

COURSE DESCRIPTIONS

Courses are listed in alphabetical order by course prefix.

ACCT 210 PRINCIPLES OF ACCOUNTING I

CREDITS: 4

This course is an introduction to fundamental accounting concepts. It focuses on understanding the steps in the accounting cycle, i.e., recording transactions, posting, preparing a trial balance, preparing the work sheet, financial statements and the adjusting and closing process. Additionally it includes the study of current and non-current assets, current and long term liabilities, payroll accounting, and partnership accounting.

ACCT 211 PRINCIPLES OF ACCOUNTING II

CREDITS: 4

This course continues the study of fundamental accounting concepts; however, it involves the students in the world of accounting as opposed to the record keeping function. The course includes the study of Generally Accepted Accounting Principles (GAAP) and the Conceptual Framework, the corporate form as the business entity, preparation of the Statement of Cash Flows, financial statement analysis, introduction to cost accounting, responsibility accounting, cost volume profit analysis, and budgeting. PREREQUISITE: ACCT 210 PRINCIPLES OF ACCOUNTING I

ACCT 212 INTERMEDIATE ACCOUNTING I

CREDITS: 4

This course is intended to develop each student's understanding of accounting by focusing on GAAP and the conceptual framework that provides the support for accounting information. It includes a review of the accounting cycle with advanced work in cash flow, inventory valuation methods, current and non-current assets and liabilities, their specific valuation, and balance sheet presentation. PREREQUISITE: ACCT 211 PRINCIPLES OF ACCOUNTING II

ACCT 213 INTERMEDIATE ACCOUNTING II

CREDITS: 4

This course is intended to develop each student's understanding of accounting information related to stockholders' equity, including: earnings per share calculations, accounting for investments in securities, revenue recognition, interperiod tax allocation, pensions, leases, and financial statement analysis are topics of focus in this course. PREREQUISITE: ACCT 212 INTERMEDIATE ACCOUNTING I

ACCT 215 PAYROLL ACCOUNTING

CREDITS: 3

The students will study payroll accounting, including the reporting formats for the various governments. Manual payroll applications are covered in the course to enhance the student's job skills. The governmental reporting will include monthly, quarterly, semi-annual, and year-end reports. PREREQUISITE: ACCT 211 PRINCIPLES OF ACCOUNTING II

ACCT 218 TAX ACCOUNTING I

CREDITS: 3

This course is the study of federal income tax including the principles of income recognition, the principles of business and non-business expense deductions and the concept of the capital gains and losses. Emphasis is placed on the individual non-business taxpayer. Case problems involve the preparation of individual tax returns and the various supporting schedules. PREREQUISITE: ACCT 211 PRINCIPLES OF ACCOUNTING II

ACCT 223 MANAGERIAL ACCOUNTING

CREDITS: 3

This course focuses on using accounting information by management as a competitive advantage in real-world situations. The student will be prepared to help management develop the internal financial reports needed for these situations. The use of basic cost accounting skills and basic communication skills to provide management with useful internal information will be stressed. PREREQUISITE: ACCT 211 PRINCIPLES OF ACCOUNTING II

ACCT 227 EXCEL FOR ACCOUNTING

CREDITS: 3

This course develops the use of electronic spreadsheets using Excel in accounting applications. It encourages students to develop spreadsheet formulas for problem solving. Students will create graphs and macros. This encourages the students to develop effective accounting formats in the presentation of financial information. PREREQUISITE: A WORKING KNOWLEDGE OF COMPUTERS, ACCOUNTING, AND COMPUTERIZED SPREADSHEET PRINCIPLES WITH APPROVAL OF INSTRUCTOR.

ACCT 228 QUICKBOOKS ACCOUNTING**CREDITS: 3**

This course focuses on the integration of computerized information into the basic accounting process. It provides the link between accounting in a traditional sense and its application in an automated environment. It is designed to develop a working knowledge of window-based software packages using Quick Books or Quick Books Pro commonly used by business. **PREREQUISITE: A WORKING KNOWLEDGE OF COMPUTERS AND ACCOUNTING WITH APPROVAL OF INSTRUCTOR.**

ACCT 280 ETHICS IN ACCOUNTING AND BUSINESS**CREDITS: 3**

This course is a study of the ethical implications of accounting and managerial decisions. Topics covered include the responsibility of the organization to the individual and society, the role of the individual within the organization, and ethical systems for American business. The course provides an examination and assessment of current American accounting and business practices.

ACCT 290 INTERNSHIP**CREDITS: 3**

The internship offers students the opportunity to gain experience in an accounting environment and apply what they have learned in the first three semesters of the accounting program. **PREREQUISITE: Must have satisfactorily completed all the required CORE courses in the first three semesters.**

AET 240 INTRODUCTION TO ALTERNATIVE POWER SYSTEMS**CREDITS: 3**

This course is an introduction to alternative and standby power generation systems. Types of generation and transfer switching techniques will be covered. **PREREQUISITES: IEL110 DC Theory and Lab, IEL115 AC Theory and Lab, ELT206 Solid State 1 Theory and Lab.**

AET 242 ELECTRICAL CODE STUDY FOR ALTERNATIVE ENERGY**CREDITS: 1**

This is a code course designed to familiarize students with the National Electrical Code. It deals with commercial and industrial wiring standards with heavy emphasis on the articles that deal with Solar, Wind and Communications Systems. During this course, the student will become accustomed to using the national Electrical Code and the articles that apply to Alternative Energy Systems. **PREREQUISITES: IEL122**

AET 245 ELECTRONIC CONTROLS**CREDITS: 1**

This course is an introduction to electronic control systems that include electromechanical, control processor and feedback systems. The course will cover the basic concepts of control systems including sensors, mechanical concepts, switching devices, actuators and digital controls. **PREREQUISITES: IEL110 DC Theory and Lab, IEL115 AC Theory and Lab, ELT206 Solid State 1 Theory and Lab**

AET 246 ELECTRONIC CONTROLS LAB**CREDITS: 1**

This course is a laboratory course to accompany the 'Introduction to Electronic Controls' course. Laboratory exercises will follow the lecture course and will provide experience in working with the components commonly found in electronic control systems. **PREREQUISITES: IEL110 DC Theory and Lab, IEL115 AC Theory and Lab and ELT206 Solid State 1 Theory and Lab.**

AET 248 WIND AND SOLAR POWER SYSTEMS THEORY**CREDITS: 3**

An introduction to Wind and Solar Power Generation will cover installation, troubleshooting and connection to existing power systems. **PREREQUISITES: IEL110 DC Theory and Lab, IEL115 AC Theory and Lab, ELT206 Solid State 1 Theory and Lab.**

AET 249 WIND AND SOLAR POWER SYSTEMS LAB**CREDITS: 3**

An introduction to Wind and Solar Power Generation will cover installation, troubleshooting and connection to existing power systems. **PREREQUISITES: IEL110 DC Theory and Lab, IEL115 AC Theory and Lab, ELT206 Solid State 1 Theory and Lab.**

ALH 200 ALLIED HEALTH TECHNICAL ELECTIVES**CREDITS: 2-8**

This is an area where incoming students can place credits they have taken in health related classes from accredited institutions. These classes in most cases, are not offered by WDT but do apply to the scope of the Allied Health program.

ALH 203 PERIOPERATIVE CONCEPTS IN ORTHOPEDIC SURGERY**CREDITS: 2**

This course is an in depth study of care of the Orthopedic patient during surgery. Concepts will include Orthopedic Trauma, Total Joint Replacement, Sports Medicine, and practices in Orthopedic Technology.

ALH 204 INTRODUCTION TO CARE OF THE PERIOPERATIVE PATIENT**CREDITS: 2**

This course is an introduction to the concepts for care of the Perioperative Patient and the practice of basic aseptic technique. The student will learn skills and practices of both the Scrub and Circulator role in the Operating Room and apply those skills in a lab setting. **PREREQUISITES: Must be a current LPN or RN.**

ALH 205 INTRODUCTION TO OPHTHALMIC SURGERY

CREDITS: 2

This course will prepare individuals in healthcare to work successfully in the office and surgical setting in ophthalmology. In this course students will be introduced to basic concepts in ophthalmic surgical procedures and care of the ophthalmic patient.

ATB 112 SHOP ORIENTATION, MAINTENANCE, AND SAFETY

CREDITS: 1

This course teaches a student proper handling of shop chemicals, personal safety, and maintenance of equipment. Students will become familiar with shop areas and what is expected in class.

ATB 116 PANEL REPLACEMENTS AND ADJUSTMENTS

CREDITS: 4

In this course, the students will learn the process for removing and replacing bolt on panels of a vehicle and aligning panels to proper adjustments. Students will also be instructed in removing and replacing moveable glass from the doors and the lock and latch assemblies. The class also addresses removing, replacing, and adjusting headlights.

ATB 119 BASIC SHEET METAL WORK

CREDITS: 5

In this course, the students will learn the proper use of hand and power tools. Student will learn the characteristics of sheet metal repair on collision and hail damaged panels, rusted-out panels, fiberglass panels, and the methods to repair them.

ATB 120 WELDING/EQUIPMENT

CREDITS: 5

This course teaches the student safety procedures and familiarization with MIG set up operations and welding in flat, horizontal, vertical, and overhead positions. In addition, the use and care of oxyacetylene welding and the cutting torch are covered.

ATB 125 PANEL REPLACEMENTS AND ADJUSTMENTS II

CREDITS: 5

This course teaches the student the procedures of removing and installing of large weld-on panels, such as quarter panels, roof panels, door skins, and other structural and non-structural components. Safety of working with those units is emphasized.
PREREQUISITE: First semester technical courses.

ATB 137 PAINT DEFECTS/CAUSES AND CURES

CREDITS: 2

This course will teach the students to visually identify and correct paint problems in the finish. Use a logical sequence of operations to repair a finish using a buffer and a sequence of different grit compounds and polishes.

ATB 138 ESTIMATING

CREDITS: 3

Students will be taught how to generate both handwritten and computer generated repair estimates.

ATB 139 REFINISHING

CREDITS: 5

This course will familiarize students with refinishing materials, refinishing equipment, vehicle surface preparation, and proper refinishing procedures and techniques. This course will also familiarize students with proper paint booth maintenance procedures.

ATB 148 AUTO PLASTICS REPAIR

CREDITS: 2

This course will teach the student how to identify different types of plastic used in the manufacture of automobiles. The student will also learn the safe procedures of prepping and repairing plastic parts using a two part plastic repair component to meet industry standards.

ATB 149 FINAL DETAILING

CREDITS: 1

This course will teach the student how to final clean and detail a vehicle prior to delivery for improved customer satisfaction. The students will learn how to apply vinyl pinstripes and decals.

ATB 154 REFINISHING II

CREDITS: 5

The student will use learned procedures and products to refinish a customer's vehicle as required. This course enables the student to repeatedly practice acquired refinishing techniques and procedures.

ATB 155 TINTING AND BLENDING

CREDITS: 3

The student will learn to tint for a blendable match and to blend so there is no noticeable color difference.

ATB 156 UNIBODY DIAGNOSING

CREDITS: 5

The student will learn to use "telltale signs" to help analyze damage and to use gauges and measuring systems to plan unibody repairs.

ATB 157 CONVENTIONAL FRAME DIAGNOSTICS**CREDITS: 4**

The student will learn to use “telltale signs” to help analyze damage and to use gauges and measuring systems to plan conventional frame repairs.

ATB 158 TWO-TONE AND TRI-COAT FINISHES**CREDITS: 1**

This course will teach the students the proper procedures and techniques to refinish two-tone and tri-coat vehicles.

ATB 159 COMPETENCY PANEL**CREDITS: 2**

The student will demonstrate the correct refinishing procedures and techniques to refinish a hood panel in basecoat/clear coat.

ATB 160 MASKING**CREDITS: 2**

This course will teach students how to properly mask vehicles for primer, color and topcoat application.

ATT 112 CHASSIS AND STEERING**CREDITS: 4**

Suspension and steering are studied during this semester. The student is required to diagnose poor steering and handling and tire-wear problems. The student will also be required to perform alignments on the major types of suspension and steering systems. Four-wheel alignment and drive-axle service are covered in detail. The student will be required to perform at least one alignment unassisted.

ATT 113 BRAKE SYSTEMS**CREDITS: 4**

The construction, operation, and repair of automotive brakes will be covered in the lecture portion of class using the textbook, audio visual aids, models, and handouts. Demonstrations of use of equipment and the procedures used to perform brake jobs will be performed in the laboratory.

ATT 114 STANDARD TRANSMISSIONS AND FINAL DRIVES**CREDITS: 3**

The construction, operation, and repair of automotive standard transmissions, dry clutches, drive lines, and differentials are covered. The lab will be correlated with the class and the student is required to complete all assignments. The class presentation will be conducted in the lab using instructional units that each student will use for practice.

ATT 226 AIR CONDITIONING**CREDITS: 2**

Air conditioning is a course designed to enable the student to understand the principles of refrigeration. The student will use modern equipment for reclamation and recharging. Modern diagnostic equipment will be used to diagnose and repair automobile air conditioning systems.

ATT 232 ENGINE OVERHAUL**CREDITS: 4**

Engine repair is designed to instruct the students in numerous techniques for the inspecting and repairing of camshafts, timing mechanisms, blocks, cylinder heads, crank, and piston assemblies. The student will also learn proper disassembly and reassembly techniques associated with modern automobile engines. Construction and repair of automotive engines are covered in lecture class using the textbook, audio visual aids, models, and handouts. Demonstrations on use of equipment and the procedures used to perform the tasks assigned in the lab will be given during lab time. **PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS**

ATT 233 AUTOMATIC TRANSMISSIONS**CREDITS: 5**

The construction, operation, and repair of domestic automatic transmissions will be covered using the text, audiovisual aids, models, handouts, and manuals. Lab Instruction will use classroom transmissions that will be disassembled, reassembled, and tested on the transmission dyno. If time permits, students will be able to work on their own transmission or transaxle.

BUS 101 INTRODUCTION TO BUSINESS**CREDITS: 3**

This is an introductory business course designed to give students a broad overview of business principles and concepts. Topics included are key functions of business, ownership structures, ethics, social responsibilities, international business, and general business operations.

BUS 120 PRINCIPLES OF MARKETING**CREDITS: 3**

This course will give students training in the study of the principles, methods, and problems of marketing. This includes markets, pricing, distribution, structure, products, and promotional activities. **PREREQUISITE: BUS 101 INTRODUCTION TO BUSINESS**

BUS 130 BUSINESS COMMUNICATIONS**CREDITS: 4**

This course is designed to help students develop proficiency in communication skills with an emphasis in the writing skills that are needed for career success. The course will emphasize composing, proofreading, editing, grammar, punctuation, and style for writing letters. Writing memos and reports are stressed. This is a course for the Medical Administrative and Transcription students.
PREREQUISITE: ENGL 010 BASIC ENGLISH

BUS 134 WRITTEN COMMUNICATIONS FOR BUSINESS**CREDITS: 4**

This course will give students a comprehensive study of written business communications including the writing process, corresponding at work, reporting data, and communicating for employment.

BUS 136 ORAL COMMUNICATIONS IN BUSINESS**CREDITS: 2**

This course is designed to provide students with communication skills to be used in the business world. The kind of results achieved in this course include work relationships that run smoothly; effective communication in demanding situations, such as hiring, firing, and business meetings; and an enhanced ability to speak up effectively when situations demand it. These goals will be accomplished with interactive learning on the part of the students.

BUS 137 PROFESSIONAL DEVELOPMENT**CREDITS: 1**

This course will give students a variety of skills to be successful in the professional workplace. Topics will include ethics, etiquette, and social awareness including the importance of being an active member in their community.

BUS 140 BUSINESS LAW**CREDITS: 3**

This is an introductory course in business law, encompassing contracts, sales, bailment, agency and employment, and business organizations.

BUS 150 ADVERTISING**CREDITS: 3**

This course introduces students to advertising principles and practices that contribute to business success. Through projects, lectures, reading, and discussion, students will learn how to recognize and plan effective advertising. PREREQUISITE: BUS 120 PRINCIPLES OF MARKETING

BUS 152 DESKTOP PUBLISHING FOR MARKETING I**CREDITS: 3**

Students will learn the art of desktop publishing including the creation of practical business documents/forms including design principles, consistency, proportion, balance, etc.

BUS 156 WEBSITE DEVELOPMENT FOR BUSINESS**CREDITS: 3**

This intermediate-level computer course is designed to give students the ability to use the power of visual media. This course will develop each student's skills in website development. PREREQUISITE: CIS 109 WORD, LEVEL I and CIS 114 POWERPOINT, LEVEL I

BUS 157 MULTIMEDIA FOR BUSINESS**CREDITS: 3**

This course concentrates on advanced website design features and the manipulation of various types of media including; pictures, drawings, video, and sound clips for use in business communications. PREREQUISITE: BUS156

BUS 160 PRINCIPLES OF SELLING**CREDITS: 3**

Students will learn the art of selling. In addition, negotiation and persuasion strategies are studied and practiced. It is important to note that in business one is continually "selling" oneself, so this class can benefit anyone who is trying to succeed in business. Instructional methods include lecture, role-playing, group processing, outside guest lecturers, and films.

