

# COURSE DESCRIPTIONS

**Courses are listed in alphabetical order by course prefix.**

## **ACCT 120 PRINCIPLES OF ACCOUNTING I**

**CREDITS: 3**

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 121 PRINCIPLES OF ACCOUNTING II**

**CREDITS: 3**

This course continues the study of fundamental accounting concepts; however, it involves the students in the world of accounting as opposed to the recordkeeping 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 120.

## **ACCT 122 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 121.

## **ACCT 123 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. **PREREQUISITE:** ACCT 212.

## **ACCT 125 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 120.

## **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 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 120.

## **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 121.

## **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. **PREREQUISITES:** ACCT 120 and CIS105.

## **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 Windows-based software packages using QuickBooks or QuickBooks Pro commonly used by business. **PREREQUISITE:** ACCT 120 or APPROVAL OF INSTRUCTOR.

**ACCT 230 TOPICS AND ISSUES IN ACCOUNTING****CREDITS: 3**

This course includes many topics and issues in the accounting and bookkeeping fields: mastery of 10-key machines, South Dakota Sales Tax, South Dakota Use Tax, South Dakota Excise Tax, South Dakota Unemployment Tax (SUTA), Federal Unemployment Tax (FUTA), Workers' Compensation guidelines, and other common bookkeeping and accounting topics.

**ACCT 281 ETHICS IN ACCOUNTING AND BUSINESS****CREDITS: 2**

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 285 OPTIONAL INTERNSHIP****CREDITS: 1**

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. **PREREQUISITES: MUST HAVE SATISFACTORILY COMPLETED ALL THE REQUIRED TECHNICAL COURSES IN THE FIRST TWO SEMESTERS and HAVE A GPA OF 3.0.**

**ACCT 290 INTERNSHIP****CREDITS: 2-3**

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: ADVISOR APPROVAL.**

**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 in the course are business ethics, international business, ownership structures, and general business operations.

**BUS 115 KEYBOARDING****CREDITS: 3**

The student will develop proper keyboarding speeds and touch keyboarding speed of at least 40 NWAM. Document formatting techniques including tables, correspondence, and reports are all covered in the course.

**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.

**BUS 129 ORAL COMMUNICATIONS IN BUSINESS****CREDITS: 3**

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 140 BUSINESS LAW****CREDITS: 3**

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

**BUS 141 WRITTEN COMMUNICATIONS FOR BUSINESS****CREDITS: 3**

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. **PREREQUISITE: CIS 105.**

**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.**

**BUS 158 WEB DESIGN FOR BUSINESS****CREDITS: 3**

This intermediate-level computer course is designed to give students the skills in website development. **PREREQUISITE: CIS 105.**

**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 162 PROJECT MANAGEMENT****CREDITS: 3**

Students will learn how to manage a project from start to finish. PREREQUISITE: CIS 105.

**BUS 166 DIGITAL IMAGE DESIGN FOR BUSINESS****CREDITS: 3**

This course concentrates on using applications to create various types of media assets for use in business communications. PREREQUISITE: CIS 105.

**BUS 175 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.

**BUS 200 OFFICE PROCEDURES****CREDITS: 3**

This course will give students seeking entry-level office professional positions or students who are transitioning to a higher level career a comprehensive study in the dynamics of the modern day workplace. Instruction and activities target new technology and build communication and human relations skills. Emphasis on critical thinking, creative problem solving, and professional development will prepare students for challenges they will face in today's global marketplace.

**BUS 205 SOCIAL MEDIA MARKETING****CREDITS: 3**

Social media has revolutionized the marketing landscape and how businesses connect and interact with customers. Explore the ever-changing world of social media marketing through case studies, discussions, and exercises. Learn the history of social media, how it has grown into the phenomenon it is today, and what that means for businesses and marketing. Identify and discover various social media marketing tools and learn how to effectively integrate them into the marketing mix.

**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.

**BUS 215 SEARCH ENGINE MARKETING****CREDITS: 3**

Explore and apply search engine marketing fundamentals such as search engine optimization, pay-per-click, link development, and other tactics that can improve the search engine performance of any website. Create webpages that are search engine friendly and meet the needs of customers. Learn how to evaluate search engine marketing efforts and make tactical adjustments to improve results.

**BUS 218 DESIGN ESSENTIALS****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. PREREQUISITE: CIS 105.

**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.

**BUS 227 WRITING FOR SOCIAL MEDIA MARKETING****CREDITS: 3**

Effective social media marketing efforts require a unique copywriting approach. Discover why social media writing needs to be different and how effective writing changes how customers interact with businesses. Learn about appropriate writing tone and how to achieve a writing style that increases engagement and return traffic. Use case studies, examples, and hands-on writing projects to understand and apply effective social media writing techniques.

**BUS 228 PERSONAL INVESTMENTS****CREDITS: 3**

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 a new business. PREREQUISITES: ACCT 120 and BUS 101.

**BUS 241    ADVANCED COMPUTER APPLICATIONS FOR BUSINESS****CREDITS: 3**

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.

**PREREQUISITE:** CIS 105.**BUS 250    SOCIAL MEDIA MARKETING CAMPAIGN****CREDITS: 3**

In this capstone course, create and implement a social media marketing campaign for an actual business or organization. Use business, marketing, and social media principles and tactics to select a client, assess the client's needs, evaluate the market, and construct a sound social media campaign. During the campaign, use available metrics and data to evaluate the effectiveness of the campaign.

**BUS 255    PROFESSIONALISM IN BUSINESS****CREDITS: 3**

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

**PREREQUISITE:** CIS 105.**BUS 291    INTERNSHIP****CREDITS: 3**

This course is designed to provide the student an opportunity to apply the skills and knowledge acquired in the classroom through active participation in a local business. This is a volunteer or paid supervised internship. **PREREQUISITE:** ADVISOR APPROVAL.

**CAD 101    DRAFTING FUNDAMENTALS****CREDITS: 3**

The student is introduced to the fundamentals of drafting for the architectural, civil, and mechanical fields. The course covers the principles of board 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 an introduction to architectural drafting and design. Students will build on their knowledge of residential construction and learn to apply that knowledge toward the development of residential construction documents which conform to code requirements, industry standards, and proper drafting techniques. **PREREQUISITES:** CAD 132 and CAD 135.

**CAD 132    INTRODUCTION TO 2D CAD****CREDITS: 3**

This course introduces the latest release of AutoCAD and its commands. Basic Draw, Modify, Layer, Layout, and Plot concepts will be studied. Students will also learn proper computer care and file manipulation and storage.

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

This course is an introduction to the concepts of architectural construction theory. The student is introduced to the fundamentals of construction practices and materials used in building foundations, floors, walls, roofs, and associated components.

