touch method of keyboarding through classroom instruction and outside lab. Emphasis is on the production of business documents such as memorandums, letters, reports, and tables. Upon completion, the student should be able to demonstrate proficiency at an acceptable rate of speed and accuracy, as defined by the course syllabus, in the production of business documents.

OAD 125 WORD PROCESSING 3 Hrs.
PREREQUISITE: OAD 101.
This course is designed to provide the student with basic word processing skills through classroom instruction and outside lab. Emphasis is placed on the utilization of software features to create, edit, and print common office documents. Upon completion, the student should be able to demonstrate the ability to use industry-standard software and generate appropriately formatted, accurate, and attractive business documents such as memos, letters, tables, and reports.

OAD 126 ADVANCED WORD PROCESSING 3 Hrs.
PREREQUISITE: OAD 125/CIS 196A.
This course is designed to increase student proficiency in using the advanced word processing functions through classroom instruction and outside lab. Emphasis is on the use of software to maximize productivity. Upon completion, the student should be able to demonstrate the ability to generate complex documents such as forms, newsletters, and multi-page documents.

OAD 130 ELECTRONIC CALCULATIONS 3 Hrs.
PREREQUISITE: None.
This course is designed to teach the touch system and problem solving methods of machine calculators. Emphasis is on basic mathematical functions. Upon completion, the student should be able to demonstrate an acceptable rate of speed and accuracy, as defined by the course syllabus to solve problems based on typical business applications.

OAD 131 BUSINESS ENGLISH 3 Hrs.
PREREQUISITE: None.
This course is designed to develop the student’s ability to use proper English. Emphasis is on grammar, spelling, vocabulary, punctuation, word usage, word division, and proofreading. Upon completion, the student should be able to write and speak effectively.

OAD 133 BUSINESS COMMUNICATIONS 3 Hrs.
PREREQUISITE: OAD 131.
This course is designed to provide the student with skills necessary to communicate effectively. Emphasis is on the application of communication principles to produce clear, correct, logically-organized business communications. Upon completion, the student should be able to demonstrate effective communication techniques in written, oral, and nonverbal communication.

OAD 135 FINANCIAL RECORDKEEPING 3 Hrs.
PREREQUISITE: None.
This course is designed to provide the student with an understanding of accounting concepts, principles, and terminology. Emphasis is on the accounting cycle and equations as they relate to different types of business ownership. Upon completion, the student should be able to demonstrate accounting procedures used in a proprietorship, partnership, and corporation.