BUS 210 SUPERVISORY MANAGEMENT**CREDITS: 3**

This course is designed to give students instruction in the areas of employee supervision. Students will learn to supervise production and performance. Students will also work in the area of small and large group supervision. PREREQUISITE: BUS 135 PROFESSIONAL DEVELOPMENT

BUS 224 PERSONAL FINANCE**CREDITS: 3**

This course provides the student with the basics of financial planning: budgeting, cash flow, use of credit, and risk management. The course focuses on the information graduates will need to provide themselves with a secure personal financial environment. Many of the skills and much of the information will transfer to the business environment as knowledge of employee benefits for the individual or for employees they may supervise.

BUS 225 RETAIL MANAGEMENT**CREDITS: 3**

This course studies retailing with emphasis on the development of retail institutions, store management, merchandising, contemporary problems, and current trends of retailers in today's business environment. **PREREQUISITES:** BUS 101 INTRODUCTION TO BUSINESS

BUS 226 PERSONAL INVESTMENTS**CREDITS: 2**

This course is an introductory course designed to help students gain a better understanding of the basic theories, instruments, environments, and practical techniques associated with personal investment decisions. Upon completion of this course, students will be better prepared to make sound personal investment decisions.

BUS 233 SMALL BUSINESS ENTREPRENEURSHIP**CREDITS: 3**

This course familiarizes students with the concept of entrepreneurial spirit while providing them with an understanding of the skills necessary to manage a small business. Students develop a business plan and oral presentation for starting a new business. **PREREQUISITES:** BUS 101 INTRODUCTION TO BUSINESS, BUS 120 PRINCIPLES OF MARKETING and ACCT 210 PRINCIPLES OF ACCOUNTING I.

BUS 240 ADVANCED COMPUTER APPLICATIONS FOR BUSINESS**CREDITS: 4**

The primary focus of the class will be on expert proficiencies in word processing and spreadsheet software. The class is designed to meet all the required skills needed to take the Microsoft Office User Specialist Expert exams in word processing and spreadsheet software. The curriculum will also cover additional Windows-based programs and computer operations.

BUS 290 INTERNSHIP**CREDITS: 2**

This course is designed to provide students an opportunity to apply the skills and knowledge acquired in the classroom through active participation in a local business. This is a supervised, volunteer, or paid internship.

CAB 228 KITCHEN DESIGN AND LAYOUT**CREDITS: 4**

This course will give students the opportunity to learn and practice math, drafting and designing custom kitchens and custom cabinetry. Also, blueprint reading of light commercial construction and millwork will be included.

CAD 101 DRAFTING FUNDAMENTALS**CREDITS: 3**

The student is introduced to the fundamentals of board drafting for both the mechanical and architectural fields. The course covers the principles of drafting, use of equipment, orthographic drawings, shape description, isometric drawings, and basic design concepts. The course strives to develop good drafting habits, technical abilities, and communication and teamwork skills.

CAD 111 ARCHITECTURAL DRAFTING I**CREDITS: 3**

This course is a continuation of Drafting Fundamentals, CAD 101. Course specializes in architectural drafting. Each student will learn to draw and lay out a set of residential house plans on the computer. **PREREQUISITES:** Three credits of the CIS MICROSOFT SOFTWARE APPLICATIONS and CAD 116 COMPUTERS FOR CAD.

CAD 116 COMPUTERS FOR CAD**CREDITS: 3**

This course is an introduction to the origin, development, and evolution to computers in today's . Students will cover the proper care of the computer and the operator and introduce the student to the basic file manipulation and storage media. This is also an introduction to the AutoCAD library of books and manuals and its basic commands including the use of the Cartesian coordinate system.

CAD 130 INTRODUCTION TO CAD**CREDITS: 3**

This course is a hands-on introduction to CAD instructing the student on basic PC-based CAD operation principles using AutoCAD software. Course emphasis includes 2D CAD drawing techniques, understanding the "vector" drawing environment, simple and complex vector drawings and "windows" for the CAD environment, plus working within model space and using layouts for final drawing presentation. **PREREQUISITE:** Three credits of the CIS MICROSOFT SOFTWARE APPLICATIONS and CAD 116 COMPUTERS FOR CAD.

CAD 135 ARCHITECTURAL CONSTRUCTION THEORY I**CREDITS: 3**

This course is an introduction to instructing the student of concepts and theory of architectural theory. Course emphasis includes a review of construction materials, foundations, floors, walls, roofs, and other associated topics.

CAD 201 INTERMEDIATE CAD**CREDITS: 3**

This course is a continuation of the Introduction to CAD course instructing the student in PC-based CAD application using the AutoCAD software product. Course emphasis includes: continued training in 2D CAD drawing techniques, creating and using symbol libraries, 3D drawings, and additional OS commands for the CAD environment. PREREQUISITE: CAD 126 INTRODUCTION TO CAD.

CAD 202 MECHANICAL DRAFTING**CREDITS: 3**

This drafting course covers drafting practices used to create engineering drawings, with a focus on drawing accuracy, drafting conventions, and readability. PREREQUISITES: CAD 232 MECHANICAL PRINCIPLES AND CAD 233 MECHANICAL PRINT READING.

CAD 203 PRINCIPALS OF COMMERCIAL THEORY I**CREDITS: 3**

Students will study the beginning aspects of commercial construction theory. Emphasis is placed on construction methods, materials, techniques, and terminology that are used in the commercial construction industry as well as architectural and engineering firms. PREREQUISITE: CAD135 ARCHITECTURAL CONSTRUCTION THEORY I.

CAD 214 INTRODUCTION TO CIVIL DRAFTING**CREDITS: 3**

This course introduces the student to basic drafting principles and surveying techniques needed for civil drafting work. The student will survey an area, draw a plot plan, establish existing contours for the lot layout, orientate a building on the lot, design parking and landscaping on the lot, and establish new contours. Students will be working in the field as well as in the lab to complete course objectives. PREREQUISITE: CAD126 INTRODUCTION TO CAD and CAD252 INTRODUCTION TO SURVEYING

CAD 215 LIGHT COMMERCIAL CONSTRUCTION W/MECHANICAL AND ELECTRICAL**CREDITS: 3**

This course is designed to introduce the student to the concepts, techniques, and safety practices of mechanical and electrical systems as they apply to the drafting environment. Course emphasis includes reading and drawing prints to show M and E requirements, safe practices, introduction to the National Electrical Code (NEC), M and E symbols, and basic concepts. PREREQUISITE: CAD 201 INTERMEDIATE CAD.

CAD 221 MECHANICAL DIMENSIONING**CREDITS: 3**

This course covers a working knowledge and application of coordinate and geometric dimensioning and tolerancing techniques for engineering drawings based on ASME V14.5 standard. PREREQUISITE: CAD 202 MECHANICAL DRAFTING.

CAD 222 PRINCIPALS OF COMMERCIAL THEORY II**CREDITS: 3**

Students will continue to explore the aspects of commercial construction theory. Emphasis is placed on construction methods, materials, techniques, and terminology that are used in the commercial construction industry, as well as architectural and engineering firms. PREREQUISITE: CAD 203 PRINCIPALS OF COMMERCIAL THEORY I.

CAD 232 MECHANICAL PRINCIPLES**CREDITS: 3**

This course equips the student with basic principles of mechanical operations, component interaction, and assembly procedure. Included in this course is the construction of schematic drawings for hydraulic, pneumatic, electrical, and electronic systems. PREREQUISITE: CIS105 OR CIS106 MICROCOMPUTER SOFTWARE APPLICATIONS I OR II AND CAD116 COMPUTERS FOR CAD.

CAD 234 MECHANICAL PRINT READING**CREDITS: 2**

Students will learn to read a variety of prints from different industries and to extract important construction and design information from each drawing. PREREQUISITES: CIS105 OR CIS106 MICROCOMPUTER SOFTWARE APPLICATIONS I OR II AND CAD116 COMPUTERS FOR CAD.

CAD 237 ARCHITECTURAL DRAFTING II**CREDITS: 3**

This course specializes in architectural residential design and drafting. The students will build on their knowledge and experience gained in previous classes to become more independent in designing and completing different architectural drawings with limited supervision from the instructor. PREREQUISITE: CAD 111 ARCHITECTURAL DRAFTING I.

CAD 239 ARCHITECTURAL DRAFTING III**CREDITS: 3**

This course continues the study of residential construction. Students will use Autodesk Revit software to complete residential drafting projects. Students will also use Microsoft PowerPoint to create an electronic version of their CAD Program Portfolio. PREREQUISITE: CAD 237 ARCHITECTURAL DRAFTING II.

CAD 242 COMPUTER AUTOMATED MANUFACTURING

CREDITS: 2

This course covers a working knowledge and application of computer-automated manufacturing.

CAD 244 3D ENGINEERING DESIGN

CREDITS: 3

This course covers a working knowledge and application of 3D design using AutoCAD Inventor. PREREQUISITE: CAD 201 INTERMEDIATE CAD.

CAD 250 INTRODUCTION TO MAPPING/GPS

CREDITS: 2

This course covers principals of reading and using maps using various existing technologies. Emphasis will be on understanding proper techniques of gathering usable mapping coordinates that can later facilitate creation of GIS systems.

CAD 251 INTRODUCTION TO GIS

CREDITS: 3

This course covers principals and applications of geographic information systems using ArcGIS software. Students will gain a basic understanding of creating geographic information systems through class and individual projects. Research outside the classroom may be necessary. PREREQUISITE: CAD 214 INTRODUCTION TO CIVIL DRAFTING.

CAD 252 INTRODUCTION TO SURVEYING

CREDITS: 3

This course includes the care and use of surveying instruments, field note procedures, land surveying, topographic surveying, and mapping from field notes. PREREQUISITE: CAD 250 INTRODUCTION TO MAPPING/GPS.

CAD 298 PROFESSIONALISM

CREDITS: 2

A course designed to instruct students in the everyday routines, techniques, and expectations of a drafting office environment. Note: those students who do not take CAD 299 INTERNSHIP will take this course. PREREQUISITE: CAD 126 INTRODUCTION TO CAD.

CAD 299 INTERNSHIP

CREDITS: 2

Work in a professional office for a minimum of 100 hours to gain office experience. The student will be responsible for finding an office that will accept them. The instructor may assist the student in finding an internship. The internship must be directly related to the drafting field and approved by the instructor. (NOTE: Students cannot be paid by the office while participating in an internship.) PREREQUISITE: CAD 126 INTRODUCTION TO CAD.

CAR 216 BLUEPRINT READING

CREDITS: 2

Blueprint reading will address the need to accurately interpret technical drawings and transform them into actual projects. Students will study the principles of architectural and structural details and measurements.

CHEM 106 CHEMISTRY SURVEY

CREDITS: 3

This course provides an introduction to the properties of matter, atomic structure, bonding, stoichiometry, kinetics, equilibrium, states of matter, solutions, and acid-base concepts. A required laboratory experience will accompany CHEM 106. PREREQUISITE: MATH101

CHEM 106L CHEMISTRY SURVEY LAB

CREDITS: 1

This course is a required laboratory experience to accompany CHEM 106.

CIS 090 INTRODUCTION TO COMPUTERS

CREDITS: 1

This course is an introductory course into computer use for those students who have little to no computer experience. Topics covered in this course will include computer hardware, windows, file management, and word processing.

CIS 100 INTRODUCTION TO KEYBOARDING

CREDITS: 1

This course is a course to learn touch-typing skills on the keyboard.

CIS 109 WORD, LEVEL I

CREDITS: 1

This course is an introductory course in word processing which includes basic technical concepts as well as hands-on experience. The utility of the computer is demonstrated by introducing Windows and word processing to the student.

CIS 111 WORD, LEVEL II

CREDITS: 1

This course is an intermediate level course in word processing which includes technical concepts as well as hands-on experience. The utility of the computer is demonstrated by advanced concepts in Windows and word processing. PREREQUISITE: CIS 109 or articulated credit for a Microsoft Word class.

CIS 112 EXCEL, LEVEL I**CREDITS: 1**

This course is an introductory course in spreadsheets which includes basic technical concepts as well as hands-on experience. The utility of the computer is demonstrated by introducing Windows and spreadsheets to the student.

CIS 113 EXCEL, LEVEL II**CREDITS: 1**

This course is an intermediate level course in spreadsheets which includes technical concepts as well as hands-on experience. The utility of the computer is demonstrated by advanced concepts in Windows and spreadsheets. PREREQUISITES: CIS 112 or articulated credit for CIS 109, CIS 112, CIS114.

CIS 114 POWERPOINT, LEVEL I**CREDITS: 1**

This course is an introductory course in presentations which includes basic technical concepts as well as hands-on experience. The utility of the computer is demonstrated by introducing Windows and presentations to the student.

CIS 116 ACCESS, LEVEL I**CREDITS: 1**

This course is an introductory course in databases which includes basic technical concepts as well as hands-on experience. The utility of the computer is demonstrated by introducing Windows and databases to the student. PREREQUISITE: CIS 109 or CIS 111 or CIS 112 or CIS 113.

CIS 117 ACCESS, LEVEL II**CREDITS: 1**

This course is an intermediate level course in databases which includes technical concepts as well as hands-on experience. The utility of the computer is demonstrated by advanced concepts in Windows and databases to the student. PREREQUISITE: CIS 116 and CIS 109 or CIS 111 or CIS 112 or CIS 113.

CIS 118 PUBLISHER**CREDITS: 1**

This course is an introductory course in creating and editing newsletters, brochures, flyers, and websites which includes basic technical concepts as well as hands-on experience. The utility of the computer is demonstrated by introducing Windows and publishing skills to the student. PREREQUISITE: CIS 111 or BUS 138.

CIS 130 INTRODUCTION TO 10-KEY**CREDITS: 1**

Ten Key Mastery is a course that is designed to teach the numeric keypad with speed and accuracy using industry standards for data entry. Proficiency on three employment tests used by three large interstate corporations helps the student meet employment standards.

CN 126 CISCO ACADEMY/NETWORKING TECHNOLOGIES I**CREDITS: 3**

CN 126 (CCNA 1 Networking Basics) introduces Cisco Networking Academy Program students to the networking field. The course focuses on network terminology and protocols, Open System Interconnection (OSI) models, cabling, cabling tools, routers, Ethernet, Internet Protocol (IP) addressing and network standards and design. Basic small office/home office networks will be addressed, including wireless and security configurations. Prerequisite: CNS 112 and CNS 114 or NO prerequisite if approved by the instructor.

CN 127 CISCO ACADEMY/NETWORKING TECHNOLOGIES II**CREDITS: 3**

CN 127 (CCNA2 Routers & Routing Basics) is the second of the four courses leading to the Cisco Certified Network Associate (CCNA) certification. Students will develop skills on initial router configuration, Cisco IOS Software management, routing protocol configuration, TCP/IP, and security and disaster recovery. Prerequisite: CN 126 Cisco Academy/Networking Technologies 1.

CN 128 CISCO ACADEMY/NETWORKING TECHNOLOGIES III**CREDITS: 3**

CN 128 (CCNA3 Switching Basics and Intermediate Routing) is the third of the four courses leading to the Cisco Certified Network Associate (CCNA) certification. This course will develop an understanding of how switches are interconnected and configured to provide network access to LAN users. This course also teaches how to integrate various network devices into a LAN.. Prerequisite: CN 127 Cisco Academy/Networking Technologies 2.

CN 130 CISCO ACADEMY/NETWORKING TECHNOLOGIES IV**CREDITS: 3**

CN 130 (CCNA 4 WAN Technologies) focuses on WAN Technologies and is the last of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The course focuses on advanced IP addressing on the LAN/WAN, Network design, Cisco device upgrades, and supporting converged networks with proper hardware and configurations. There is also content to assist the student to prepare for the CCNA certification exam. Prerequisite: CN 128 Cisco Academy/Networking Technologies 3.

CN 213 NETWORKING USING WINDOWS SERVER**CREDITS: 3**

This course features WINDOWS Server as the local area network operating system and provides hands-on tutorials for the student to plan and implement Windows Server. The study includes an introduction to configuring protocols such as TCP/IP, continues with how to configure name resolution as well as vital services such as DNS, WINS, DHCP, and IPSec and emphasizes ActiveDirectory configuration. PREREQUISITE: Students must have completed CNS 129

CN 215 NETWORK DESIGN AND VIRTUALIZATION**CREDITS: 3**

This course offers students a background in network virtualization technology needed to advance in today's workplace. It provides an overview of virtualization technology and using virtualization software in networked environments. It includes designing and building virtual networks, enhancing performance and security, and centralizing management. The student will work with virtual computing concepts, using real-world situations to build the skills necessary for a successful career in a computer industry increasingly focused on virtualization. PREREQUISITES: CN126 AND CN213.