**CAD 140    ADVANCED 2D CAD****CREDITS: 3**

This course is a continuation of Introduction to 2D CAD and covers advanced concepts of the latest AutoCAD release. Advanced Draw, Modify, Text, Block, Data Linking, Dimensioning, and Layout concepts will be studied. **PREREQUISITE:** CAD 132 or PERMISSION FROM THE INSTRUCTOR.

**CAD 150    ARCHITECTURAL PRINT READING****CREDITS: 1**

This course addresses the need to accurately read and interpret technical drawings. Students will become familiar with the various symbols, abbreviations and terms associated with a standard set of construction documents and learn to navigate these drawings to accurately determine design intent.

**CAD 202    MECHANICAL DRAFTING****CREDITS: 3**

This course covers mechanical drafting practices used to create engineering drawings with a focus on drawing accuracy, drafting conventions, dimensioning, and readability. **PREREQUISITES:** CAD 232 and CAD 234.

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

This course is an introduction to the concepts of commercial construction theory. Emphasis is placed on methods, materials, and terms that are used in the commercial construction industry including advanced concepts of foundation, wall, floor, and roof construction.

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

This course introduces students to practical concepts and drafting principles associated with civil engineering and design. Students learn to interpret maps and symbols, calculate surveying data, and develop drawings for common civil drafting functions.

**PREREQUISITE:** CAD 132.**CAD 215 LIGHT COMMERCIAL CONSTRUCTION WITH 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 mechanical and electrical requirements, safe practices, introduction to the National Electrical Code (NEC), mechanical and electrical symbols, and basic concepts. **PREREQUISITE:** CAD 132.

**CAD 232 MECHANICAL PRINCIPLES****CREDITS: 3**

This course equips the student with basic principles of mechanical operations, component interaction, and assembly procedure.

**PREREQUISITE:** CAD 132 or **MUST TAKE CONCURRENTLY WITH CAD 255.****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.

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

This course continues exploration into the concepts of architectural drafting and design. Students will become more proficient in designing and completing architectural drawings with increased independence from the instructor. Advanced techniques are introduced which make use of the student's growing skill with CAD software. **PREREQUISITE:** CAD 111.

**CAD 240 3D ARCHITECTURAL DESIGN****CREDITS: 3**

This course continues the application of architectural design concepts and adapts them to the use of 3D Building Information Modeling (BIM). Students will apply their acquired skills and knowledge toward the development of functional designs and construction documents using the latest version of the appropriate 3D applications. **PREREQUISITE:** CAD 255. **PREREQUISITE or COREQUISITE:** CAD 111.

**CAD 244 3D ENGINEERING DESIGN****CREDITS: 3**

This course covers advanced features of parametric solid modeling including the concepts of parts, assemblies, drawings, sheet metal design, and animation. **PREREQUISITE:** CAD 255.

**CAD 247 COMPUTER AUTOMATED MANUFACTURING****CREDITS: 3**

This course covers a working knowledge and application of computer automated manufacturing. **PREREQUISITE:** CAD 255.

**CAD 250 INTRODUCTION TO MAPPING/GPS****CREDITS: 2**

This course covers principles of reading and using maps with industry standard technologies including Global Positioning Systems (GPS). Proper techniques of gathering usable mapping coordinates for Geographical Information Systems (GIS) will be emphasized.

**CAD 251 INTRODUCTION TO GIS****CREDITS: 3**

This course introduces principles and applications of Geographic Information Systems (GIS) using ArcGIS software. Students will develop skills in manipulating geographic data and representing this data through various informational mapping techniques.

**PREREQUISITE:** CAD 250.**CAD 252 INTRODUCTION TO SURVEYING****CREDITS: 3**

This course exposes students to basic field surveying techniques and related office procedures. **PREREQUISITE or COREQUISITE:** CAD 250.

**CAD 255 INTRODUCTION TO 3D CAD****CREDITS: 3**

This course introduces industry standard 3D CAD applications in both the architectural and mechanical fields. The architectural portion of the course covers the basics of parametric modeling with BIM (Building Information Modeling) software. The mechanical portion of the course covers the basics of parametric 3D modeling including the concepts of parts, assemblies, and drawings.

**CAD 297 INTERNSHIP****CREDITS: 3**

Work in a professional office for a minimum of 120 hours to gain computer aided drafting experience. The internship will be directly related to the drafting field and approved by the instructor. PREREQUISITE: CAD 140.

**CHEM 106 CHEMISTRY SURVEY****CREDITS: 3**

A one-semester survey of chemistry. Not intended for those needing an extensive chemistry background. Introduction to the properties of matter, atomic structure, bonding, stoichiometry, kinetics, equilibrium, states of matter, solutions, and acid-base concepts. PREREQUISITE: MATH 101 or HIGHER.

**CHEM 106L CHEMISTRY SURVEY LAB****CREDITS: 1**

Laboratory designed to accompany CHEM 106.

**CIS 105 MICROCOMPUTER SOFTWARE APPLICATIONS I****CREDITS: 3**

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

**CIS 125 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. Students will 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.

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

This course is the first of the four courses leading to the Cisco Certified Network (CCNA) certification. 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 networks will be addressed, including wireless and security configurations.

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

This course is the second of the four courses leading to the Cisco Certified Network (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: CIS 126.

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

This course is the third of the four courses leading to the Cisco Certified Network (CCNA) certification. In this course the student will assemble switching devices while using switching technology on the LAN side of a network. Students will also produce a wireless network using wireless technology points. PREREQUISITE: CIS 127.

**CIS 129 WINDOWS OPERATING SYSTEMS****CREDITS: 3**

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

**CIS 135 CISCO ACADEMY/NETWORKING TECHNOLOGIES IV****CREDITS: 3**

This course is the last of the four courses leading to the Cisco Certified Network (CCNA) certification. In this course the student will evaluate current WAN technologies and network services that are required by enterprise networks. PREREQUISITE: CIS 128.

**CIS 211 LINUX OPERATING SYSTEMS****CREDITS: 3**

In this course, the student will learn about the Linux file system and use a Linux operating system as a standalone system.

**CIS 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 and continues with how to configure name resolution and vital services such as DNS, WINS, DHCP, and IP Sec. The course also emphasizes Active Directory configuration. PREREQUISITE: CIS 129.

**CIS 215 NETWORK DESIGN AND VIRTUALIZATION**

**CREDITS: 3**

Students will design a virtualized computer network to be integrated into a networked environment. PREREQUISITES: CIS 127, CIS 211, and CIS 213.

**CIS 216 INTRODUCTION TO PROGRAMMING**

**CREDITS: 3**

This course is intended to give students with no previous programming experience the tools needed to create real-world procedural applications.