CN 220 DESIGNING SECURITY FOR MS WINDOWS NETWORK**CREDITS: 3**

This course provides in-depth study of configuring, administering, and troubleshooting security services available within a Microsoft Windows Server network. It provides detailed hands-on activities that let you experience firsthand the process involved in securing and managing a Microsoft Windows Server network. The course will help the student prepare for Microsoft certification exams related to security. PREREQUISITES: Students must have completed CNS 213 NETWORKING USING MS WINDOWS SERVER or documentation of having passed an equivalent Microsoft certification exam.

CN 223 COLLABORATIVE TECHNOLOGIES**CREDITS: 3**

This course is designed to introduce the student to the concepts of Microsoft messaging services; and the installation, setup, and maintenance of a Microsoft Exchange Server. Prerequisite: CN 213 (May be taken concurrently)

CN 227 HETEROGENEOUS NETWORKS**CREDITS: 3**

This course is an Omnibus survey of technologies used to connect various networks utilizing a range of tools including: Websites, Wireless technologies and Operating System Independent programs will be explored. PREREQUISITE: Students must have completed CNS 211

CN 230 COMPUTER FORENSICS**CREDITS: 3**

This course offers students a background necessary to launch and complete a successful computer investigation. Students will learn about acquiring digital evidence to reporting its findings. Students will learn how to set up a forensics lab, how to acquire the proper and necessary tools, and how to conduct the investigation and subsequent digital analysis. PREREQUISITS: CN126 AND CN213.

CNS 100 INTRODUCTION TO ELECTRICITY AND DIGITAL LOGIC**CREDITS: 2**

This course is a general introduction to electricity and digital logic, providing a broad base for entry into a general study of microprocessor-based computer systems and computer networking. The class is designed to cover the theoretical and practical applications of electricity and number systems as applied to digital and computer electronics. It is also designed to cover the theoretical and practical applications of electricity and number systems as applied to Environmental Engineering Technicians. The course begins with an introduction to voltage, current, and resistance as they apply to both direct and alternating currents, number systems, and continues through the basic logic gates. Hands-on demonstration circuits and application number systems exercises are an integral part of the course.

CNS 112 A+ HARDWARE/SOFTWARE**CREDITS: 6**

A+ Hardware/Software lays a foundation of the basic information required to assemble a computer and troubleshoot problems that occur. You learn how to properly install, configure, upgrade, troubleshoot, and repair PC hardware and software. The course will help prepare the student to pass the CompTIA A+ certification exam to become a certified computer service technician and pursue a future career in IT technology or simply be equipped with the knowledge of how a computer works.

CNS 114 NETWORKING ESSENTIALS**CREDITS: 3**

This course will prepare students for the CompTIA Server+ certification exam and introduces students to basic networking concepts, Network Operating System management and administration, and network security. It also includes an overview of Windows NT/2000, Windows XP, Linux, and Novell Netware. This class prepares students to become server system specialists who can perform basic installation, operation, administration, and troubleshooting services. PREREQUISITE: A general understanding of digital logic, and the operation of IBM compatible desktop computers. This course includes installation and configuration of peripheral/adaptor cards; installation and configuration of peripheral devices to include hard drives, CD drives, and backup devices; assigning computer resources; and resolving computer resource conflicts.

CNS 129 COMPUTER OPERATING SYSTEMS**CREDITS: 3**

This course covers the Windows operating system. Subject areas include installation, configuration, administration, and network setup.

CNS 211 LINUX SERVER OPERATING SYSTEM**CREDITS: 3**

This course is designed to give the student the knowledge and experience to use Linux in a server role. The student will be able to configure the Linux environment and provide network services such as authentication, mail, time, file, and directory services.

PREREQUISITE: CNS 114**CNS 216 INTRODUCTION TO PROGRAMMING****CREDITS: 3**

This course is designed to provide the student with a solid foundation in both programming concepts and Microsoft Visual C#. Topics covered include compilation and execution of a Visual C# application and understanding data types, methods, behaviors, and expressions. Additionally the student learns to program in a visual environment. **PREREQUISITE:** MATH 101 (grade B or higher) or completion of any higher level math course (grade C or higher).

CNS 217 PROGRAMMING LOGIC AND DESIGN**CREDITS: 3**

This course is designed to provide the student an introduction to object-oriented programming and logic concepts. While not based in a specific language, the student will gain a good foundation for later courses in the programming curriculum. Concepts covered include the following: object-oriented programming concepts, methods and parameters, structure, loops, arrays, and advanced arrays. **PREREQUISITE:** MATH 101 (grade B or higher) or completion of any higher level math course (grade C or higher).

CNS 218 INTERMEDIATE PROGRAMMING**CREDITS: 3**

This course is designed to provide the student with a solid foundation in Microsoft Visual Basic 2005. The student, upon completion, should be able to setup a visual based application with the use of variables, selection and repetition structures, string manipulation, arrays, classes, and objects. **PREREQUISITES:** CNS 216 INTRODUCTION TO PROGRAMMING.

CNS 219 DATABASES**CREDITS: 3**

This course is intended to familiarize students with databases and the Structured Query Language (SQL) using MS SQL Server, Oracle and MS SQL. It will teach concepts of database design and maintenance and the differences and similarities among database engines.

CNS 221 TROUBLESHOOTING II**CREDITS: 3**

This course is designed to provide the student with advanced network troubleshooting skills. The student will use network analysis tools to determine network health and to help identify problems. The student will learn to analyze packet level information and to address system settings (i.e. registry) that influence performance, security, replication, and data transfer. **PREREQUISITE:** Students must have completed CNS 112 A+ Hardware/Software.

CNS 299 INTERNSHIP**CREDITS: 3**

This course is designed to provide the student an opportunity to apply the learned skills and knowledge he/she has acquired in the classroom through active participation in a work environment in a local business. This is a supervised position which may be a volunteer or paid status. This class may be used as a substitute for any second year 3-credit course based on location and substance of the internship opportunity. This class is available for AAS students and Programming diploma students. **PREREQUISITE:** The student must be a third or fourth-semester student enrolled in the Computer Networking Specialist program and be in good standing with Western Dakota Tech at the time the internship begins. Exceptions may be made on a case-by-case basis and must be approved by all members of the CNS faculty.

COC 110 KEYBOARDING I**CREDITS: 3**

The student will develop proper keyboarding speeds and touch keyboarding speed of at least 35 NWAM. Document formatting techniques including tables, correspondence and reports are all covered in the course.

COC 120 KEYBOARDING II**CREDITS: 3**

This course enables students to further develop keyboarding accuracy and speed. The student will produce tables, letters, memos, and reports involving advanced document formatting techniques using Microsoft Word.

COC 132 RECORDS MANAGEMENT**CREDITS: 3**

The student will learn and apply alphabetic, numeric, and subject filing according to the rules established by the Association of Records Managers and Administrators. This class also covers record storage and retrieval systems, equipment, file maintenance, and improvement of record control.

COC 141 COMPUTERIZED OFFICE APPLICATIONS**CREDITS: 2**

This course is designed to teach the student how to manage the medical office in a computerized setting. The student will learn to build databases and use them in many different ways. Once the databases are set up, the student will learn other office management skills such as entering patient data, arranging appointments, keeping track of charges and payments, filing insurance electronically, etc.

CPR 100 CPR/FIRST RESPONDER**CREDITS: 1**

Students will be instructed in Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care in accordance with the American Heart Association and First Aid. Also covered is what to do in the first five minutes. The information will enable the first responder to manage almost any emergency until professional help arrives.

CPR 103 INTRODUCTION TO EMERGENCY MEDICAL TECHNOLOGY (EMT)**CREDITS: 6**

Students will be instructed on all aspects of emergency medical care at the emergency medical technician/basic level in accordance with the National Registry of the Department of Transportation curriculum.

CPR 105 CPR**CREDITS: 1/2**

Students will be instructed in Cardiopulmonary Resuscitation (CPR) and Emergency Cardiac Care in accordance with the American Heart Association and First Aid. This course will be used for students in the Pharmacy and Phlebotomy programs.

CPR 106 EMERGENCY RESPONDER**CREDITS: 2**

Students will be instructed on all aspects of CPR/First Responder-Medical consistent with the National Registry Certification as set by Department of Transportation curriculum.

CPR 106L EMERGENCY RESPONDER LAB**CREDITS: 1**

Students work on practicums in preparation of the national written exams.

DMS 126 DRIVE TRAIN**CREDITS: 3**

This course introduces the basic principles of transmissions, differentials, and drive trains. Students will understand the operation of all drive train components, as well as the procedure for disassembly, repair, and the reassembling of each component. Included are how to perform failure analysis and how to trouble shoot drive train problems. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

DMS 127 HVAC**CREDITS: 2**

This course is designed to teach students basic heating and air conditioning principles. Through a series of job sheets and troubleshooting schematics, they will learn to identify, diagnose, and repair heating and air conditioning systems. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

DMS 203 DIESEL ENGINES**CREDITS: 4**

This course teaches the diagnostic and repair skills necessary for diesel engine work. All of the following areas are covered: diesel engine design, overhaul, tune-up, troubleshooting, and repair. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

DMS 205 HYDRAULICS**CREDITS: 3**

This course teaches fluids and how they are utilized to transmit energy and force. The maintenance and repair of pumps, actuators, valves, accumulators, cylinders, and motors are included. Students will learn how to maintain and service reservoirs, coolers, and filters. In addition to maintaining a hydraulic system, they will learn to read hydraulic schematics and troubleshoot hydraulic problems. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

DMS 228 CDL TRAINING (CLASS B)**CREDITS: 3**

This course enables students to obtain a Class "B" commercial driver's license (CDL). They will learn to drive, back up, and inspect a Class "B" vehicle (26,001+ lbs.). PREREQUISITES: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

DMS 230 STEERING & SUSPENSION**CREDITS: 4**

This course covers the diagnostic and repair skills necessary for suspension and steering systems. Included are heavy-duty steering systems, air and spring ride suspension systems, and truck alignment. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

DMS 234 BRAKES**CREDITS: 4**

This course covers the diagnostic and repair skills necessary for hydraulic and heavy-duty air brake systems, along with various components that make up the air system on heavy-duty trucks. The course will be taught using a combination of classroom lectures, demonstrations, and class/lab assignments. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

DMS 299 INTERNSHIP**CREDITS: 3**

Students will be placed throughout the area in truck and diesel shops. They will work with different mechanics learning the various methods of repairing engines, drive trains, suspension systems, break systems, hydraulic systems, and electrical systems.

PREREQUISITE: ALL PREVIOUS COURSE REQUIREMENTS MUST BE MET.

ECN 201 PRINCIPLES OF MICROECONOMICS**CREDITS: 3**

Principles of microeconomics studies basic economic concepts as they relate to consumer, worker, and business decisions.

Emphasis is given to satisfaction maximizing behavior by individuals and profit maximization by firms. Market structures are thoroughly analyzed regarding their effect on price, output, and competitiveness.

ECN 202 PRINCIPLES OF ECONOMICS (MACRO)**CREDITS: 3**

The course is designed to provide students with a better understanding of macroeconomic issues that affect their daily lives.

Economics is about making choices, i.e., how we use our limited “means” to satisfy our unlimited wants. Macroeconomics considers how the economy as a whole makes those decisions, both domestically and on the global scene.

ECN 204 PRINCIPLES OF MACROECONOMICS (ONLINE)**CREDITS: 3**

This course will satisfy the online economics requirement for Ag and Business. This class will be open to any student that wants to take economics online. Principles of Macro Economics considers the economy as a whole, how its sectors interact, and how monetary and fiscal policy can influence output, inflation, interest rates, unemployment, poverty, debt, and other factors. This course is non-transferrable.

ENGL 010 BASIC ENGLISH**CREDITS: 3**

ENGL 010 is a comprehensive, yet easy-to-learn, presentation of English grammar that helps the student to deal effectively with the communication process to become a better communicator.

ENGL 091 BASIC WRITING**CREDITS: 2**

This course will provide the basic elements of grammar and the writing process. Students will learn to communicate effectively by clarifying messages, analyzing a reader’s needs, and identifying different writing types.

ENGL 101 COMPOSITION**CREDITS: 3**

This course instructs students in reading critically and writing clearly, correctly, and persuasively. Students will study principles of grammar, rhetoric, and logic in order to analyze and compose text effectively. This includes work on personal, expository, and research essays.

ENGL 102 CAREER COMMUNICATIONS**CREDITS: 2**

This course covers the communication skills required for success during the job hunt and on the job.

ENGL 201 TECHNICAL WRITING I**CREDITS: 3**

This course presents the basic principles and forms of written and oral communication in the . Instruction leads students through planning tasks, identifying audiences, and gathering information. Major emphasis is on writing reports.

ENGL 202 TECHNICAL COMMUNICATIONS**CREDITS: 3**

Students will prepare oral and written communications required in the workplace. **PREREQUISITE: ENGL 101 or ENGL 201.**

ENGL 203 TECHNICAL WRITING II (online)**CREDITS: 3**

This is an online course. This course is writing and research based. This course is non-transferrable.

FET 102 ENVIRONMENTAL INSTRUMENTATION**CREDITS: 4**

This course exposes the student to a variety of analytical techniques and instruments utilized in environmental chemical analysis. It is designed to couple theory of equipment operation with a basic understanding of the chemical principles involved. The laboratory time is divided between practical hands-on bench work and field experiences.

FET 105 INTRODUCTION TO ENVIRONMENTAL SCIENCES**CREDITS: 4**

This course is a study of environmental interactions, including population and cultural problems, resource utilization, and impacts upon biotic systems. Presented to enable students to better understand and evaluate contemporary environmental problems and the application of science to their solution. The corresponding laboratory component provides students with the practical experience of measuring, recording and interpreting environmental data. Interdisciplinary knowledge is used to solve environmental problems. Some field trips may be required.

FET 106 INTRODUCTORY FIELD METHODS**CREDITS: 3**

This course introduces the field techniques used in environmental site assessment, ground water monitoring, and ground water testing and includes soil water sampling, ground water sampling, water quality testing, and water level recording. Students will explore topics of geophysical surveying, water well installation, piezometer installation and techniques to determine the direction of ground water flow.

FET 110 SOILS TESTING**CREDITS: 3**

This course covers the actual hands-on performance of laboratory and field tests on soils used for the construction of civil engineering projects. Most of the course is devoted to the lab and field procedures along with the necessary measurements, calculations and reports required for an accurate soil analysis. PREREQUISITE: FET100

FET 111 ENVIRONMENTAL GEOLOGY**CREDITS: 3**

Introduces geology as it relates to human activities, and is designed for both non-science majors and students interested in an environmental career. Emphasizes geologic hazards, including earthquakes, volcanic eruptions, flooding, mass movements, and pollution of water and soil resources. This course examines waste disposal along with related topics in medical geology and environmental law. This course may include optional field trip(s) to waste disposal sites and/or remediation sites.

FET 298 TECHNICAL COOPERATIVE WORK EXPERIENCE**CREDITS: 3**

The Cooperative Work Experience involves an individually developed, contracted work experience under the guidance of an approved employer, combined with a structured series of on-campus meetings with a program coordinator. Students have an opportunity to develop and pursue challenging work experiences which relate directly to their individual career plan. Credit will be commensurate with the work experience.

FET 299 FIELD INTERNSHIP**CREDITS: 2**

Environmental or Geo-Technical work experience in business, industry or government. 80 hours of designated work. PREREQUISITE: DEPARTMENTAL APPROVAL.

FETE 202 WATER QUALITY**CREDITS: 3**

Chemical and physical factors involved in evaluating water quality are examined with emphasis on water quality deterioration from landfills, underground storage tanks, and hazardous waste. Sampling techniques of groundwater, soil, surface water, quality assurance, quality control, and data processing techniques are included. Field exercises to acquire water quality data and service data gathering equipment will be conducted. Safety procedures are stressed. PREREQUISITES: FET 100 INTRO TO ENVIRONMENTAL SCIENCES or FET 101 INTRODUCTORY FIELD METHODS and FET 110 SOILS TESTING, CHEM 130 BASIC CHEMISTRY, CEHM 131 BASIC CHEMISTRY LAB, MATH 101 INTERMEDIATE ALGEBRA or equivalent.

FETE 204 ENVIRONMENTAL REGULATION**CREDITS: 2**

This course presents an overview of the regulations that are related to environmental protection, including OSHA regulations, Clean Air Act, SARA, RCRA and similar regulations. This course also provides an awareness of why the regulations exist, how they are enforced, penalties for noncompliance, and practical experience in interpretation of the regulations.

FETE 205 PRINCIPLES OF HYDROLOGY**CREDITS: 3**

This course will provide students a basic knowledge of the underlying principles of hydrology. In addition to an introduction to surface water hydrology, this course also introduces students to the basic concepts of ground water hydrology. Other topics explored in some detail include the hydrologic cycle, dams, Federal water agencies and their responsibilities, an introduction to drinking water and waste water treatment, water use conflicts, and emerging water issues. PREREQUISITES: FET 100 INTRO TO ENVIRONMENTAL SCIENCES, FET 102 ENVIRONMENTAL INSTRUMENTATION, and MATH 101 INTERMEDIATE ALGEBRA or equivalent.

FETE 222 INTRODUCTION TO WASTEWATER TECHNOLOGIES**CREDITS: 3**

This course provides an introduction to the causes of water pollution, the reasons for treating polluted waters and the fundamentals of wastewater treatment. Students will study the basic principles of treatment plant operation and the processes commonly used in pollution control facilities. Investigation of terms, mathematics and problem-solving techniques commonly used by wastewater treatment personnel will be included.

FETG 235 CONSTRUCTION MATERIALS SAMPLING & TESTING**CREDITS: 4**

This course will cover the materials, proportioning, mixing, placing, finishing, curing, sampling and laboratory/field testing techniques commonly used for Portland cement concrete. It will cover the testing and properties of asphalt cement and asphalt concrete. The course also will cover gradation, moisture control and density of gravels. Students will evaluate the capacity of cement and concrete to withstand stress and strain. This course will prepare students for the certification exam from the American Concrete Institute.

FFP 100 PARAMEDIC PREPARATORY I**CREDITS: 6**

This course consists of Introduction to Pre-hospital Care, Well-Being of the Paramedic, EMS Systems, Role and Responsibilities of the Paramedic, Illness and Injury Prevention, Ethic in Pre-hospital Care, General Pathophysiology, General Principles of Pharmacology, and Medication Administration. PREREQUISITES: EMT-BASIC

FFP 105 PARAMEDIC PREPARATORY II**CREDITS: 2**

This course consists of Therapeutic Communications, Life Span Development, Airway Management and Ventilation. PREREQUISITES: CPR100 EMT-BASIC, FFP100 PARAMEDIC PREPARATORY I

FFP 110 PARAMEDIC ASSESSMENT**CREDITS: 2**

This course consists of Research in EMS, History Taking, Techniques of Physical Exam, Patient Assessment, Communications, and Clinical Decision Making. PREREQUISITES: CPR 100 EMT-BASIC, FFP100 PARAMEDIC PREPARATORY I

FFP 115 PARAMEDIC CARDIOLOGY**CREDITS: 5**

This course consists of Pulmonology, Cardiology, 12-Lead EKG, and Advanced Cardiac Life Support. PREREQUISITES: CPR100 EMT-BASIC, FFP100 PARAMEDIC PREPARATORY I, FFP105 PARAMEDIC PREPARATORY II, PARAMEDIC ASSESSMENT

FFP 200 PARAMEDIC MEDICAL**CREDITS: 5**

This course consists of Neurology, Endocrinology, Allergies and Anaphylaxis, Gastroenterology, Urology, Environmental, Toxicology, Infectious and Communicable Diseases, Hematology, Gynecology, Obstetrics, Behavioral/Psychiatric Emergencies, and Advanced Medical Life Support. PREREQUISITES: CPR100 EMT-BASIC, FFP100 PARAMEDIC PREPARATORY I, FFP105 PARAMEDIC PREPARATORY II, FFP110 PARAMEDIC ASSESSMENT, AND CARDIOLOGY

FFP 205 PARAMEDIC SPECIAL OPERATIONS I**CREDITS: 4**

This course consists of Neonatology, Pediatrics, Pediatric Life Support, and Neonatal Resuscitation Program. PREREQUISITES: CPR100 EMT-BASIC, FFP100 PARAMEDIC PREPARATORY I, FFP105 PARAMEDIC PREPARATORY II, FFP110 PARAMEDIC ASSESSMENT, AND FFP115 CARDIOLOGY, FFP200 PARAMEDIC MEDICAL

FFP 210 PARAMEDIC SPECIAL OPERATIONS II**CREDITS: 7**

This course consists of Pre-hospital Trauma Life Support, Geriatrics, Abuse, Assault, Patients with special Challenges, Acute Interventions, in Chronic Care, Assessment Based Management, Emergency Vehicle Operations, Ambulance Operations and NREMT Skill Practice. PREREQUISITES: CPR100 EMT-BASIC, FFP100 PARAMEDIC PREPARATORY I, FFP105 PARAMEDIC PREPARATORY II, FFP110 PARAMEDIC ASSESSMENT, AND FFP115 CARDIOLOGY, FFP200 PARAMEDIC MEDICAL and FFP205 SPECIAL OPERATIONS I

FFP 298 PARAMEDIC CLINICAL**CREDITS: 3**

The student will start with the clinical observation hours to include rotations in the operating room to become proficient with airway techniques to include basic oral and nasal airways, oxygen administration, endotracheal intubation and other related airway related topics. The rotation also includes observation in the laboratory in drawing blood samples, processing the samples, BSI techniques to include sterile techniques. The next observation will be at the emergency department where the student will use patient assessment, history taking, clinical decision making, triage techniques, IV insertion and maintenance, medication administration, documentation techniques and other related techniques. PREREQUISITES: CPR100 EMT-BASIC, FFP100 PARAMEDIC PREPARATORY I, FFP105 PARAMEDIC PREPARATORY II, FFP110 PARAMEDIC ASSESSMENT

FFP 299 PARAMEDIC CLINICAL II**CREDITS: 5**

The student will start with the clinical observation hours to include rotations in the Neonatal Intensive Care Unit, OB Department, Pediatric Department, intensive Care Unit, Behavioral Unit, Morgue and Ambulance Field Internship. PREREQUISITES: CPR100 EMT-BASIC, FFP100 PARAMEDIC PREPARATORY I, FFP105 PARAMEDIC PREPARATORY II, FFP110 PARAMEDIC ASSESSMENT, FFP298 PARAMEDIC CLINICAL, FFP115 CARDIOLOGY, FFP200 PARAMEDIC MEDICAL, FFP205 & FFP210 SPECIAL OP I & II

FFT 100 WILDLAND FIREFIGHTER I**CREDITS: 3**

An introduction to the principles of fire suppression in the wildland setting: NWCG courses S-130, S-190, and Standards of Survival will be presented.

FFT 102 RESCUE I**CREDITS: 3**

In addition to a basic working knowledge of ropes and knots, the student will attain knowledge in and learn techniques for accomplishing high angle rescue, motor vehicle extrication, trench rescue, and confined space rescue.

FFT 105 PHYSICAL EDUCATION I**CREDITS: 2**

Health, physical conditioning, and nutrition will be covered as they relate to general fitness for meeting the physical requirements and demands for the job of firefighter; strength, stamina, and agility will be measured, and the student will train until measured goals are achieved, including the "Red Card Pack Test".

FFT 106 STRUCTURE FIREFIGHTER**CREDITS: 6**

This course is an introduction to the history, organization, and operation of a fire department; fire science and basic fire suppression techniques will be covered; the proper use of firefighter protective clothing and breathing apparatus will be taught; minimum standards for Structural Firefighter I will be met.

FFT 110 BUILDING CONSTRUCTION**CREDITS: 3**

The student will study various construction methods, as well as building materials and systems; the effect fire will have on given structures will be emphasized. PREREQUISITE: FFT106 STRUCTURE FIREFIGHTER

FFT 111 FORESTRY**CREDITS: 3**

This course will focus on the wildland ecosystems of the Great Plains and Black Hills. It will provide a foundation for further study of management for fire protection and wild land fire behavior.

FFT 112 PUBLIC FIRE EDUCATION**CREDITS: 3**

The student will meet basic criteria for public speaking and instruction as they relate to fire safety and related program delivery.

FFT 116 HAZARDOUS MATERIALS OPERATIONS**CREDITS: 3**

Hazardous materials recognition; operations at incidents involving the release of hazardous materials and the role of emergency response agencies will be covered. This course will meet the EPA/OSHA requirements for operations level certification.

PREREQUISITES: FFT 106 STRUCTURE FIREFIGHTER and/or FFT 100 WILDLAND FIREFIGHTER I.

FFT 117 FIRE CODES & INSPECTION PROCEDURES**CREDITS: 3 (classroom or WEB)**

The International Fire Code will be covered, as well as basic fire inspection procedures with emphasis on code enforcement.

FFT 118 40 HOUR HAZWOPPER CERTIFICATION**CREDITS: 2**

Hazardous materials recognition; operations at incidents involving the release of hazardous materials and the role of emergency response agencies will be covered. This course will meet the EPA/OSHA requirements for operations level certification.

PREREQUISITES: FFT 106 STRUCTURE FIREFIGHTER and/or FFT 100 WILDLAND FIREFIGHTER I.

FFT 202 RESCUE II**CREDITS: 3**

A continuation and expansion of Rescue I, this course covers ice rescue, rapid intervention, farm machinery extrication and rescue, and swift water rescue. PREREQUISITE: FFT 102 RESCUE I.

FFT 203 FIREFIGHTER FITNESS TESTING**CREDITS: 1**

The student will train until measured goals are achieved, including the "Red Card Pack Test," the "Firefighter Combat Challenge Test" and the "CPAT" test for meeting the hiring requirements of Municipal and Wild land Fire Departments.

FFT 204 DRIVER OPERATOR**CREDITS: 3**

This course contains the knowledge and skills required of drivers to safely and efficiently operate fire apparatus and vehicles in the fire environment. Students will be able to apply basic maintenance procedures and operate various types and complexities of pumps and engines. Students will be able to ensure vehicle readiness and act in a professional manner when operating a fire apparatus. PREREQUISITES: FFT 100 WILDLAND FIREFIGHTER I and FFT 106 STRUCTURE FIREFIGHTER.

FFT 205 STRUCTURE FIRE ORIGIN & CAUSE**CREDITS: 2**

Procedures for determining fire origin and cause will be presented for structure and wild land fires, along with scene and evidence protection and arson detection. The motivations and behavior patterns of arsonists and fire setters will be presented. NWCG course, FI-110 will be presented. PREREQUISITES: FFT 100 WILDLAND FIREFIGHTER I and FFT 106 STRUCTURE FIREFIGHTER.

FFT 206 WILDLAND FIRE SERVICE DRIVING**CREDITS: 1**

Presentation of the NWCG course S-216; basic knowledge and skills required of fire vehicle drivers to safely and efficiently operate fire vehicles in the fire wild land environment. PREREQUISITES: FFT 100 WILDLAND FIREFIGHTER I.

FFT 207 WILDLAND FIRE ORIGIN & CAUSE**CREDITS: 1**

NWCG course, FI-110 will be presented. Procedures for determining fire origin and cause will be presented for wild land fires, along with scene and evidence protection and arson detection. PREREQUISITE: FFT 100 WILDLAND FIREFIGHTER.

FFT 209 EMERGENCY VEHICLE OPERATIONS**CREDITS: 1**

This class covers basic knowledge and skills required of emergency response vehicle drivers to safely and efficiently operate emergency response vehicles on public and private roadways. Emergency Response Vehicle Laws and Standards will be presented. Skills will be assessed with emergency response vehicles on an EVOC course. PREREQUISITE: VALID DRIVERS LICENSE

FFT 210 WILDLAND FIREFIGHTER II**CREDITS: 2**

Instruction continues from Wild land Firefighter I with the presentation of NWCG courses S-211 (Portable Pumps) and S-212 (Saws). PREREQUISITE: FFT 100 WILDLAND FIREFIGHTER I.

FFT 212 ARFF (AIRCRAFT RESCUE FIREFIGHTING)**CREDITS: 3**

This course is focused primarily on the duties of a Rescue Firefighter; common aircraft designs and systems will be explored as well as specialized Aircraft Rescue Firefighting equipment. PREREQUISITES: FFT 106 STRUCTURE FIREFIGHTER.

FFT 215 WILDLAND/URBAN INTERFACE FIRE SUPPRESSION & PREVENTION**CREDITS: 3**

Presentation of the NWCG course S-215 and methodology of preventing fires in the urban interface through education, fuels treatment, and prescribed burns will be covered. PREREQUISITES: FFT100 WILDLAND FIREFIGHTER I.

FFT 218 STRATEGY & TACTICS**CREDITS: 3**

This course covers basic fire suppression attack strategies and tactics; incident management systems will be explored; emphasis will be on fire fighter safety and risk reduction. PREREQUISITE: FFT100 WILDLAND FIREFIGHTER I or FFT106 STRUCTURE FIREFIGHTER,

FFT 221 FIRE OFFICER I**CREDITS: 3**

Minimum standards for NFPA Fire Officer I will be met. PREREQUISITE: FFT222 ADVANCED WILDLAND FIREFIGHTER OR FFT106 STRUCTURE FIREFIGHTER

FFT 222 ADVANCED WILDLAND FIREFIGHTER

CREDITS: 3

The NWCG course S-290 (Intermediate Fire Behavior), S-270 (Air Operations) and S-131 (Advanced Firefighter/Squad Boss) will be presented. PREREQUISITE: FFT100 WILDLAND FIREFIGHTER I.

FFT 223 PROTECTIVE SYSTEMS - STRUCTURE

CREDITS: 2 (CLASSROOM OR WEB)

This course covers basic automatic fire detection and suppression systems; emphasis will be on Code requirements, safety and risk reduction. PREREQUISITE: FFT106 STRUCTURE FIREFIGHTER.

FFT 224 FIRE SERVICE INSTRUCTOR

CREDITS: 1

This course is designed to meet the Standards for NFPA 1041, Fire Service Instructor Professional Qualifications, 2002 version, which covers basic aspects of adult instructional methodology, safety, legal issues, record keeping and evaluations.

PREREQUISITE: FFT 106 STRUCTURE FIREFIGHTER or FFT100 WILDLAND FIREFIGHTER I.

FFT 227 HAZARDOUS MATERIALS TECHNICIAN

CREDITS: 3

This course is designed to prepare responders for offensive operations at incidents involving release of hazardous materials. This course will meet the EPA/OSHA requirements for technician level certification. REREQUISITE: FFT 116 HAZARDOUS MATERIAL OPERATIONS.

FFT 228 URBAN SEARCH & RESCUE (STRUCTURE COLLAPSE TRAINING)

CREDITS: 3

This course is designed to prepare responders for dealing with structure collapse due to a variety of natural and man - made causes. This course is designed to provide participants with the knowledge, skills and abilities to perform rescue at structural collapse scene. Recent terminology and technology will also be covered. PREREQUISITE: FFT102 RESCUE I.

FFT 229 INDUSTRY STANDARDS FIRE SCIENCE

CREDITS: 3

Student will be instructed in the responsibilities and demeanor expected of them upon being employed by a Municipal Fire Department or Wildland Fire Service Agency. This instruction shall include the proper wearing of the uniform and basic entry level firefighter roles and responsibilities PREREQUISITE: FFT100 and FFT106 or equivalent.

FFT 231 FIRE OFFICER II

CREDITS: 3

Minimum standards for NFPA Fire Officer II will be met. PREREQUISITE: FFT221 FIRE OFFICER I.

FFT 299 INTERNSHIP

CREDITS: 2-6

This course is designed to give students the opportunity to apply their skills while working with trained professional firefighters assigned to shift work at a staffed Fire Station. Students will learn the daily duties and responsibilities of working as a professional firefighter at stations and/or other divisions. Students will be expected to perform the daily duties of a firefighter for all assignments. Students may respond to emergencies and incidents as a crew member assigned to an apparatus. Students will be expected to work an 8 to 12 hour shift that may include some evenings and weekends. Internship opportunities are divided into the following sections:

Operations (Suppression) Division (STRUCTURE AND/OR WILDLAND)

STRUCTURE - 2 CREDITS

WILDLAND - 2 CREDITS

Prevention Division - 1 CREDIT

Education Division (STRUCTURE AND/OR WILDLAND)

STRUCTURE - 1 CREDIT

WILDLAND - 1 CREDIT

PREREQUISITES: FFT106 STRUCTURE FIREFIGHTER and/or FFT100 WILDLAND FIREFIGHTER.

HC 113 MEDICAL TERMINOLOGY FOR THE HEALTH PROFESSIONS

CREDITS: 2

Students will be taught the basic techniques of medical word building. These techniques will be applied to acquire an extensive medical vocabulary. The course introduces students to medical terms relating to the anatomy and physiology of body systems, pathology, diagnosis, medical treatments and procedures.

HC 114 ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS

CREDITS: 3

Students will gain an introductory understanding of the structure and function of the human body. This course emphasizes concepts essential for student success in health program curriculum as well as in practical, work-related environments.

HC 117 MICROBIOLOGY FOR THE HEALTH SCIENCES**CREDITS: 3**

This course is an introduction to microbiology. Students learn the history of microbiology, characteristics of microorganisms and the process of infection.

HC 140 CARDIAC MONITORING**CREDITS: 2**

This course will teach the skills to be employed as an ECG technician or a telemetry technician in a hospital, clinic, or outpatient setting.

HC 145 ELECTRONIC HEALTH RECORDS**CREDITS: 2**

This course will give students the foundation of knowledge and skill to utilize electronic health records in various health care settings.

HRT 100 HOT ROD CHASSIS FABRICATION**CREDITS: 16**

This class is comprised of both theory and lab experiences in automotive custom car fabrication. Students will learn the types of metal, tubing and sheet metal used in custom car construction. The students will use metal working tools and equipment, and learn measuring and pattern development. MIG, TIG and Oxy-acetylene welding will be covered. Students will be trained in custom automotive frame fabrication and design. Students will examine cross members, roll cages and automotive front and rear suspension setups including straight axle, independent, and air spring suspensions design and installations. The students will be required to document their work and create a portfolio of their accomplishments while at school and have a resume' to present for employment.