**CIS 218 LINUX SERVER**

**CREDITS: 3**

In this course, the student will integrate a Linux-based operating system as a standalone server or as a domain server within a MS Windows-based network. PREREQUISITE: CIS 211.

**CIS 220 NETWORK SECURITY I**

**CREDITS: 3**

In this course, the student will analyze the security risks of a network and be able to design options to mitigate those vulnerabilities. PREREQUISITES: CIS 211 and CIS 213 or APPROVAL OF INSTRUCTOR.

**CIS 225 DATABASES**

**CREDITS: 3**

This course introduces students to database creation, manipulation, and the Structured Query Language (SQL). PREREQUISITE or COREQUISITE: CIS 213.

**CIS 230 COMPUTER FORENSICS**

**CREDITS: 3**

Students will inspect digital evidence, analyze the data, and validate the analysis. PREREQUISITES: CIS 128, CIS 211, and CIS 213.

**CIS 235 NETWORK SECURITY II**

**CREDITS: 3**

Students will assemble switching devices while using switching technology on the LAN side of a network. Students will also produce a wireless network using wireless technology points. PREREQUISITE: CIS 220.

**CIS 240 COMPUTER SCIENCE CAPSTONE**

**CREDITS: 3**

A project and research-oriented course that emphasizes synthesis through collaborative learning. Students integrate and apply previous knowledge, skills, and experiences they have learned in their core and other academic courses to complete a team-oriented project. The course emphasizes communication skills, critical thinking, problem solving, computer/networking knowledge, and teamwork. PREREQUISITES: SUCCESSFUL COMPLETION OF THE FIRST THREE SEMESTERS OF COMPUTER SCIENCE COURSES and ENROLLMENT IN FOURTH SEMESTER COURSES FOR COMPLETION OF THE PROGRAM REQUIREMENTS.

**CJUS 200 COMMUNITY CORRECTIONS**

**CREDITS: 3**

This course will focus on alternative methodologies of corrections as opposed to traditional correctional institutions such as prisons and jails. The student will learn the philosophies and structures of alternative correctional programs in the criminal justice system and how they impact victims, offenders, and society.

**CJUS 205 CRIMINAL JUSTICE FORENSICS**

**CREDITS: 3**

This course explores how specific technologies are used by professionals in the criminal justice system to apprehend offenders, secure convictions on the guilty, exonerate the innocent, and make the criminal justice system more efficient. Views from the past and into the future will give student perspective on the ever-changing forensics in the criminal justice system and the demands for modernization and the cost impact to society.

**CJUS 210 CONTEMPORARY SECURITY PRACTICES**

**CREDITS: 3**

This course explores the practices of security professionals. Students will explore topics and tactics of security organizations and the personnel they employ. Specific tasks covered in this course include patrol, investigations, risk assessment, and emergency management. Also explored will be the technology and equipment used in the field to safeguard resources.

**CJUS 215 ETHICS IN CRIMINAL JUSTICE**

**CREDITS: 3**

The focus of this course is on the ethical decisions made in the criminal justice system and ethical predicaments placed on criminal justice professionals. Ethical theory from ancient Greece to contemporary western culture will be explored and applied in confronting ethical issues. Critical analysis regarding justice, duty, freedom, punishment, happiness, and other topics will give students an understanding of ethical issues, considerations and approaches in the field.

**CJUS 220 TERRORISM AND COUNTERTERRORISM****CREDITS: 3**

This course provides a global perspective of terrorism and the impact on societies. It will explore various analytical approaches to the study of terrorism: identifying terrorist groups, reviewing terrorist tactics, and examining police and governmental responses to reduce or control the incidence of terrorism.

**CJUS 225 DOMESTIC VIOLENCE****CREDITS: 3**

This course explores domestic and family violence. Students will examine relative perspectives such as feminist, psychological, sociological, historical, and legal. Specific course topics include patriarchy, marital rape, domestic assault, and child sexual abuse. Theories of violence, alternatives to violent interactions and the criminal justice system's response will give students an understanding of the impact of domestic violence crimes on society.

**CJUS 230 AGENCY ORGANIZATION AND MANAGEMENT****CREDITS: 3**

This course explores administrative practices of a multitude of law enforcement agencies. It will study types of agencies and command and control structure. Organizational theory and management will also be covered to include personnel management, policy and procedure, and operational methodologies.

**CJUS 235 CRIMINOLOGY****CREDITS: 3**

The focus of this course is on factors related to crime in America, including basic issues, scope, and economic impact. Students will examine the causes of criminal behavior, policy implications, and research. Explanations and measurements of crime, criminal law, characteristics of criminals and victims, white-collar, organized, and sexual crimes will also be studied.

**CJUS 240 COURT SYSTEMS AND PRACTICES****CREDITS: 3**

The focus of this course is the judicial system which makes up one third of the entire criminal justice system. Court Systems and Practices is an overview of the American judicial system. The course identifies the roles of judicial officers and other professionals responsible for judicial operations.

**CJUS 245 LAW ENFORCEMENT OPERATIONS AND PROCEDURES****CREDITS: 3**

This course introduces daily law enforcement activities and procedures. It examines law enforcement response to routine and emergency calls for service and various types of situations common to law enforcement officers. The course explores use of force, arrest procedures, field interviews, police reporting, and ethics. The class will identify gang activity, signs and indicators of drug abuse and handling of civil disobedience. There will be an emphasis on courtroom testimony, occupational hazards and communications.

**ECON 202 PRINCIPLES OF MACROECONOMICS****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.

**ED 105 MENTORSHIP****CREDITS: 1**

Mentorship is intended for Western Dakota Technical Institute faculty who are working toward their first post-secondary credential with the State of South Dakota through the Office of Career and Technical Education. The course will include various topics such as advising, exam writing, managing difficult students, assessment, et cetera to help the faculty member to be a successful instructor.

**ED 106 SUCCESSFUL TEACHING APPROACHES FOR DISTANCE LEARNING****CREDITS: 1**

This class will explore learning theory and the application of adult learning practices as used in e-learning environments.

**ED 107 ONLINE LEARNING PLATFORM****CREDITS: 1**

Students will design an online course using WDT's current online learning platform.

**ED 108 ONLINE TEACHING BASICS****CREDITS: 1**

This class will cover online teaching basics for instructors who wish to teach online courses at WDT but who do not want to create the course.

**EET 102 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. Material is presented to enable students to better understand and evaluate contemporary environmental problems and the application of science to their solutions.



**EET 103 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.

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

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

**EET 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 to service data gathering equipment will be conducted. Safety procedures are stressed. PREREQUISITES: EET 102 or EET 106, CHEM 106, CHEM 106L, and MATH 101 or EQUIVALENT.