HRT 110 HOT ROD BODY FABRICATION**CREDITS: 16**

This course provides an in-depth knowledge of automotive construction and custom vehicle and motorcycle fabrication. This gives students additional knowledge and skill, giving them additional opportunities for employment.

HRT 200 HOT ROD REFINISHING**CREDITS: 15**

This course provides advanced training in Specialty Automotive finishes. It also offers continued development in refinishing preparation procedures and final assembly of custom cars. This gives students additional knowledge and skill, giving them additional opportunities for employment.

HRT 210 HOT ROD PERFORMANCE**CREDITS: 18**

This course provides an in-depth knowledge of automotive mechanical and electrical systems. This gives students general knowledge and skill, giving them additional opportunities for employment in the Custom Hot Rod Industry.

HRT 220 HOT ROD UPHOLSTRY**CREDITS: 16**

This course provides an in-depth knowledge of automotive upholstery industry, construction and custom vehicle trim and upholstery fabrication. This course completes the entry preparation of an entry-level automotive upholstery person. With the completion of this course the student can possibly open an upholstery business or use it to bring business into a custom shop. The main goal is to supply the HRI student the opportunities for employment in the automotive industry.

HUC 101 INTRODUCTION TO HEALTH UNIT COORDINATING**CREDITS: 2**

This course introduces the student to the basic responsibilities of health unit coordinators and the health care environment in which they work.

HUC 135 HEALTH UNIT COORDINATING PROCEDURES**CREDITS: 2**

This course teaches the fundamentals and knowledge needed to be employed as a Health Unit Coordinator. PREREQUISITE: HUC101 INTRODUCTION TO HEALTH UNIT COORDINATING

HUC 140 HEALTH UNIT COORDINATING LAB**CREDITS: 2**

A laboratory course during which the student practices health unit coordinating skills and procedures in a simulated work environment and applies knowledge acquired in the *Health Unit Coordinating Procedures* course. PREREQUISITES: HUC 101 INTRODUCTION TO HEALTH UNIT COORDINATING.

HUC 298 HUC CLINICAL**CREDITS: 2**

This course provides the HUC/PCT students the opportunity to apply the skills and knowledge obtained from the classroom environment to the clinical setting while under the guidance of a preceptor and the course instructor. PREREQUISITE: HUC101 INTRODUCTION TO HEALTH UNIT COORDINATING , HUC135 HEALTH UNIT COORDINATING PROCEDURES, HUC140 HEALTH UNIT COORDINATING LAB, CPR100

HUM 102 CRITICAL THINKING**CREDITS: 3**

A comprehensive and systematic approach to critical thinking, this course introduces the student to a process that results in decisions regarding what to believe and what to do. Critical thinking is careful reasoning. A critical thinker is committed to clarity, accuracy, and precision. The student will develop the skills necessary to solve legal problems.

IEL 110 DIRECT CURRENT CIRCUITS – THEORY AND LAB**CREDITS: 3**

This course introduces the fundamental concepts of basic electricity and Ohms Law. It includes basic circuit analysis of series circuits, parallel circuits, series-parallel circuits, and network theorems. A study of electrical quantities including cells, batteries, magnetism, electromagnetism and DC measuring instruments are included.

IEL 115 ALTERNATING CURRENT CIRCUITS – THEORY AND LAB**CREDITS: 3**

This course is a study of basic AC quantities and measurements using the oscilloscope. The course also addresses theory and lab study of inductance and capacitance and their relationship with resistance in RLC circuits analysis. Series and parallel resonant circuits are used in the lab experiments. To round out the course, a study of basic transformer characteristics is covered.

IEL 123 INDUSTRIAL DATA COMMUNICATION**CREDITS: 2**

The course will cover the operation and installation of data communication systems. Students will be introduced to telephone and video system operation and cable installation. In addition, an introduction to networking is given with special emphasis on Category IV cables and fiber optics. This course is designed to prepare the industrial electrician for the ever increasing demand that electricians install cabling systems in residential, commercial and industrial projects. PREREQUISITE: IEL 124 SOLID STATE DEVICES.

IEL 124 SOLID STATE DEVICES**CREDITS: 3**

This course covers the physical make up and characteristics of diodes, rectifiers, SCR's, Triacs, Transistors, and Digital Logic devices. Methods of biasing, circuit operation, and trouble-shooting are covered in detail. Laboratory experiments reinforce learning and allow students to see actual circuit applications.

IEL 127 BLUEPRINT READING**CREDITS: 3**

This course will teach the basics of blueprint reading. A great part of the course is devoted to construction topics other than the electrical trade. It is important that the electrician be able to read a blueprint for structural information and other mechanical and plumbing information. This is imperative for proper coordination of the electrical installation. PREREQUISITE: IEL 128 INTRO TO ELECTRICAL WIRING.

IEL 129 INTRODUCTION TO ELECTRICAL WIRING LAB**CREDITS: 1**

This is a lab course intended to accompany the Introduction to Electrical Wiring Class. Through actual hands on experiments on developed trainers in the lab, the student will be able to reinforce the concepts learned in Introduction to Electrical Wiring. This course will be taken concurrently with Introduction to Electrical Wiring. PREREQUISITE: IEL 130 INTRODUCTION TO ELECTRICAL WIRING.

IEL 130 INTRODUCTION TO ELECTRICAL WIRING**CREDITS: 2**

This course is designed to emphasize the importance of safety and to provide a foundation for practical electrical wiring. Information included begins with a general introduction of the National Electrical Code and laws pertaining to electrical licensing and installation. Theory and lab experience is used in the study of residential wiring principles and common residential circuit hookups. This class will be one hour lecture followed by a one hour lab.

IEL 135 BASIC ELECTRICAL MATERIALS AND DEVICES**CREDITS: 1**

This course is designed to cover essential electrical materials, identify the industry's commonly used materials and understand its terminology.

IEL 140 WELDING & FABRICATION FOR LIGHT COMMERCIAL APPLICATIONS**CREDITS: 2**

This course is designed to teach students welding skills to cut, fabricate and weld brackets, hangers for conduits and panels, stands and hanging platforms for transformers using oxyacetylene cutting and wire feed (GMAC) welding procedures.

IEL 201 ELECTRICAL CODE STUDY I**CREDITS: 3**

This is a wiring course designed to familiarize students with residential and light commercial wiring with an emphasis on electrical safety. During this course, the student will become accustomed to using the National Electrical Code along with good design techniques to develop wiring systems. PREREQUISITE: IEL 130 INTRODUCTION TO ELECTRICAL WIRING.

IEL 211 ELECTRICAL MOTOR CONTROL**CREDITS: 3**

This course is intended to familiarize the student with motor control theory from basic concepts to much more complicated circuits. This course should be taken concurrently with motor control lab. PREREQUISITES: IEL 128 INTRODUCTION TO ELECTRICAL WIRING and IEL122 ELECTRICAL CODE STUDY I.

IEL 213 ELECTRICAL HEATING AND APPLIANCES**CREDITS: 2**

This course is intended to provide the student with an understanding of electrical heat and electrical heating control circuits. Installing, maintaining and troubleshooting electrical heating systems are an important part of the industrial electrician's career. This course will also introduce the student to air conditioning and heat pump operation .

IEL 214 ELECTRICAL CODE STUDY II**CREDITS: 2**

This course deals with commercial and industrial wiring standards with heavy emphasis on the National Electrical Code. Electrical services are studied in more depth; grounding and bonding are emphasized, and wiring methods for several types of specific locations are studied. PREREQUISITES: IEL 201 ELECTRICAL CODE STUDY I.

IEL 216 MOTOR CONTROL LAB**CREDITS: 2**

This course utilizes a hands-on approach to learning motor-control circuit wiring. The student will complete the control wiring of sample circuits using the developed trainers in the lab. This hands-on experience greatly helps the student in retaining the information that is presented in the Electrical Motor Control course. PREREQUISITES: IEL 128 INTRODUCTION TO ELECTRICAL WIRING, IEL 122 ELECTRICAL CODE STUDY I and IEL 211ELECTRICAL MOTOR CONTROL (OR CONCURRENTLY).

IEL 218 WIRING LAB I**CREDITS: 3**

The purpose of this course is to provide the student with the basic skills and technical knowledge required to enter the electrical construction field as an inside wire person. The course activities provide varied applications of practical job and shop practices and experience in the use of an electrician's tools and equipment. Actual on the job training is obtained through the rough in wiring of the WDTI project house. PREREQUISITES: IEL 128 INTRODUCTION TO ELECTRICAL WIRING and IEL 122 ELECTRICAL CODE STUDY I (OR CONCURRENTLY).

IEL 219 ELECTRICAL PLANNING AND ESTIMATING**CREDITS: 2**

This course is used as an introduction to the wiring of the WDTI project house. The job site instructor will lead the students in planning the electrical installation that will be made as part of the wiring lab. The students will obtain experience in making their own blueprint drawings of an actual electrical installation. PREREQUISITES: IEL 128 INTRODUCTION TO ELECTRICAL WIRING.

IEL 220 WIRING LAB II**CREDITS: 3**

This course is a study of the National Electrical Code in relation to commercial and industrial electrical installations. Actual electrical installations, compiling pertinent facts for bidding purposes and on the job training through the wiring of the WDTI project house are included in this course. PREREQUISITE: IEL 128 INTRODUCTION TO ELECTRICAL WIRING and IEL 214 CODE STUDY II (OR CONCURRENTLY).

IEL 221 PROGRAMMABLE LOGIC CONTROLLERS**CREDITS: 2**

This course introduces programmable logic controllers and the concepts and structure of programmable controllers and provides beginning programming skills. The student will have the basic knowledge to be able to do limited maintenance, programming and installation of programmable controller systems in the industrial environment. The student will also have the background for more advanced training in programmable control. PREREQUISITE: IEL 211 ELECTRICAL MOTOR CONTROL and IEL 216 MOTOR CONTROL LAB.

IEL 222 PLC LABS**CREDITS: 3**

This course will give the student hands-on experience in programming Programmable Controllers. The theory learned in previous course work will be put into practice in a laboratory environment that includes simulated industrial applications. Programmable control is an area of ever-increasing industrial importance today. PREREQUISITES: IEL 211 ELECTRICAL MOTOR CONTROL, IEL 216 MOTOR CONTROL LAB and IEL 221 PROGRAMMABLE LOGIC CONTROLLERS (OR CONCURRENTLY).

IEL 223 ELECTRICAL MOTOR LAB**CREDITS: 1**

This is a laboratory course intended to accompany the motor study course. Through actual hands-on experiments on developed trainers in the lab, the student will be able to reinforce the concepts learned in motor study. This course should be taken concurrently with Electric Motor Fundamentals and Maintenance. PREREQUISITES: IEL226 ELECTRIC MOTOR FUNDAMENTALS & MAINTENANCE.

IEL 224 POWER DISTRIBUTION**CREDITS: 2**

Transformers are considered the single most important type of equipment in the process of distribution of electrical power. Transformer study is therefore a large portion of this course. Included in this course are transformer theory, code and actual transformer connections. PREREQUISITES: IEL 128 INTRODUCTION TO ELECTRICAL WIRING and IEL 122 ELECTRICAL CODE STUDY I.

IEL 226 ELECTRICAL MOTOR FUNDAMENTALS AND MAINTENANCE**CREDITS: 2**

This course involves a study of the operational theory and construction of AC and DC motors. It is important for the electrician to have an understanding of motor principles and motor construction in order to facilitate proper motor installation and trouble shooting. This course should be taken concurrently with Electric Motor Lab. PREREQUISITE: IEL 211 ELECTRICAL MOTOR CONTROL and IEL 216 MOTOR CONTROL LAB.

IEL 299 ELECTRICIAN INTERNSHIP/CO-OP**CREDITS: 6**

This course will give the students in the Industrial Electronics program an opportunity to experience the electrical industry in areas such as construction, industrial, mining, or maintenance. They will work in the field for a minimum of 5 months and be required to provide weekly reports on their experience and how this experience is helping them become an electrician.

LET 110 INTRODUCTION AND OCCUPATIONAL SOCIOLOGY OF LAW ENFORCEMENT**CREDITS: 3**

The history and social significance of the law enforcement profession is studied along with the role, responsibilities and demands upon law enforcement officers in today's society. The role of a law enforcement officer as it relates to the philosophy of community policing as well as the history of community policing are explored. Also included are topics concerning motivation, civil liability, job stress, sociological concepts that are applicable in the practice of law enforcement. The student will learn about culture, socialization, social deviance, social stratification, gender and minority inequalities, marriage and family relationships, education and social change in collective behavior.

LET 112 CONSTITUTIONAL LAW**CREDITS: 3**

This course presents the Constitution, Bill of Rights and other amendments from a Criminal Justice perspective. Practical examples and court decisions will be used to illustrate how law enforcement officers and other members of the Criminal Justice system apply constitutional concepts in the course of their duties. Special emphasis is placed on the search and seizure requirements of the Fourth Amendment.

LET 117 INDUSTRY STANDARDS**LET 127****LET 217****LET 227****CREDITS: 0**

Students will be instructed in the responsibilities and demeanor expected of them upon being employed by a law enforcement agency. This instruction shall also include the proper wearing of uniform and basic facing movements as they relate to dismounted drill.

LET 118 SPANISH FOR LAW ENFORCEMENT ABC**CREDITS: 3**

This course is designed to provide non-Spanish speaking students with the opportunity to learn work-specific Spanish language. Students learn basic phrases and questions necessary to carry out their law enforcement duties. Cross-cultural issues will also be discussed regarding the law enforcement and Hispanic communities.

LET 119 CRIMINAL LAW AND PROCEDURES**CREDITS: 3**

Students will be taught the differences between the criminal and civil law process. They will understand how to interpret criminal statutes and apply those statutes to violations in a law enforcement application. The study of federal, state and local governments and their respective courts will be covered. The criminal code, pre trial and post trial procedures, from a constitutional basis as well as that found in South Dakota Codified Law Titles 22, 23 and 23A will be covered. Students will become familiar with proper trial preparation, conduct and demeanor as it relates to the law enforcement officer.

LET 120 MECHANICS OF ARREST/PHYSICAL TRAINING**CREDITS: 2**

This course is intended to create the ability and confidence in the student to successfully cope with physical situation confronted by law enforcement officers and to eliminate excessive use of force by officers and respond appropriately with swift and efficient solutions, whether physical or verbal. This course of instruction will cover proper search and handcuffing techniques, proper use and deployment of OC aerosol and impact weapons. Students will also be introduced to methods of body-muscle warming and stretching to prevent muscle strain and injury.

LET 121 CRIMINAL INVESTIGATIONS**CREDITS: 4**

Students will be taught the fundamentals of the crime scene and post crime investigation as they relate to property crimes such as burglary, robbery, theft, arson, narcotics and explosives. In addition, fundamentals of crime scene and post crime investigation as it relates to personal crimes such as crimes of violence to include child abuse, sex crimes and murder. Students will analyze methods of handling crime scenes, use of specific evidence and preparation of the case for prosecution. Specific study of South Dakota Codified Law is covered. **PREREQUISITES:** LET 112 CONSTITUTIONAL LAW and LET 119 CRIMINAL LAW & PROCEDURES or approval from the LET Lead Instructor.

LET 122 INTERVIEW AND INTERROGATION/REPORT WRITING**CREDITS: 3**

This course will distinguish between interrogation and interviewing and includes instruction in the preparation and planning for interviews, effective questioning techniques as well as constitutional constraints. Students will also receive lecture and engage in practical exercises concerning proper report/statement writing skills. Emphasis is placed on the gathering and documentation of pertinent information and construction of report narratives, using clear concise language.

LET 124 JUVENILE METHODS**CREDITS: 3**

The studies of juvenile delinquency use of juvenile investigation procedure and community resources available to deal with juvenile problems are included in this course. This course will explain the theory of juvenile crime and offenders, as well as specific South Dakota Codified Law. The court process and types of juvenile correctional institutions will be covered.

LET 126 PHYSICAL TRAINING (SECOND SEMESTER)**LET 216 PHYSICAL TRAINING (THIRD SEMESTER)****LET 226 PHYSICAL TRAINING (FOURTH SEMESTER)****CREDITS: 1**

Students will periodically review previous defensive tactics and mechanics of arrest techniques. Students will continue to engage in physical fitness training to enhance muscle strength, tone and flexibility.

LET 212 ACCIDENT INVESTIGATIONS**CREDITS: 2**

Course is designed to create the ability within each student to understand the basics of proper accident investigation techniques. This will include the human element, physical evidence, speed estimates, some measurements and diagramming (field/scale). The content of this course is equivalent to that of an Intermediate Level Accident Investigation course.