**EET 204 ENVIRONMENTAL REGULATIONS****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.

**EET 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.

**EET 225 AIR QUALITY****CREDITS: 2**

This course will introduce the student to the concepts and terms essential to understanding the major issues surrounding air pollution. Basic atmospheric processes will be presented as they affect delivery and dispersion of pollutants. Sampling and analysis methods will be discussed. The health effects of various pollutants and air toxics will be presented in order to understand the purpose of air pollution regulations. The increasing concerns regarding indoor air quality will be presented along with approaches to investigation and control. PREREQUISITES: EET 102 and EET 106.

**EET 235 CONSTRUCTION MATERIALS SAMPLING & TESTING****CREDITS: 3**

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.

**EET 250 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: EET 102.

**EET 251 ENVIRONMENTAL GEOLOGY****CREDITS: 3**

This course introduces geology as it relates to human activities and is designed for both non-science majors and students interested in environmental careers. The course emphasizes geologic hazards including earthquakes, volcanic eruptions, flooding, mass movements, and pollution of water and soil resources. It also examines waste disposal along with related topics in medical geology and environmental law.

**EET 253 PRINCIPLES OF WATER RESOURCES****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 groundwater 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: EET 102, EET 103, and MATH 101 or EQUIVALENT.

**EET 255 INTRODUCTION TO GEOMORPHOLOGY****CREDITS: 3**

In this introductory geomorphology course, students will study how stream processes shape landforms. Emphasis is placed on a basic understanding of geomorphic processes. Relationships between properties of earth materials and the forces applied to them by gravity, wind, ice, water, waves, and humans also will be explored. Lectures will address the conceptual basis of geomorphology, while the laboratory exercises will combine interpretation of aerial photographs and experiments on the water table with other hands-on activities that are both practical and empirical. PREREQUISITES: EET 103, EET 106, and EET 253.

**EET 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.

**EET 299 FIELD INTERNSHIP****CREDITS: 2**

Environmental or geotechnical work experience in business, industry, or government. PREREQUISITE: ADVISOR APPROVAL.

**ELT 217 COMPUTER HARDWARE INSTALLATION & TROUBLESHOOTING****CREDITS: 4**

This course will provide a basic understanding of how personal computers work and provide an opportunity for students to obtain the knowledge and skills necessary to service PC hardware and supported peripherals. Upon conclusion of this course, students will be able to understand basic components of computer hardware systems, as well as upgrading and troubleshooting computers. PREREQUISITES: IEL 132 and IEL 133.

**EMT 105 EMERGENCY MEDICAL TECHNICIAN****CREDITS: 6**

Students will be instructed on all aspects of emergency medical care at the Emergency Medical Technician level in accordance with the National Registry and the Department of Transportation guidelines. COREQUISITE: EMT 105L.

**EMT 105L EMERGENCY MEDICAL TECHNICIAN LAB****CREDITS: 3**

Students will obtain the necessary hands-on practice in all aspects of emergency medical care at the Emergency Medical Technician level in accordance with the National Registry and the Department of Transportation guidelines. COREQUISITE: EMT 105.

**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. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL or A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN ENGL 091 or ENGL 201.

**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 communication in the workplace. Instruction leads students through the planning tasks, identifying audiences, and gathering information. More emphasis is on reports. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL or A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN ENGL 091.

**ENGL 202 TECHNICAL COMMUNICATIONS****CREDITS: 3**

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

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

This course consists of therapeutic communications, life span development, airway management, and ventilation. PREREQUISITES: CURRENT CPR CARD and FFP 120. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**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: CURRENT CPR CARD, CURRENT NREMT CERTIFICATION, HC 114, and HC 213. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**FFP 115 PARAMEDIC CARDIOLOGY****CREDITS: 5**

This course consists of pulmonology, cardiology, 12-lead EKG, and advanced cardiac life support. PREREQUISITES: CURRENT CPR CARD and FFP 110. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**FFP 120 PARAMEDIC PREPARATORY I****CREDITS: 4**

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, ethics in pre-hospital care, general pathophysiology, general principles of pharmacology, medication administration, anatomy and physiology, and medical terminology. PREREQUISITES: CURRENT NREMT CERTIFICATION, HC 114, and HC 213. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**FFP 125 PARAMEDIC MEDICAL****CREDITS: 3**

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: CURRENT CPR CARD, CURRENT NREMT CERTIFICATION, HC 114, and HC 213. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**FFP 130 PARAMEDIC SPECIAL OPERATIONS I****CREDITS: 2**

This course consists of neonatology, pediatric life support, and neonatal resuscitation. PREREQUISITES: CURRENT CPR CARD, CURRENT NREMT CERTIFICATION, HC 114, and HC 213. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**FFP 215 PARAMEDIC SPECIAL OPERATIONS II****CREDITS: 5**

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: CURRENT CPR CARD and FFP 130. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**FFP 280 PARAMEDIC CLINICAL I****CREDITS: 2**

The student's clinical rotations will include intensive care unit, operating room, IV lab, pediatric unit, and labor/delivery/newborn nursery/NICU. PREREQUISITES: CURRENT CPR CARD, CURRENT NREMT, and NEED TO BE ENROLLED IN FIRST SEMESTER OF PARAMEDIC PROGRAM TECHNICAL (FFP) COURSES. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. PROGRESSION: PROGRESSION TO FFP 280 LIVE CLINICAL SITES REQUIRES THE STUDENT TO HAVE SUCCESSFULLY PASSED PALS, ACLS, PHTLS, AND DEMONSTRATE COMPETENCY AS INDICATED BY THE NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS PRACTICAL SKILL SHEETS IN THE AREAS OF PRACTICE TO BE PERFORMED DURING THE CLINICAL ROTATION.

**FFP 281 PARAMEDIC CLINICAL II****CREDITS: 4**

The student's clinical rotation will be in the emergency room. PREREQUISITES: CURRENT CPR CARD, CURRENT NREMT, CURRENT PALS, CURRENT ACLS, FFP 110, FFP 120, FFP 125, FFP 130, and FFP 280. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. PROGRESSION: PROGRESSION TO FFP 281 LIVE CLINICAL SITES REQUIRES THE STUDENT TO HAVE SUCCESSFULLY PASSED PHTLS AND AMLS, AND DEMONSTRATE COMPETENCY AS INDICATED BY THE NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS PRACTICAL SKILL SHEETS IN THE AREAS OF PRACTICE TO BE PERFORMED DURING THE CLINICAL ROTATION.

**FFP 282 PARAMEDIC CLINICAL III****CREDITS: 10**

The student's clinical rotations will include emergency room and ambulance field training. PREREQUISITES: CURRENT CPR CARD, CURRENT NREMT, CURRENT PALS, CURRENT ACLS, CURRENT PHTLS, CURRENT AMLS, FFP 105, FFP 115, FFP 215, and FFP 281. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM. PROGRESSION: PROGRESSION TO FFP 282 LIVE CLINICAL SITES REQUIRES THE STUDENT TO DEMONSTRATE COMPETENCY AS INDICATED BY THE NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS PRACTICAL SKILL SHEETS IN THE AREAS OF PRACTICE TO BE PERFORMED DURING THE CLINICAL ROTATION.

**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: FFT 121.

**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 and NFPA requirements for operations level certification. PREREQUISITE: FFT 121 or FFT 123.

**FFT 118 HAZWOPER 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.

**FFT 121 STRUCTURAL FIREFIGHTER I****CREDITS: 3**

This course is an introduction to the history, organization, and operation of a fire department. Fire science and the basic fire suppression techniques will be covered. The proper use of firefighter protective clothing and breathing apparatus will be taught to the current standards of NFPA 1001 Firefighter I.

**FFT 122 STRUCTURAL FIREFIGHTER I LAB****CREDITS: 3**

This lab-based course will prepare students in developing skill proficiency identified in NFPA 1001, Standard for Fire Fighter Professional Qualifications, and the Job Performance Requirements (JPR's) at the awareness level of the NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents.

**FFT 123 INTRODUCTION TO WILDLAND FIREFIGHTER****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 140 PHYSICAL FITNESS I****CREDITS: 1**

This course is the first course in a series of four courses preparing students for the Red Card Pack Test, the Firefighter Combat Challenge Test, and the CPAT test to meet the hiring requirements of municipal and wildland fire departments. 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 emphasized.

**FFT 150 PUMPING APPARATUS DRIVER-OPERATOR****CREDITS: 3**

This course details the important responsibilities of firefighters who are assigned to drive and operate a fire department vehicle that is equipped with a fire pump. It acquaints the student with the evolution of fire apparatus and provides an understanding of the uses for different pieces of fire-fighting vehicles and their characteristics. The various types of fire pumps and the ability to perform fireground hydraulic calculations will be emphasized.

**FFT 151 WILDLAND PUMPS AND SAWS****CREDITS: 2**

Instruction continues from Wildland Firefighter I with the presentation of NWCG courses S-211 (Portable Pumps) and S-212 (Saws). PREREQUISITE: FFT 123.

**FFT 190 PHYSICAL FITNESS II****CREDITS: 1**

This course is the second course in a series of four courses preparing students for the Red Card Pack Test, the Firefighter Combat Challenge Test, and the CPAT test to meet the hiring requirements of municipal and wildland fire departments. 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 emphasized.

**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. PREREQUISITE: FFT 123.

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

This course covers basic fire suppression attack strategies and tactics and incident management systems. Emphasis will be on firefighter safety and risk reduction. PREREQUISITE: FFT 121 or FFT 123.

**FFT 232 STRUCTURAL FIREFIGHTER II****CREDITS: 3**

The course is designed to expand on the knowledge and skills learned in FFT 121/FFT 122. It will prepare students in developing knowledge and skill proficiency identified in NFPA 1001, Standard for Fire Fighter Professional Qualifications, and the Job Performance Requirements (JPR's) at the operations level of NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. PREREQUISITES: FFT 121, FFT 122, and FFT 123.

**FFT 233 FIRE CAUSES & INVESTIGATIONS****CREDITS: 3**

This course will assist the firefighter in determining the origin and cause of a fire, identifying and preserving evidence, and determining when the assistance of a more highly trained investigator is needed.

**FFT 234 RESCUE PRACTICES FOR THE FIRE SERVICE****CREDITS: 4**

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 240 PHYSICAL FITNESS III****CREDITS: 1**

This course is the third course in a series of four courses preparing students for the Red Card Pack Test, the Firefighter Combat Challenge Test, and the CPAT test to meet the hiring requirements of municipal and wildland fire departments. 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 emphasized.

**FFT 290 PHYSICAL FITNESS IV****CREDITS: 1**

This course is the final course in a series of four courses preparing students for the Red Card Pack Test, the Firefighter Combat Challenge Test, and the CPAT test to meet the hiring requirements of municipal and wildland fire departments. 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 emphasized.

**FFT 298 INTERNSHIP****CREDITS: 3**

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 and to apply their skills while working in structure, wildland, and fire prevention settings. Students will learn the daily duties and responsibilities of working at a professional fire station. Students will be expected to perform the daily duties of a firefighter. Students may respond to emergencies and incidents as a crew member assigned to an apparatus. PREREQUISITES: FFT 121 and FFT 123.

**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 124 INTRODUCTION TO PATIENT CARE****CREDITS: 1**

This course is designed to provide the student with the knowledge necessary to provide safe patient care at an introductory level. CLINICAL PROGRESSION: STUDENTS MUST BE MAINTAINING A "C" OR BETTER IN HC 124, HAVE COMPLETED HC 124 WITH A "C" OR BETTER WITHIN THE LAST 6 MONTHS, or HAVE NURSING DIRECTOR APPROVAL TO PARTICIPATE IN HC 126 CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM A WDT PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**HC 126 INTRODUCTION TO PATIENT CARE LAB AND CLINICAL****CREDITS: 2**

This course is designed to provide the student with the skills and clinical experience necessary to provide safe patient care at an introductory level. CO-REQUISITE: MUST BE CURRENTLY ENROLLED IN HC 124, PASSED HC 124 WITH A MINIMUM GRADE OF "C" IN THE PAST 6 MONTHS, or OBTAIN NURSING DIRECTOR APPROVAL. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN HC 124 and HC 126 TO PARTICIPATE IN HC 126 CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM A WDT PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**HC 130 MEDICAL 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.

**HC 135 MEDICAL LAW AND ETHICS****CREDITS: 2**

This course introduces the student to the legal principles and ethical issues affecting all healthcare professionals today.

**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 healthcare settings.

**HC 200 PHARMACOLOGY FOR HEALTHCARE****CREDITS: 3**

This course will cover the knowledge of common medications, usage, and safety associated with them.

**HC 205 PROFESSIONALISM IN HEALTHCARE****CREDITS: 1**

Although hands-on technical skills remain a high priority in the healthcare field, good character, a strong work ethic, and personal/professional traits and behaviors are increasingly important. This course covers the professional standards that apply to all healthcare workers and the shared responsibility to provide the highest quality of healthcare services. Emphasis is placed on professionalism, communication, attitude, behaviors, expectations, and appearance.

**HC 213 MEDICAL TERMINOLOGY I****CREDITS: 3**

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 215 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 healthcare professionals. **PREREQUISITE:** HC 213.

**HC 225 PATHOPHYSIOLOGY****CREDITS: 3**

This course includes the study of various diseases and disorders of each of the body systems. **PREREQUISITES:** HC 114 and HC 213.