LET 213 CRIMINOLOGY AND ABNORMAL BEHAVIOR**CREDITS: 3**

Course is a basic study of crime and criminal behavior. The nature and causes of crime and theories dealing with criminal behavior and delinquency are covered. Students will be taught maladaptive behavior patterns with emphasis on classification and symptom recognition. Major areas of study include general theoretical perspectives, anxiety disorders, sexual variations, dysfunctional personality disorders, and substance use disorders.

LET 215 COLLECTION/PRESERVATION OF EVIDENCE**CREDITS: 3**

This course deals with the accepted techniques and methods of crime scene preservation, management and the collection of evidence. This includes locating evidence, packaging, and transmittal of evidence to the proper forensic laboratory. Students will also receive instruction in the proper methods of obtaining fingerprints, both latent and rolled.

LET 218 PATROL PROCEDURES I**CREDITS: 3**

Students will receive lecture on various patrol procedures. The history of the police patrol will be covered, leading to modern day patrol tactics and duties. Pre shift preparation, safe vehicle stops, highway interdiction techniques, alarm response, building search techniques, intoxicated drivers and domestic violence will be covered. Instruction through lecture and hands-on application will be the primary focus. The specific study of Title 32 of the South Dakota Codified Law will be required. **This course requires a valid driver's license.**

LET 222 ADVANCED ISSUES IN POLICING**CREDITS: 2**

This course will provide a survey of relevant contemporary issues affecting the law enforcement career field and public safety. The format will be interactive, focusing on current events and trends, court decisions, new technologies, and subjects not addressed in any of the students' previous course offerings. An historical perspective will be presented allowing students to build a foundation for the purpose of problem and topic analysis.

LET 224 LAW ENFORCEMENT PRACTICUM**CREDITS: 2**

This course is designed to give each student an opportunity to participate in hands-on experience with several different types of law enforcement experiences and agencies. Each student will report to and work one shift per day, two days a week for eight weeks. Students will be assigned to specific and different law enforcement tasks working with the actual officers during their duty shifts. **PREREQUISITES:** Completion of the LET Semesters 1, 2, and 3 or approval from the LET Lead Instructor.

LET 228 CORRECTIONS AND PAROLES**CREDITS: 2**

Students will be furnished information regarding the system in the U.S. of corrections, parole and probation. Also furnished is information on how these three parts of the criminal justice system interface with each other and with the law enforcement officer on the street. Students will be exposed to the duties and responsibilities of the personnel involved in each of these areas.

LET 230 PATROL PROCEDURES II**CREDITS: 3**

This course is designed to build on the foundation established by Patrol Procedures I. The student will receive further study of South Dakota Codified Law: Title 32 and Title 41. The concepts of Patrol Procedures I as well as other technical courses in this program will be applied in hands-on scenarios. This will include the initial response of the patrol officer, report writing, preliminary investigation and testifying in court. At times students will be required to attend actual court trials that may be occurring within the local judicial system. **This course requires a valid driver's license.**

LET 231 LAW ENFORCEMENT ACADEMY PREPARATORY/ASSESSMENT**CREDITS: 3**

This course is designed to meet standards of preparation for students who are seeking South Dakota State Reciprocity Certification. This course will serve as a comprehensive knowledge and skills assessment.

LET 232 TECHNOLOGY IN LAW ENFORCEMENT**CREDITS: 2**

This course is designed to introduce students to and when appropriate to certify in the use of various pieces of equipment/tools that are available to law enforcement officers in today's society. The technology on which the students will train with (but not limited to) will be GPS/GIS, TASER, RADAR, LIDAR, and Forensic Mapping utilizing a Total Station data collection and Map Scenes software. Additional technology will be integrated into the class as science provides updated and innovative equipment to the world of law enforcement.

LET 251 FIREARMS TRAINING**CREDITS: 2**

The emphasis of this course will be safety, proper handling, proficiency and care of firearms. Information regarding the proper methods of using and time to use firearms will be covered in depth. Instruction in the proper sighting, trigger pull and all other elements to safe and proper weapon use will be given. There will be extensive live fire training with the 9mm semi automatic and 12 gauge shotgun. Course will include combat and stationary-type shooting techniques. This course cannot be taken by anyone who has sustained a criminal conviction, meeting the guidelines of Title 18 USC Sec. 922, or who is currently under the requirements of a Protection Order. **PREREQUISITES:** Completion of the LET Semesters 1, 2, and 3 or approval from the LET Lead Instructor.

LET 252 EMERGENCY VEHICLE OPERATION COURSE (EVOC)**CREDITS: 2**

The course is a study of legal aspects as they pertain to law enforcement driving. Instruction in emergency, non emergency and pursuit driving will be given. Students will demonstrate driving proficiency by successfully completing specific driving tasks. This course requires a valid driver's license.

MA 110 MEDICAL ASSISTING I**CREDITS: 2**

This course is designed to give the basic knowledge and understanding of the career of Medical Assisting and the administrative skills required to be employed as an entry level Medical Assistant.

MA 125 PATHOPHYSIOLOGY**CREDITS: 3**

This course will teach the entry level Medical Assistant about various diseases, causes, and treatments.

MA 130 MEDICAL ASSISTING II**CREDITS: 3**

This course will teach students the knowledge and clinical skills needed for an entry level Medical Assistant.

MA135 MEDICAL LAW AND ETHICS**CREDITS: 2**

This course will teach students the principles and knowledge of medical law and ethics.

MA145 PHARMACOLOGY AND ADMINISTRATION OF MEDICATIONS**CREDITS: 3**

This course will cover the knowledge of common medications, usage, and safety associated with them. Lab time will include the proper administration of medications.

MA 299 MEDICAL ASSISTING CLINICAL**CREDITS: 7**

This course provides the medical assisting students the opportunity to apply their skills and knowledge in the clinical setting.

MATH 090 BASIC MATHEMATICS**CREDITS: 2**

This course provides a mathematically sound and comprehensive coverage of basic computational skills and their applications. Certain topics from algebra are also included. The content and level of rigor of the text form the basis of a course that would properly serve as preparation for a traditional algebra course. The text has been specifically developed to meet, not only the needs of the traditional post secondary student, but also the needs of the mature student whose mathematical proficiency may have declined during years away from formal schooling. PREREQUISITES: High School Math and a COMPASS Score in Pre-Algebra Domain of 33 or higher.

MATH 101 INTERMEDIATE ALGEBRA**CREDITS: 3**

This course includes real numbers and variable expressions, first-degree equations, polynomials, factoring, rational expressions, rational exponents and radicals, and quadratic equations. Other areas covered will be linear equations, systems of linear equations, linear, exponential and logarithmic functions, and an introduction to conic sections. PREREQUISITES: High School Math and a COMPASS Score in Algebra Domain of 30 or higher.

MATH 102 COLLEGE ALGEBRA**CREDITS: 3**

This course involves equations and inequalities; polynomial functions and graphs; exponents, radicals, binomial theorem, zeros of polynomials; systems of equations; exponential, logarithmic, and inverse functions, applications and graphs. Other topics selected from sequences, series, and complex numbers will be covered. PREREQUISITES: High School Math and a COMPASS Score in Algebra Domain of 42 or above, or passing grade in MATH 101.

MATH 104 TECHNICAL MATHEMATICS**CREDITS: 3**

This course includes real numbers and variable expressions, first-degree equations, polynomials, factoring, rational expressions, rational exponents and radicals, geometry, quadratic equations and trigonometry. This course is designed for students who are preparing for technical careers. It stresses a working knowledge of applied mathematical concepts. The practice problems are applications from various technical fields but do not require prior knowledge of the technical applications. Problems are selected to help develop an understanding of where and how mathematics is used in the various fields of employment. PREREQUISITES: High School Math and a COMPASS Score in Pre-Algebra Domain of 40 or higher.

MATH 112 BUSINESS MATHEMATICS**CREDITS: 3**

A practical, working knowledge of relevant mathematical ideas and computations is developed for preparation in many careers, as well as in daily and consumer life. Topics include: arithmetic operations with: whole and decimal numbers; common fractions; ratio, rate, proportion, percent; statistics and graph interpretation; discounts, markup/markdown; and many uses of formulas, including payroll, simple and compound interest, credit, mortgage, and annuities calculations. Each unit refreshes essential computation skills, builds with calculator and data practices, graphic and geometric descriptions, and then leads to related problem-solving skills. Computer, consumer, and many business applications are provided. Pencil-paper, calculator, and estimating methods are all stressed.

MATH 120 TRIGONOMETRY**CREDITS: 3**

Topics include: trigonometric functions, equations, and identities; inverse trigonometric functions; exponential and logarithmic functions, and applications of these functions. PREREQUISITE: High School Math and a COMPASS Score in Algebra Domain of 42 or above, or passing grade in MATH 101.

MTH 100 ELEMENTARY ALGEBRA**CREDITS: 3**

This course prepares students for college level mathematics. Topics generally include: Basic properties of real numbers, exponents and radicals, rectangular coordinate geometry, solutions to linear and quadratic equations, inequalities, polynomials and factoring. Students may also be introduced to functions and systems of equations. PREREQUISITES: High School Math and a COMPASS Score in Algebra Domain of 0-29.

MDS 110 MEDICAL TERMINOLOGY I**CREDITS: 3**

This course will provide students with a foundation for the study of medical terminology. Students will be taught to divide words into component parts, to recognize basic combining forms, suffixes and prefixes as well as learn their meanings. Students will also gain understanding of the organization and complexity of the body and become familiar with the location and function of major body organs and body systems.

MDS 122 MEDICAL TERMINOLOGY II**CREDITS: 3**

This course is a continuation of Medical Terminology I. Medical terminology is a special vocabulary that is needed in order to communicate with other health care professionals. PREREQUISITE: MDS 110 MEDICAL TERMINOLOGY I.

MDS 210 HEALTH CARE CODING I**CREDITS: 4**

This is an introductory course to the statistical classification system of the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), the system in use in hospitals and private medical practices for the classification and reporting of morbidity and mortality in the United States. Many third party payment systems are based on the ICD-9-CM classification and coding system. PREREQUISITES: MDS 110 MEDICAL TERMINOLOGY I and MDS 122 MEDICAL TERMINOLOGY II.

MDS 211 HEALTH CARE CODING II**CREDITS: 3**

This course is an introduction to CPT Evaluation and management, radiology and laboratory codes. HCPCS coding system will be investigated. Additionally, this course includes an overview and education of electronic coding systems. It is a continuation of coding from Health Care Coding I objectives with the introduction of DRG and APC systems of reimbursement. ICD-9, CPT and HCPCS manuals will be utilized.

MDS 212 HEALTH CARE FUNDAMENTALS AND REIMBURSEMENT**CREDITS: 3**

This course will cover financial reimbursement, third party payers, including the government program. HIPAA regulations and clinical and hospital corporate compliance issues will be reviewed.

MDS 299 INTERNSHIP**CREDITS: 3**

This course is designed to place the student in an actual work situation for which they have been trained. It is designed to give them experience in the medical administration field.

MED 299 MEDICAL TRANSCRIPTION PRACTICUM**CREDITS: 2-4**

This course is designed to place the student in an actual work situation for which they have been trained. It is designed to give them experience in the medical transcription field. PREREQUISITE: The student must have maintained a cumulative 2.5 GPA or higher, and must be enrolled in the final semester of their program.

MTS 102 MEDICAL TRANSCRIPTION I**CREDITS: 3**

This course introduces students to the medical transcription profession through hands-on practical applications. Students will transcribe simulated dictation from the field of general medicine while honing their English and medical terminology skills. PREREQUISITES: CIS105 MICROCOMPUTER SOFTWARE APPLICATIONS, COC 110 KEYBOARDING I, MD S110 MEDICAL TERMINOLOGY I, and HC 114 ANATOMY AND PHYSIOLOGY FOR THE HEALTH PROFESSIONS.

MTS 124 DISEASE PROCESSES I**CREDITS: 3**

This course is offered for students entering allied health careers and for students interested in learning the fundamentals of human disease. This course also introduces important terminology, the study of disease, inflammation and allergy, neoplasia, heredity and disease, and dietary factors and disease, as well as the major diseases associated with each body system and the role stress and aging play in health and disease. Students are also introduced to the concept of wellness. PREREQUISITES: HC114 ANATOMY & PHYSIOLOGY, MDS 110 MEDICAL TERMINOLOGY I, and MDS 122 MEDICAL TERMINOLOGY II.

MTS 212 BASIC PHARMACOLOGY**CREDITS: 3**

This course is not to instruct in the prescribing or administration of medication. Rather, its purpose is to provide a framework of knowledge to help the student recognize drug names and drug classes; understand drug actions and the rationale for treatment; discern between sound-alike drugs; understand why side effects, allergic effects, and other effects of drugs occur; and address various current healthcare issues relating to pharmacology and drugs.

MTS 213 MEDICAL TRANSCRIPTION II**CREDITS: 3**

This course incorporates skills in information processing, medical terminology, and machine transcription in order to produce medical reports for health care facilities. Students transcribe dictation from several specialty areas including Obstetrics, Gastroenterology, Urology, Orthopedics, Hematology, and Immunology. Proper format, punctuation, and increased accuracy are emphasized. PREREQUISITE: MTS 102 MEDICAL TRANSCRIPTION I.

MTS 214 DISEASE PROCESSES II**CREDITS: 3**

This course will center on "Special Pathology." Emphasis will be placed on diseases of individual organs and organ systems. The objective is to describe important pathological mechanisms in considerable detail, while exposing the language of medicine. PREREQUISITE: MTS 124 DISEASE PROCESSES I.

MTS 222 MEDICAL TRANSCRIPTION III**CREDITS: 3**

This course introduces students to advanced medical transcription material from medical specialties including Cardiology, Orthopedics, Gastroenterology, Radiology, and Surgery. Student transcriptionists will be exposed to the broad scope of medicine and the continuing need for accurate documentation. Emphasis is on increased accuracy and independence with decreased assistance. PREREQUISITE: MTS 213 MEDICAL TRANSCRIPTION II.

MTS 232 MEDICAL TRANSCRIPTION IV**CREDITS: 3**

In this course students transcribe over 100 surgery reports. The surgery unit is divided into eight body systems: Cardiovascular/Thoracic Surgery, Gastrointestinal Surgery, Genitourinary Surgery, Head and Neck Surgery, Neurosurgery, Obstetrics and Gynecology Surgery, Orthopedic Surgery, and Plastic Surgery. PREREQUISITE: MTS 213 MEDICAL TRANSCRIPTION II.

NSG 114 PHARMACOLOGY IN NURSING**CREDITS: 3**

This course is designed to present material on the administration of medications in a safe and responsible way. Information on medications is presented according to body systems. The nursing process is incorporated into drug information; drugs are discussed according to their classification, side effects and nursing implications for administration. Dosage calculations are covered.

NSG 115 FOUNDATIONS IN NURSING LAB**CREDITS: 2**

This is the lab component of Foundations in Nursing. This lab course offers a thorough introduction to the Fundamental Skills required of the 21st Century Nurse. Emphasis is placed on the development of the myriad of basic nursing skills, including the cornerstone of nursing physical assessment. Skills offered range from basic (such as bed-making, hygiene and skin care) through complex (airway management, oxygenation, and fluid/chemical balance).

NSG 116 FOUNDATIONS IN NURSING CLINICAL**CREDITS: 4**

This is the clinical component of Foundations in Nursing. These beginning nursing students provide direct patient care in a variety of adult health and long-term care settings. The students are supervised by RN instructors at all times. This course allows for application of knowledge obtained from NSG 115 and NSG 117 with an emphasis on Physical Assessment, Therapeutic Communication, and Application of the Nursing Process.

NSG 117 FOUNDATIONS IN NURSING**CREDITS: 5**

This course establishes the foundation for nursing practice by providing the fundamental concepts and skills needed to meet basic human physiological needs. An introduction to the nursing process and critical thinking is presented. PREREQUISITES: HC 114 ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS, HC 113 MEDICAL TERMINOLOGY FOR THE HEALTH PROFESSIONS and three credits of the CIS MICROSOFT SOFTWARE APPLICATIONS.

NSG 118 GERIATRIC CLINICAL**CREDITS: 1**

Laboratory and clinical experiences are incorporated into this course to enhance the learning process. The clinical component includes direct care of the older adult with focus on assessment skills

NSG 119 MENTAL HEALTH NURSING**CREDITS: 2**

This course presents basic concepts of mental health/illness and offering care to clients. Categories of mental illness are discussed along with common therapies used to treat them. The course also addresses issues that nurses will face as they work with clients with special mental and emotional needs. There is a clinical component included in this course.

NSG 125 MATERNAL/CHILD HEALTH NURSING**CREDITS: 4**

This course introduces the student to comprehensive family centered care, wellness, health promotion and illness prevention. The course focuses on growth and development of the child from conception to adolescence and incorporates family dynamics. PREREQUISITE: COMPLETION OF ALL FIRST SEMESTER COURSES.

NSG 128 ADULT HEALTH NURSING LAB**CREDITS: 1**

This is the lab component of the Adult Health Nursing Course. This lab course includes offers a thorough introduction of advanced nursing skills utilized by the Practical Nurse. Skills taught in this course range in complexity from simple to advanced. Skills taught include: Tracheotomy Care, Central Line Care, Advanced Neurological Assessment, and Intravenous insertion and care.