**HVAC 121 ELECTRICAL APPLICATIONS FOR HVAC I****CREDITS: 4**

This course covers general knowledge of basic electrical applications used by industry. Use of basic electrical equipment including multimeters is stressed. Topics include current, voltage, resistance, symbols, and basic AC and DC circuits. Introduction to automatic component controls and motors in their typical applications are also included.

**HVAC 125 HVAC INSTALLATION I****CREDITS: 3**

This course provides a comprehensive introduction to designing and installing heating, ventilating, and air-conditioning systems. Students learn basic principles of heat transfer and the basic refrigeration cycle applied to air conditioning.

**HVAC 126 HVAC INSTALLATION I LAB****CREDITS: 4**

Laboratory designed to accompany HVAC 125.

**HVAC 135 ELECTRICAL APPLICATIONS FOR HVAC II****CREDITS: 3**

This course continues the coverage of electrical applications used by heating, ventilating, air-conditioning installers. Students learn a more thorough explanation of voltage and current, including basic measuring techniques and safety concerns. **PREREQUISITE:** HVAC 121.

**HVAC 145 HVAC INSTALLATION II****CREDITS: 3**

This course provides advanced instruction on designing and installing heating, ventilating, air-conditioning systems. Students also will go into more depth on topics such as refrigerant handling procedures, gas piping and sizing, chimney and vent calculations, and the uniform mechanical code. This course also includes preparation for and completion of the universal heating, ventilating, air-conditioning certification exam. The examination requires an additional fee. **PREREQUISITE:** HVAC 125.

**HVAC 146 HVAC INSTALLATION II LAB****CREDITS: 4**

Laboratory designed to accompany HVAC 145. PREREQUISITE: HVAC 126.

**HVAC 220 HVAC/R I****CREDITS: 3**

This course is designed to introduce the fundamentals of low, medium, and high temperature commercial refrigeration. This includes the study of commercial freezers, walk-in boxes, and commercial refrigeration equipment. PREREQUISITES: ALL FIRST AND SECOND SEMESTER HVAC COURSES. COREQUISITE: HVAC 221.

**HVAC 221 HVAC/R I LAB****CREDITS: 4**

This course is designed to accompany HVAC/R I. PREREQUISITES: ALL FIRST AND SECOND SEMESTER HVAC COURSES. COREQUISITE: HVAC 220.

**HVAC 225 ELECTRICAL APPLICATIONS FOR HVAC/R III****CREDITS: 3**

This course provides a more in-depth knowledge on diagnosing problems in electrical components and electrical circuits that make up refrigeration, heating, and air-conditioning systems. Students will apply learned knowledge to troubleshoot HVAC systems. PREREQUISITES: ALL FIRST AND SECOND SEMESTER HVAC COURSES.

**HVAC 230 HVAC/R II****CREDITS: 3**

This course is a continuation of HVAC/R I. Commercial air conditioning, chilled-water, hydronic heating, and geothermal heat pump systems will be introduced. Students will study indoor air quality, psychrometrics, air distribution, and balancing. PREREQUISITES: HVAC 220 and HVAC 221. COREQUISITE: HVAC 231.

**HVAC 231 HVAC/R II LAB****CREDITS: 4**

This course is designed to accompany HVAC/R II. PREREQUISITE: HVAC 220 and HVAC 221. COREQUISITE: HVAC 230.

**HVAC 235 ELECTRICAL APPLICATIONS FOR HVAC/R IV****CREDITS: 3**

This course is a continuation of previous HVAC electrical applications with emphasis on commercial and special refrigeration electrical equipment and components. Students will be introduced to basic direct digital controls, pneumatics, and electronic control circuits used in HVAC/R systems. PREREQUISITE: HVAC 225.

**HVAC 240 SPECIALIZED HVAC/R EQUIPMENT****CREDITS: 2**

This course studies various types of commercial ice machines, water coolers, and common domestic HVAC/R appliances. Students will also be introduced to extra-low-temperature refrigeration, cascade systems, and mobile refrigeration equipment. PREREQUISITES: ALL FIRST THROUGH THIRD SEMESTER HVAC COURSES.

**IEL 122 ELECTRICAL CODE STUDY I****CREDITS: 3**

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 locations are studied. PREREQUISITE: IEL 130.

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

This course will cover the operation and installation of data communication cabling 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 cabling and fiber optics. This course is designed to prepare the industrial electrician for the ever-increasing demand for installation of cabling systems in residential, commercial, and industrial projects. PREREQUISITES: IEL 132 and IEL 133.

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

This is a lab course intended to accompany the IEL 130 – Introduction to Electrical Wiring course. Through actual hands-on experiments on developed trainers in the lab, the student will be able to reinforce the concepts learned in IEL 130. PREREQUISITES: IEL 132 and IEL 133.

**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 are used in the study of residential wiring principles and common residential circuit hookups. PREREQUISITES: IEL 132 and IEL 133.

**IEL 132 ELECTRICAL FUNDAMENTALS****CREDITS: 5**

This course introduces the fundamental concepts of basic electricity-AC, DC, and solid state. It includes basic circuit analysis of series circuits, parallel circuits, series-parallel circuits, and OHMS law. A study of electrical quantities and measuring basic quantities using a VOM and the oscilloscope are included. This course covers the physical make up and characteristics of electrical components and how to analyze and troubleshoot circuits.

**IEL 133 ELECTRICAL FUNDAMENTALS LAB****CREDITS: 7**

This course addresses the lab study of AC, DC, solid state, series, parallel, series-parallel, inductance, and capacitance. Measuring basic quantities using a VOM and the oscilloscope and analyzing and troubleshooting circuits are included. Voltages and currents are measured to demonstrate circuit characteristics.

**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. PREREQUISITES: IEL 132 and IEL 133.

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

This course is designed to teach students 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 211 ELECTRICAL MOTOR CONTROL****CREDITS: 3**

This course is intended to familiarize the student with motor control theory from very basic concepts to much more complicated circuits. This course is intended to be taken concurrently with IEL 216 – Motor Control Lab. PREREQUISITES: IEL 223 and IEL 226.

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

This course will provide the student with an understanding of electrical heat and electrical heating control circuits. Installation, maintenance, and troubleshooting of electrical heating systems are an important component of an industrial electrician's career. This course will also introduce the student to air conditioning and heat pump operation as well as the essentials needed to understand control systems on gas and oil heating systems. PREREQUISITES: IEL 132 and IEL 133.

**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. PREREQUISITE: IEL 122.

**IEL 216 ELECTRICAL 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 IEL211-Electrical Motor Control course. PREREQUISITES: IEL 130, IEL 223, and IEL 226. CO-REQUISITE: IEL 211.