NSG 129 ADULT HEALTH NURSING**CREDITS: 6**

This course includes theory with emphasis on care of patients with diseases/disorders of the following systems: Nervous, Sensory, Respiratory, Circulatory, Urinary, Gastrointestinal, Endocrine, Reproductive, Musculoskeletal, Immune, Integumentary, and Hematological. Nursing assessment and evaluation is integrated into the study of disease process. PREREQUISITE: COMPLETION OF ALL FIRST SEMESTER COURSES.

NSG 130 ADULT HEALTH NURSING CLINICAL**CREDITS: 6**

This is the clinical component of Adult Nursing. The students provide direct care to clients in a variety of acute, inpatient settings and in physician offices and outpatient care centers. They are supervised by RN Instructors at all times. They utilize the various components of the nursing process to design and provide appropriate care. PREREQUISITE: COMPLETION OF ALL FIRST SEMESTER CLASSES AND SUCCESSFUL PROGRESSION IN NSG 126 ADULT HEALTH NURSING.

NSG 135 PROFESSIONAL DEVELOPMENT**CREDITS: 2**

This is designed to prepare the student for successful transition into the workforce. NCLEX (National Certification Licensure Exam) review is included to prepare the student for licensure exam. This course also incorporates skills to assist the student in developing a portfolio (resume and overview of clinical experience) to assist in job placement.

NSG 136 MENTAL HEALTH PRACTICUM**CREDITS: 1**

In this course, the student will apply the nursing process and mental health nursing theory in the care of clients with mental illnesses. The student will also gain knowledge of the importance of milieu in the treatment of mental illnesses and the various contributions of the mental health team members. PREREQUISITE: NSG 119 MENTAL HEALTH NURSING.

NSG 138 MATERNAL/CHILD HEALTH PRACTICUM**CREDITS: 2**

This course is the clinical component of maternity and pediatric nursing. The clinical settings are varied and include but are not limited to hospitals, clinics, out-patient facilities, and physicians' offices. PREREQUISITES: NSG 125 MATERNAL/CHILD HEALTH NURSING.

NSG 139 ADULT HEALTH PRACTICUM**CREDITS: 4**

This course emphasizes the specific nursing care for clients with disorders of each body system. The nursing process and critical thinking are utilized to identify symptoms, provide care, set goals and evaluate nursing care for each of the identified disorders. Clinical experiences are a fundamental component of this course. Students are paired with a practicing LPN or RN in an adult health clinical setting. PREREQUISITES: NSG 117 FOUNDATIONS IN NURSING, NSG 129 ADULT HEALTH NURSING, AND NSG 114 PHARMACOLOGY IN NURSING.

ORT 010 ORIENTATION**CREDITS: 1**

The course is designed to increase the student's success in school by assisting the student in obtaining skills necessary to complete his/her education objectives. Topics include: study skills, communications skills, and problem solving skills.

PCN 120 WEB APPLICATIONS TOOLS**CREDITS: 3**

This course introduces a variety of applications and tools for web development. The student will learn how to create and manipulate web pages using these tools.

PCN 125 WEB PROGRAMMING LANGUAGES**CREDITS: 3**

This course is intended to give students a complete understanding of web programming languages such as Hypertext Markup Language, Cascading Style Sheets and Javascript. Students will further their understanding of object oriented programming as well as learn new markup languages. Students will learn how to use these languages to make web applications more interactive and friendly.

PCN 126 SYSTEMS ANALYSIS AND DESIGN**CREDITS: 3**

This course is intended to give students the ability to manage projects and develop project plans using object modeling. It will enable students to learn to solve problems on large projects much like the ones they will encounter on the job. PREREQUISITE: ADVANCED PROGRAMMING, PROGRAMMING LOGIC & DESIGN.

PCN 128 PROGRAMMING LANGUAGE CONCEPTS**CREDITS: 3**

This course is intended to give students the understanding of various programming language syntax and for what type of applications these languages are designed to be used.

PCN 230 DESIGN PATTERNS**CREDITS: 3**

This course is intended to give students a solid foundation in object oriented design using many common software development patterns. PREREQUISITE: INTERMEDIATE PROGRAMMING, PROGRAMMING LOGIC & DESIGN.

PCN 232 WEB APPLICATION DESIGN WITH ASP.Net**CREDITS: 3**

This course will give students the understanding of developing web applications using Web-Forms and the Net framework. It will solidify the web language concepts as well as object oriented programming. PREREQUISITE: ADVANCED PROGRAMMING, DATABASES, WEB DEVELOPMENT TOOLS.

PCN 235 DEVELOPING APPLICATION USER INTERFACES**CREDITS: 3**

This course is intended to expand on the students programming experience by introducing Windows Presentation Foundation (WPF) and elements of good user interface design. It will reinforce programming concepts learned to this point. PREREQUISITE: ADVANCED PROGRAMMING

PCN 239 ADVANCED WEB DEVELOPMENT**CREDITS: 3**

This course is intended to expand on the students' programming experience by introducing cutting edge concepts and techniques for developing web applications like those employed by Google and Microsoft in their latest software releases. Topics covered will include service oriented architecture and software + services. It will also give a better understanding in XML as many advanced techniques employ the use of XML. PREREQUISITE: ADVANCED PROGRAMMING, DATABASES, DESIGN PATTERNS.

PCN 240 ADVANCED PROGRAMMING CONCEPTS**CREDITS: 3**

This course will give students an understanding of advanced programming concepts such as threading, delegates, raw communications and lambdas. PREREQUISITES: ADVANCED PROGRAMMING, PROGRAMMING LOGIC & DESIGN, DESIGN PATTERNS.

PCN 242 PROGRAMMING WORKFLOW**CREDITS: 3**

This course will teach students to define human and system interactions as a series of workflows that can be mapped and implemented. PREREQUISITES: PROGRAMMING LANGUAGE CONCEPTS, INTERMEDIATE PROGRAMMING.

PCN 245 SECURITY AND CRYPTOGRAPHY**CREDITS: 3**

This course is intended to give students a comprehensive look at modern cryptography. It will give them an understanding on how programmers and electronics communications professionals can use cryptography for ciphering and deciphering messages and to secure private data. It will give them the ability to implement cryptography in their applications. PREREQUISITES: A LAPTOP COMPUTER IS REQUIRED FOR COURSEWORK. YOU MAY PURCHASE ONE THROUGH WDT OR YOU MAY BRING YOUR OWN. CONSULT YOUR INSTRUCTOR OR THE WDT IT DEPARTMENT FOR SPECIFICATIONS. ADVANCED PROGRAMMING, DATABASES, PROGRAMMING LANGUAGE CONCEPTS, PROGRAMMING LOGIC & DESIGN, DESIGN PATTERNS

PCN 249 DEVELOPING SMARTPHONE APPLICATIONS**CREDITS: 3**

This course will teach students the essentials for developing applications for mobile devices. It will address real world needs for businesses for custom mobile applications.

PCT 110 PATIENT CARE TECH I**CREDITS: 2**

This course is designed to provide the student with the knowledge and basic health care skills necessary to become a nursing assistant or a patient care tech in the acute care setting.

PCT 111 PATIENT CARE TECH I LAB**CREDITS: 1**

Lab for PCT110.

PCT 120 PATIENT CARE TECH II**CREDITS: 2**

This course is designed to provide the student with advanced knowledge and advanced patient care skills necessary to become a patient care tech in the acute care setting. PREREQUISITE: PCT110

PCT 299 PATIENT CARE TECH CLINICAL**CREDITS: 2**

This course provides the HUC/PCT students the opportunity to apply the skills and knowledge obtained from the classroom environment to the clinical setting. Basic nursing skills and upper level skills will be utilized to care for the hospitalized patient while under the guidance of a preceptor and the course instructor. PREREQUISITES: PCT110, PCT120, CPR100

PH 102 INTRODUCTION TO PHLEBOTOMY**CREDITS: 2**

This course introduces students to the practice of phlebotomy and the role of the phlebotomist as part of the health care team. Students will become familiar with phlebotomy equipment and learn about basic blood collection procedures. Special blood collection procedures, safety procedures, quality management and legal issues are discussed. The importance of professionalism and good communication skills in the patient care environment is stressed.

PH 121 PRINCIPLES AND PRACTICES**CREDITS: 3**

This course provides the student with active learning experiences and hands-on training necessary to develop the skills of an entry-level phlebotomist. The student will learn the procedures performed by a phlebotomist and will become familiar with different types of equipment and techniques applied. Emphasis will be placed on professional behavior, communication skills, personal and patient safety and technical skill development.

PH 123 LABORATORY ASSISTANT TECHNIQUES**CREDITS: 3**

This course provides training for the clinical laboratory assistant including laboratory safety, equipment and instrumentation, basic laboratory mathematics, regulations and standards, quality assurance practices, record keeping and billing, specimen processing, CLIA waived and point-of-care laboratory testing.. The course combines theory and hands-on practice of laboratory procedures with an emphasis on the necessity for accuracy and attention to detail. PREREQUISITES: HC 114 ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS, HC 113 MEDICAL TERMINOLOGY FOR THE HEALTH PROFESSIONS, AND PH 121 PRINCIPLES AND PRACTICES.

PH 124 PHLEBOTOMY/LABORATORY ASSISTANT CAPSTONE**CREDITS: 1**

This capstone course provides opportunity for an integration of program coursework, knowledge, skills, and experiential learning enabling the student to demonstrate achievement of the program goals. The course will focus on problem analysis, critical and creative thinking, and effective communication. Students will also complete a program of study post-test.

PH 130 CLINICAL PRACTICE**CREDITS: 8**

This course consists of clinical practice in phlebotomy and laboratory assistant training at various affiliated health care institutions and laboratories. The program director will coordinate clinical schedules and evaluations. PREREQUISITE: PH 102 INTRO TO PHLEBOTOMY AND PH 121 PRINCIPLES AND PRACTICES.

PHR 110 PHARMACOLOGY/PHARMACEUTICAL PRODUCTS I**CREDITS: 3**

This course is designed to present material to the pharmacy technician as it applies to the preparation and dispensing of pharmacologic agents. Drugs are discussed according to their classification, trade and generic name, drug action (mechanism), side effects, toxicity, and contraindications.

PHR 111 PHARMACY I**CREDITS: 3**

This course is designed to present material to the pharmacy technician as an introduction to the field of pharmacy. The course will introduce the student to all aspects of the pharmacy from the relationship between the pharmacist and the pharmacy technician to the details necessary to be a successful pharmacy technician.

PHR 120 PHARMACY II**CREDITS: 3**

This course is designed to present material to the pharmacy technician as an introduction to the field of pharmacy. The course will continue to introduce the student to all aspects of pharmacy to include pharmacy manufacturing, pharmacy repackaging, purchasing and inventory control, drug categories, medication errors, and drug interactions.

PHR 121 PHARMACOLOGY/PHARMACEUTICAL PRODUCTS II**CREDITS: 3**

This course is designed to present material to the pharmacy technician as it applies to the preparation and dispensing of pharmacologic agents. Drugs are discussed according to their classification, trade and generic name, drug action (mechanism), side effects, toxicity and contraindications. Drugs will include review of prescriptions as well as non prescription (over the counter) products.

PHR 122 PHARMACY LAW AND ETHICS**CREDITS: 2**

This course is designed to present material to the pharmacy technician on professional ethics and the philosophy, requirements, administration and enforcement of local, state and federal laws related to the practice of the profession of pharmacy.

PHR 124 PHARMACY LAB**CREDITS: 2**

The course is designed to provide the pharmacy technician with the practical hands-on experience with all aspects of pharmacy preparation and dispensing of sterile and non sterile pharmaceuticals.

PHR 126 PHARMACY SYSTEMS SOFTWARE**CREDITS: 1**

This course is designed to present material to the pharmacy technician as an introduction to pharmacy management software. Aspects of retail prescription filling, various pharmacy reports, and medication orders will be covered including adding patient and insurance information to the database, filling and refilling tasks, running the daily prescription report, and entering new medication orders.

PHR 127 PHARMACY CALCULATIONS**CREDITS: 2**

This course is designed to present material to the pharmacy technician in the areas of pharmacy math. All aspects of pharmacy math will be covered including metric and household measurements, special calculations for compounding, understanding the apothecary system, pharmacy business math, and preparing injectable medications.

PHR 128 PHARMACY OPERATIONS**CREDITS: 2**

This course is designed to present material to the pharmacy technician as an introduction to institutional pharmacy and retail pharmacy. All aspects of institutional pharmacy and retail pharmacy will be covered to include organization and function of pharmacists and technicians in this setting. Also included are the institutional medication distribution systems and prescription filling in retail pharmacy.

PHR 131 CLINICAL ROTATIONS**CREDITS: 8**

This course emphasizes the basics of pharmacy practice and exposes the student to the practical aspects of dispensing, compounding and inventory control at an "on the job" training site in an institutional, retail or alternative pharmacy practice setting.

PLL 111 INTRODUCTION TO PARALEGALISM**CREDITS: 2**

This course provides the student with an introduction to the fundamental concepts techniques essential to the practicing paralegal. Lecture topics include an overview of the American legal system and a survey of such legal sub-fields as torts, criminal law, litigation, contract law, and real property. Several weeks of the course are devoted to the study of professional ethics for the paralegal.

PLL 123 REAL PROPERTY**CREDITS: 2**

This course offers the paralegal student a practical introduction to the basics of real property law and real estate law. During the course, the student examines legal forms, checklists, and problems that a paralegal would encounter in a law firm involved in handling real estate transactions and litigating real property cases.

PLL 124 CRIMINAL LAW**CREDITS: 2**

This course is designed to provide the student with an introduction to the basic concepts of criminal law and criminal procedure and the terminology associated with the practice of criminal law.

PLL 125 TORTS**CREDITS: 3**

This course introduces the student to substantive tort law in the context of trial preparation. The focus of the course is on the skills needed by a paralegal to be an effective litigation assistant.

PLL 126 CONTRACTS**CREDITS: 3**

This is an introduction to the law of contracts. The course includes instruction in the elements of a contract, the formation of a contract, drafting a contract, mistakes, conditions and the discharge of legal obligations, assignments, delegations, and third-party beneficiaries and contract remedies.

PLL 132 LEGAL RESEARCH AND WRITING I**CREDITS: 4**

This course provides the student with an introduction to the basic tools of legal research and writing as used in the modern law office. The course includes an overview of our system of government and law, methods of legal research, research resources, and an introduction to computerized research and the drafting of legal documents.

PLL 133 LEGAL RESEARCH AND WRITING II**CREDITS: 4**

This course is designed to further refine the research and writing skills acquired in the prerequisite course, Legal Research and Writing I. The emphasis in this course is placed on successful completion of more difficult research assignments and further refinement of the student's legal writing skills. **PREREQUISITE: PLL 132 LEGAL RESEARCH & WRITING I.**

PLL 211 AMERICAN LEGAL SYSTEM AND CONSTITUTIONAL LAW**CREDITS: 3**

This course concentrates on instructing the student concerning the function of the United States legal system and a broad overview of constitutional law. The course also instructs students in the interaction of the legal system with other branches of government.

PLL 212 LITIGATION AND CIVIL PROCEDURE**CREDITS: 3**

This course uses the casebook method, supplemented by the Federal Rules of Civil Procedure and the South Dakota Rules of Civil Procedure, to instruct students in the basic requirements of jurisdiction, service of process, joinder, discovery, depositions, motions, trial, and appeal.

PLL 215 LAW OF BUSINESS ORGANIZATIONS**CREDITS: 2**

This course introduces the student to the basic concepts, terminology and doctrines involved in business law. The student is instructed in the procedures necessary for the formation of sole proprietorships, limited and general partnerships and corporations and is introduced to the essential case opinions in business and corporate litigation.

PLL 217 EVIDENCE**CREDITS: 3**

This course focuses on an introduction to the Federal Rules of Evidence, includes a study of pretrial, trial, and post-trial evidentiary motions preparation. The course also explores how such preparation impacts the outcome of litigation at both trial and administrative hearings.

PLL 223 WILLS AND PROBATE**CREDITS: 2**

This course is designed to instruct the student as to procedures, techniques, and substantive law involved in the administration of estates and trusts. The student is required to draft a will and a simple trust as well as to prepare pleadings and other documents necessary for probate administration.

PLL 224 BANKRUPTCY AND COMMERCIAL LAW**CREDITS: 2**

This course provides the student with instruction in the essentials of basic bankruptcy and commercial law. It also instructs the student in proper document filing under Chapters 7, 11, 12 and 13 of the Bankruptcy Code.

PLL 225 ADMINISTRATIVE LAW**CREDITS: 2**

This course is designed to convey to students the role administrative law plays in the American political system and its role in shaping, guiding, and restricting actions of Administrative agencies.

PLL 226 OFFICE MANAGEMENT**CREDITS: 2**

This course introduces the student to the theory and practical aspects of law office management, including the functions of management, administrative procedures, basic principles of finance, facilities management, personnel management, and leadership skills.

PLL 227 INTRODUCTION TO ENVIRONMENTAL LAW**CREDITS: 2**

This course is designed to provide the student with a background in the basic issues pervading environmental laws, regulations, and disputes. The course will introduce the procedures utilized to integrate environmental policies into the social system and insight into how to accommodate environmental concerns with economic realities, property rights, and national policy in such other areas as energy, transportation, and public health.

PLL 228 INTRODUCTION TO NATIVE AMERICAN TRIBAL LAW, TREATIES, & POLICIES**CREDITS: 2**

This course is designed to acquaint the student with the basic principles underlying federal decisions in Native American law and the interrelationship between these decisions and tribal codes, constitutions, and treaties. The student is instructed in historical perspectives relative to Native American legal issues, as well as modern theories regarding tribal sovereignty and jurisdiction, both civil and criminal.

PLL 231 FAMILY LAW**CREDITS: 2**

This course teaches students about the various legal and social issues involved in the practice of family law. Students are taught techniques for the drafting of pleadings necessary in a family law case. Students also receive instruction in client interviewing techniques and trial preparation in the areas of divorce, legal separation, adoption, and child custody.

PLL 232 LITIGATION CLINIC I**CREDITS: 2**

This course introduces the student to the proper methods of conducting an investigation through interviewing techniques, record investigation, the taking of statements, and reporting of obtained information. The bulk of the course is based on a single fact pattern exercise, allowing the student to follow the progress of one case from beginning to the early stages of the discovery process.

PLL 233 LITIGATION CLINIC II**CREDITS: 2**

This course effectively ties together the operation of the rules of civil procedure, rules of evidence, and common law principles. The student will be instructed regarding proper preparation of a case file for trial. The foundation of the course is the fact pattern exercise introduced to the student in Litigation Clinic I. Picking up from where that course concluded, the student follows the progress of the case from the early discovery stages through the trial and post trial stages. PREREQUISITE: PLL 232 LITIGATION CLINIC I.

PLL 298 INTERNSHIP**CREDITS: 7**

The internship is an on the job training work experience. The student works at a law firm, governmental agency, or other appropriate office in the final semester of study for 280 hours of documented work experience. During this internship the student is under the direct supervision of an attorney or other qualified person. The requirements and responsibilities for the paralegal student must be agreed upon in advance. The students are also required to meet with the instructor of the course to prepare their resumes. PREREQUISITE: Registration in final semester of study only, unless approved by the lead instructor of the program.

PSYC 101 GENERAL PSYCHOLOGY**CREDITS: 3**

General Psychology 101 is a course designed to help the student become aware of the field of psychology and its applications. The student will learn the major behavior of organisms, the origins and important contributors to the field, an understanding of the scientific method of research employed in psychology, how to report basic research findings, and the basic concepts and terminology of psychology.

PSYC 103 HUMAN RELATIONS IN THE WORKPLACE**CREDITS: 3**

Success in the world of work requires not only the ability to perform according to the requirements of the position, but also the ability to adjust and get along with others. The purpose of this course is to help students grasp the importance of human relations skills in both their personal and career lives. It will introduce students to the skills necessary to create and maintain positive relationships and interactions in the workplace.

PSYC 113 HUMAN RELATIONS FOR HEALTH CARE PROFESSIONALS**CREDITS: 2**

This course is designed for students enrolled in allied health care programs. The student in health care must understand the importance of professionalism. This course introduces the student to the professional standards necessary to all health care workers and to assist the student in developing the traits and behaviors that are required to successfully and effectively interact with coworkers, patients, and visitors.

SOC 100 INTRODUCTION TO SOCIOLOGY**CREDITS: 3**

This course is designed to develop the sociological thinking of students. The multifaceted nature and depth of sociology will be presented in such areas as culture, socialization, ethnicity, and political systems.

SPCM 101 FUNDAMENTALS OF SPEECH**CREDITS: 3**

This course covers the basic principles of effective public speaking with emphasis on preparation of speeches.

ST 102 INTRODUCTION TO SURGICAL TECHNOLOGY**CREDITS: 3**

This course is an introduction to concepts and practices of Surgical Technology. It encompasses the role of the surgical technologist, a basic history of surgery, the surgical patient, medical-legal issues, safety, infection control, disinfection and sterilization, and concepts of wound closure and wound healing.

ST 111 INTRODUCTION TO SURGICAL TECHNOLOGY LAB**CREDITS: 3**

This course is an introduction to Surgical Technology in a lab setting and clinical setting. Students will learn and apply the principles of aseptic technique, care of the perioperative patient, duties of the circulator, and principles of safety as they apply to the perioperative environment. Students will learn basic surgical instrumentation, equipment, and supplies. Students will be required to either pass BLS Healthcare Provider or present a current Healthcare level CPR certification that does not expire before the following September.

ST 125 PRINCIPLES AND PRACTICE OF SURGICAL TECHNOLOGY**CREDITS: 3**

Student will apply techniques and concepts mastered in the first semester. Students will continue to learn surgical instrumentation, basic, instrument setups, patient draping, safe handling/handling of surgical instrumentation, sharps, and medications, and the proper performance of surgical counts. Students will also participate and demonstrate competence in a variety of simulated procedure based scenarios and interventions in the lab performing both the scrub and circulator role. **PREREQUISITES:** All first semester health courses.

ST 126 SURGICAL PROCEDURES**CREDITS: 7**

This course is designed to introduce the students to diagnostic procedures and minor and major procedures in all surgical areas. **PREREQUISITES:** All first semester health courses.

ST 127 SCIENCE AND TECHNOLOGIES FOR THE SURGICAL TECHNOLOGIST**CREDITS: 1**

This course introduces the Surgical Technology student to the applications of a wide variety of specialty equipment used in the operating room. The students will also be able to relate the concepts of electricity and physics as they apply to the surgical environment. The impact and uses of robotics in surgery will also be discussed. **PREREQUISITES:** All first semester health courses.

ST 128 SURGICAL PHARMACOLOGY**CREDITS: 2**

In this course, students will learn the concepts and practices of pharmacology and anesthesia care in the perioperative environment. **PREREQUISITES:** All first semester health courses.

ST 135 CLINICAL PRACTICE**CREDITS: 3**

This course provides clinical practice at local healthcare facilities for the surgical technology student. The student will progressively apply concepts of both the scrub and circulator role, continually building on experiences gained in the clinical setting and the classroom. Students will be under the direction of the clinical instructor and mentored by clinical preceptors provided by the facility. PREREQUISITE: ST 111

ST 136 CLINICAL PRACTICE II**CREDITS: 6**

Clinical practice takes place at a hospital setting in the regional area. It consists of 240 hours of practice in the OR with a rotation to other departments. With a preceptor, students will apply their knowledge and skills and perform as a surgical technologist. PREREQUISITES: All first and second semester health courses.

ST 137 CLINICAL PRACTICE III**CREDITS: 6**

This is a continuation of ST-136. Clinical Practice III takes place at a healthcare facility. It consists of 240 hours of practice in the perioperative environment. Students will participate in a minimum of 80 surgical procedures in the scrub role. At least 25 of these procedures will be performed independently without assistance from a preceptor. Students will continue to develop skills to an entry level or better for employment as a Surgical Technologist. Students will also be required to sit for the Certifying Exam in Surgical Technology at WDT on a date determined at the beginning of the semester. PREREQUISITES: All first and second semester health courses.

TTT 100 OCCUPATIONAL SKILLS**CREDITS: 2**

This course is designed to enable the student to understand the safety aspects of the trade as well as common skills required for successful completion of other areas of the automotive program. This class is a prerequisite for all classes in the automotive program.

TTT 102 INTRODUCTION TO ELECTRONICS**CREDITS: 3**

This course is designed to enable the student to understand electrical principles and how they apply to the automobile.

TTT 103 VEHICLE ELECTRONICS**CREDITS: 3**

This class is designed to provide the students with the electronics background necessary to understand and diagnose the sophisticated electronic systems of the modern automobile. The student will also learn to use state-of-the-art test equipment, used by automotive technicians to solve complex electrical problems. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

TTT 104 STARTING & CHARGING SYSTEMS**CREDITS: 2**

Starting and charging systems is a two-semester hour course designed to enable the student to understand the operation and function of automotive starting and charging systems. Students will diagnose and service automotive batteries, alternators, and starters using state-of-the-art test equipment and techniques. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

TTT 107 ENGINE PERFORMANCE & DRIVABILITY**CREDITS: 4**

Engine Performance and Drivability is a four semester-hour course designed to provide the student with the necessary instruction to diagnose and repair ignition-, fuel-, and emissions-related drivability problems. The student will use mock-ups, school vehicles, and customer-related issues to complete the instruction. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

TTT 115 ENGINE CONSTRUCTION & OPERATION**CREDITS: 3**

This course is designed to instruct the student on the operation and diagnosis of a four-cycle gasoline automobile engine. Particular attention will be paid to the techniques of analyzing internal failures of the compression lubrication and cooling systems. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

TTT 118 ELECTRONIC FUEL INJECTION**CREDITS: 6**

Electronic Fuel Injection and Computerized Engine Controls is a course designed to instruct the student on the components of fuel and timing management, fuel delivery, and the diagnostic techniques for solving emission and drivability related problems. Attention will be paid to both OBD I and OBD II diagnostic strategies and scan tool usage. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

TTT 120 SHOP & PARTS MANAGEMENT**CREDITS: 1**

The course is designed to instruct the student in the wholesale and retail automobile parts industry to assess the knowledge and the skills necessary to work competently as a parts specialist. The course will enable the student to possess knowledge about a wide range of vehicle component systems for all makes and models, as well as customer relations, sales, merchandising, vehicle identification, cataloging, and inventory management skills. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

TTT 121 INTRO TO HYBRIDS**CREDITS: 1**

In this class, the students will learn the different types of Hybrids, how Hybrids work, precautions and maintenance. PREREQUISITE: TTT 103 VEHICLE ELECTRONICS

TTT 122 CHASSIS WIRING**CREDITS: 1**

This course is designed to instruct the student on the diagnosis and repair of common chassis wiring problems. Instruction will include how numerous automobile accessories common to all automobiles function as well as the diagnosis and repair of these systems. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

TTT 129 WELDING/EQUIPMENT**CREDITS: 2**

This course teaches the student safety procedures and familiarization with MIG set-up operations and welding in flat, horizontal, vertical, and overhead positions. In addition, the use and care of oxyacetylene welding and the cutting torch are covered. PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS and TTT 102 INTRODUCTION TO ELECTRONICS.

TTT 130 PREVENTATIVE MAINTENANCE**CREDITS: 3**

This course encompasses the characteristics and benefits of a well-planned maintenance program. This course will cover the tools and procedures needed to perform a proper preventive maintenance inspection (PMI). PREREQUISITE: TTT 100 OCCUPATIONAL SKILLS.

WDM 110 SHIELDED METAL ARC WELDING**CREDITS: 3**

Shielded Metal Arc Welding classroom theory and skills training in the lab will allow the student to attain an acceptable level of welding skills. Equipment safety, setup, operation and maintenances, electrode identification, application and metallurgy are covered for the welding of ferrous metals. Surface and fillet welds in all positions along with carbon arc gouging and cutting will be the main focus in this course.

WDM 120 GAS TUNGSTEN ARC WELDING AND CUTTING PROCEDURES**CREDITS: 4**

Gas Tungsten Arc Welding and Cutting Procedures safety, welding theory, setup and skills training in the welding operations of this process. Students will fusion weld and weld adding filler metal on metal coupons in position. In addition to GTAW welding, students will learn the fundamentals of OFW/C (Oxy Fuel welding/Cutting), CAC (Carbon Arc Cutting), and PAC (Plasma Arc Cutting).

WDM 122 GAS METAL ARC WELDING, FILLET AND SURFACE WELDS**CREDITS: 3**

Gas Metal Arc Welding classroom theory and skills training in the lab will allow the student to attain an acceptable level of welding skills. This course is designed to provide the student with a technical understanding of wire welding processes, equipment set up, metal transfers and shielding gases. The development of welding procedures to successfully weld various types and thickness of structural steels are stressed. Students will weld fillet welds in all position.

WDM 124 SHIELDED METAL ARC WELDING GROOVED PLATE**CREDITS: 3**

Shielded Metal Arc Welding classroom theory and skills training in the lab enables the student to attain an acceptable level of welding skills. Students will weld on grooved plate with backing and open root, in and out of position. These welds will be completed on 3/8"-1" thickness metal using E7018 and E6010 electrodes. This may also include some work site internships. PREREQUISITE: WDM110 Shielded Metal Arc Welding

WDM 127 MILL AND LATHE OPERATION, MANUAL I**CREDITS: 3**

Manual mill and manual lathe safety, setup, and operation will be taught in the classroom theory along with lab assignments that will be given to be completed. Students will learn the use of micrometers and calipers to assist the measuring of assigned projects. After safe use and setup instruction students will be assigned projects to complete in both the mill and lathe. This may also include some work site internships.

WDM 128 MILL AND LATHE OPERATION, MANUAL II**CREDITS: 3**

This is a continuation of WDM-118 with additional classroom theory and lab assignments that will be given to be completed and graded on the quality of workmanship and acceptable tolerance allowance.

WDM 131 SHIELDED METAL ARC WELDING TESTING**CREDITS: 3**

This course includes welding qualification testing in the SMAW process in all positions up to ¾" and unlimited thickness grooved plate, with and without backing. The AWS D1.1 Structural Steel Welding Code is used as the welding and inspection criteria.

WDM 132 GAS METAL ARC WELDING TESTING**CREDITS: 3**

Welder qualification testing in the GMAW process, in all positions, solid wire and dual shield, up to ¾" and unlimited thickness grooved plate without backing. The AWS D1.1 Structural Steel Welding Code is used as the welding and inspection criteria.

WDM 133 WORK SITE INTERNSHIP**CREDITS: 3**

After completion of the testing processes in WDM 131 and/or WDM 132, students will complete an internship within the welding or machining industry. Student evaluation will be completed by instructor and worksite employer.

WDM 140 BLUEPRINT READING AND SOLIDWORKS FUNDAMENTALS**CREDITS: 3**

This course begins by introducing the student to the components, layout, and interpretation of blueprints and progresses through the fundamentals of using SolidWorks as a platform for the solid modeling method of creating digital models and engineering drawings for the manufacturing environment.

WDM 236 PIPE WELDING I**CREDITS: 3**

The student will be produce quality grooved welds on schedule 40 pipe, 2"-6" diameter utilizing Shielded Metal Arc Welding and Gas Tungsten Arc Welding processes 2G and 5G positions. They will construct pipe joint designs and layouts. Work site internships may be included as part of the training. PREREQUISITES: WDM I or demonstrate by testing to have equivalent welding and machining skills and knowledge.

WDM 237 FLUX CORE ARC WELDING I**CREDITS: 3**

Flux Core Arc Welding classroom theory and skills training in the lab will allow the student to attain an acceptable level of welding skills. Equipment safety, setup, operation and maintenances, electrode identification, application and metallurgy are covered for the welding of ferrous metals. Surface and fillet welds in all positions along with carbon arc gouging and cutting will be the main focus in this course.

WDM 238 ADVANCED MACHINING I**CREDITS: 3**

Developing the students' machining skills through the use of projects designed to introduce more advanced techniques and procedures that build on their basic skills. They will have the opportunity to learn basic CNC concepts and operational procedures in the use of vertical machining centers and horizontal turning centers and to explore some of their own project ideas. Work site internships may be included as part of the training. PREREQUISITE: WDM I or demonstrate by testing to have equivalent welding and machining skills and knowledge.

WDM 246 ADVANCED MANUFACTURING I**CREDITS: 3**

Advanced Manufacturing I is based on project design and manufacture by students. Projects may be assigned by the instructor and student projects that the instructor approves. Students will work as team members on some projects and as an individual on other projects. Every project will have CAD drawing, material list, and cost estimating prior to the manufacturing. Students will apply welding and machining skill to complete the manufacturing projects. Worksite internships may be included as part of the training. PREREQUISITES: WDM I

WDM 247 ADVANCED AUTOMATED MANUFACTURING I**CREDITS: 3**

Students will learn safe robotic and plasma programming, maintenance and setup to complete the welding or cutting project assignments that will be given. PREREQUISITES: WDM I or demonstrate by testing to have equivalent welding and machining skills and knowledge..

WDM 248 ADVANCED PRODUCTION I**CREDITS: 3**

This course is a lab class that lets the student create skills learning activities in the welding and or machining areas that best suit their career paths. Students under the supervision of an instructor must submit a weekly production plan that includes a time line for each of their production activities. They will be expected to complete a summery report of these weekly activities for comparison goals achieved to planned goals. PREREQUISITES: WDM I or demonstrate by testing to have equivalent welding and machining skills and knowledge.

WDM 249 ADVANCED GAS TUNGSTEN ARC WELDING**CREDITS: 3**

Students will continue to advance their skills learned in WDM120. Ferrous and non ferrous coupons and tube joints will be welded in and out of position. PREREQUISITES: WDM120 or demonstrate by testing to have equivalent welding and machining skills and knowledge.