**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 WDT projects. PREREQUISITES: IEL 129 and IEL 130.

**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 WDT projects are included in this course. PREREQUISITE: IEL 218.

**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. PREREQUISITES: IEL 211 and IEL 216.



**IEL 222 PROGRAMMABLE LOGIC CONTROLLERS LAB****CREDITS: 3**

This course will give the student hands-on experience in programming programmable controllers. The theory learned in previous coursework 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 and IEL 216. CO-REQUISITE: IEL 221.

**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 IEL 226 Electric Motor Fundamentals and Maintenance. PREREQUISITES: IEL 132 and IEL 133.

**IEL 224 POWER DISTRIBUTION****CREDITS: 2**

Transformers are considered the most important type of equipment in the process of distribution of electrical power. Included in this course are transformer theory, code, and actual transformer connections. PREREQUISITES: IEL 132 and IEL 133.

**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 troubleshooting. This course should be taken concurrently with IEL 223 Electric Motor Lab. PREREQUISITES: IEL 132 and IEL 133.

**IEL 230 BLUEPRINT READING, ELECTRICAL PLANNING, AND ESTIMATING****CREDITS: 4**

This course will teach the basics of blueprint reading, planning, and estimating. A part of the course is devoted to construction topics other than that of the electrical trade. The students will plan and draw the actual electrical diagram on a blueprint and estimate the cost of the job. PREREQUISITES: IEL 129 and IEL 130.

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

The Electrician Internship/CO-OP course is a hands-on course where students gain experience with an employer through on-the-job electrical related work at an approved job site. PREREQUISITE: ADVISOR APPROVAL REQUIRED.

**INT 299 INTERNSHIP****CREDITS: 3**

This course is designed to provide the student an opportunity to apply the skills and knowledge acquired in the classroom through active participation in their field of study. PREREQUISITE: INSTRUCTOR APPROVAL.

**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 include the proper wearing of uniform and basic facing movements as they relate to dismounted drill.

**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 and pretrial 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 121 CRIMINAL INVESTIGATIONS****CREDITS: 4**

Students will be taught the fundamentals of the crime scene and post-crime investigation as it relates to property crimes, crimes against persons, and white-collar crime. Specific instruction as it relates to South Dakota Codified Law will be covered as it relates to these crimes. Crimes committed in relation to cults, hate groups, explosives, and drugs and the culture that promotes them will be covered.

**LET 122 INTERVIEW AND INTERROGATION AND 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, and 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 course is designed to introduce students to the basics of the juvenile justice system. The course will begin with a history of juvenile crime and the social significance of trends being observed by professionals. Although a focus will be placed upon the role of law enforcement in dealing with juvenile issues from a preventative and enforcement aspect, several areas of the system will also be examined. Among these are terminologies pertaining to this area of the criminal justice system and the causes of delinquency, gangs, and child abuse. The workings of the schools, social services, detention facilities, prosecutors, diversion programs, the court, and correctional institutions (as they relate to the juvenile justice system) will be touched upon as well. All of the information will be presented in a manner such that the students will not only be able to become familiar with theory but also see how it applies to everyday law enforcement workings.

**LET 126 PHYSICAL TRAINING****CREDITS: 1**

Students will periodically review previous defensive tactics and skills as instructed in LET 128. Students will maintain the ability and confidence to successfully cope with the physical situations which confront law enforcement officers. Students will be instructed in the methods of stretching and warming of muscles to prevent strain and injury. Students will perform certain physical exercises for fitness purposes.

**LET 128 MECHANICS OF ARREST AND PHYSICAL TRAINING****CREDITS: 3**

This course is designed to familiarize the student with the use of force continuum and in basic offender confrontation concepts. Students will gain the ability and confidence to successfully cope with physical situations and the ability to respond with swift and efficient solutions whether physical or verbal. Students must properly arrest, handcuff, control, and conduct a safe and thorough search incident to arrest of compliant and non-compliant suspects. Techniques covered will be the proper use of handcuffs, police baton, and oleoresin capsicum (OC) spray. Students will be taught the methods for body muscle warming and methods used to prevent muscle strain and injury. Students will perform certain physical exercises for fitness purposes.

**LET 210 INTRODUCTION TO CRIMINAL JUSTICE****CREDITS: 3**

The history and social significance of the law enforcement profession will be studied along with the role, responsibilities, and demands upon law enforcement officers in our 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 will be explored. Topics concerning motivation, civil liability, job stress, and sociological concepts which are applicable in the practice of law enforcement will be covered. 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 212 ACCIDENT INVESTIGATIONS****CREDITS: 2**

This course is designed to create the ability within each student to understand the basics of proper and lawful investigations of accidents. This will include the students being taught the applicable laws that pertain to accidents of a general nature and specifically as it relates to the laws of the State of South Dakota. This course will include a segment on accident reconstruction.

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

This course deals with the accepted techniques and methods of crime scene preservation and management and the collection of evidence. This includes locating evidence, packaging, and transmittal of evidence to the proper forensic laboratory.

**LET 216 PHYSICAL TRAINING****CREDITS: 1**

Students will periodically review previous defensive tactics and skills as instructed in LET 128. Students will maintain the ability and confidence to successfully cope with the physical situations which confront law enforcement officers. Students will be instructed in the methods of stretching and warming of muscles to prevent strain and injury. Students will participate and perform certain physical exercises for fitness purposes.

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

Students will receive lecture on various patrol procedures. 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. **PREREQUISITE: 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. A 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 allow students the opportunity to participate in hands-on experiences with various law enforcement/criminal justice agencies covering a variety of duties. Students may be assigned a variety of law enforcement tasks working with officers during their duty shifts. **PREREQUISITES: SUCCESSFUL COMPLETION OF ALL FIRST THROUGH THIRD SEMESTER LET COURSES or PERMISSION FROM THE LEAD INSTRUCTOR OF THE LAW ENFORCEMENT TECHNOLOGY PROGRAM.**

**LET 226 PHYSICAL TRAINING****CREDITS: 1**

Students will periodically review previous defensive tactics and skills as instructed in LET 128. Students will maintain the ability and confidence to successfully cope with the physical situations which confront law enforcement officers. Students will be instructed in the methods of stretching and warming of muscles to prevent strain and injury. Students will perform certain physical exercises for fitness purposes.

**LET 229 CORRECTIONS****CREDITS: 3**

Students will understand the U.S. system of corrections, parole, and probation. Students will also learn 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, Code of Federal Regulations Title 36, and United States Code 16 and 18. The concepts of Patrol Procedure I will be applied in hands-on scenarios. This will include the initial response of the patrol officer as it relates to emergency medical, report writing, preliminary investigation, and testifying in court. **PREREQUISITES: VALID DRIVER'S LICENSE and CURRENT CPR CARD.**

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

This course is designed to introduce students to the use of various pieces of equipment and tools that are available to law enforcement officers in today's society. When appropriate, students will certify in the use of the equipment and tools. Students will learn GPS/GIS, TASER, RADAR, LIDAR, and forensic mapping utilizing a total station data collection and associated software. Additional technology will be integrated into the class as science provides updated and innovative equipment to the world of law enforcement. **PREREQUISITE: VALID DRIVER'S LICENSE**

**LET 240 CONSTITUTIONAL LAW FOR LAW ENFORCEMENT****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 251 FIREARMS TRAINING****CREDITS: 2**

The emphasis of this course will be firearms safety, proficiency in use of firearms and the proper handling and care of firearms. Information regarding the proper methods of using and when to use firearms will be covered in depth. Instruction in the proper sighting, trigger pull, and all other elements of 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. **TITLE 18 USC Sec. 922 COMPLIANCE:** Any student who has been convicted of a misdemeanor crime of domestic violence (or any crime which could be classified as a domestic violence violation but was not) and/or any student who is subject to a restraining order cannot participate in this class. Any student who acquires this particular status during firearms training will be terminated immediately from the firearms class. **PREREQUISITE: VALID DRIVER'S LICENSE**

**LET 255 EMERGENCY VEHICLE OPERATION COURSE****CREDITS: 3**

This 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 the required course driving maneuvers. **PREREQUISITE: VALID DRIVER'S LICENSE**

**LIBR 100 INTRODUCTION TO LIBRARY SERVICES****CREDITS: 3**

Overview of the variety of roles performed by library technicians in all types of libraries and information centers. Emphasis is on the library technician's role in the delivery of services, the tools and terminology of library relationships to the communities they serve, and monitoring and implementation of new service trends.

**LIBR 102 INTRODUCTION TO LIBRARY CIRCULATION AND CUSTOMER SERVICE****CREDITS: 3**

This course covers research into and development of circulation policies, review of self-service technologies, readers' advisory, notification systems, and materials handling. The course also includes the investigation of integrated library systems and their impacts to user-friendly customer service, and discussion of current issues that impact library services.

**LIBR 104 PUBLIC SERVICES FOR LIBRARY TECHNICIANS****CREDITS: 3**

This course is an introduction to public catalogs, bibliographic instruction, inter-library loan practices, handling of problem patrons, and development of library behavior policies. Also reviewed is basic marketing of library services.

**LIBR 120 PROGRAMMING AND SERVICES FOR ALL AGES****CREDITS: 3**

This course is an introduction to programming for multicultural and multi-aged populations (youth, teens, working adults, and seniors); resource awareness including cost-benefit analysis with program evaluations, planning and management; and basic marketing of library programming.

**LIBR 122 CHILDREN'S AND YOUNG ADULT LITERATURE****CREDITS: 3**

This is an introductory course for both children's and young adult literature. Content will emphasize selection and evaluation of books according to levels, interest, special needs, and educational objectives. Readers' advisory for youth is also reviewed.

**LIBR 200 INTRODUCTION TO TECHNICAL SERVICES: ACQUISITIONS, SERIALS, AND PROCESSING****CREDITS: 3**

Principles of acquiring and processing library materials, including vendor selection, ordering, receiving, processing and outsourcing, and budget accounting will be covered in this course.

**LIBR 202 CONTENT CREATION AND MOBILE LIBRARY SERVICES****CREDITS: 3**

Principles of online content creation for customization and user-friendly access to library resources will be covered in this course. The course will also review and assess mobile library applications and tools that deliver library services to mobile devices.

**LIBR 204 SELECTION AND ACCESS RESOURCES****CREDITS: 3**

Principles of collection development in all formats, including selection and evaluation of print and virtual resources will be covered in this course. Research into and development of collection development policies and assessment and weeding of collections will also be studied.

**LIBR 220 INTRODUCTION TO CATALOGING AND CLASSIFICATION****CREDITS: 3**

This course includes principles of cataloging systems to facilitate user-friendly patron access. It also discusses the implications of organization including subject headings and tagging and indexing practice upon patrons' information access.

**LIBR 222 REFERENCE RESOURCES****CREDITS: 3**

This course includes selection and use of e-formats, databases, and print resources appropriate for reference and information services. It presents an introduction to effective search strategies and critical analysis of reference tools.

**LIBR 224 TECHNOLOGY INFORMATION RESOURCES & ONLINE SOCIAL NETWORKING****CREDITS: 3**

This course introduces a variety of social media and social networking platforms and their use in providing library information and communications. It discusses trend-watching and implementation of new resources for evolving library services.

**LIBR 299 INTERNSHIP****CREDITS: 3**

This course is designed to provide students an opportunity to apply the skills and knowledge acquired in the classroom through active participation in a library. This is a supervised experience that may be volunteer-based or paid.

**MA 210 MEDICAL ASSISTING I****CREDITS: 3**

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. **COREQUISITE: MA 214.**

**MA 214 MEDICAL ASSISTING I CLINICAL****CREDITS: 1**

This course provides medical assisting students the opportunity to apply their skills and knowledge in the medical office. Students are placed in medical facilities to gain hands-on experience in the administrative skills required of an entry-level medical assistant. Students are under the supervision of the facility and are periodically evaluated by the preceptor. **PREREQUISITE: CURRENT CPR CARD. COREQUISITE: MA 210.**

**MA 215 PHLEBOTOMY AND LAB TECHNIQUES FOR THE MEDICAL ASSISTANT****CREDITS: 4**

This course introduces students to the phlebotomy skills and lab techniques necessary for entry-level medical assistants. The course includes theory, active learning experiences, and hands-on training. Students will become familiar with phlebotomy and lab equipment, blood collection procedures, laboratory safety, basic laboratory mathematics, regulations and standards, quality assurance practices, recordkeeping and billing, specimen processing, and CLIA waived and point-of-care laboratory testing. The importance of professionalism, communication skills, attention to detail, personal and patient safety, and accurate technical skill development will be emphasized.

**MA 250 MEDICAL ASSISTING II****CREDITS: 3**

This course will teach students the clinical knowledge needed for an entry-level medical assistant. PREREQUISITES: HC 124 and HC 126. COREQUISITE: MA 253.

**MA 253 MEDICAL ASSISTING II LAB AND CLINICAL****CREDITS: 5**

This course provides the medical assisting students the opportunity to apply their clinical skills and knowledge in the clinical setting after completion of lab hours. Students are placed in medical facilities of Rapid City and surrounding areas to gain hands-on experience in the clinical skills required of an entry-level medical assistant. Students are under the supervision of the facility and are periodically evaluated by the preceptor. PREREQUISITES: CURRENT CPR CARD and ADVISOR APPROVAL. COREQUISITE: MA 250.

**MACH 110 MACHINE SHOP OPERATIONS****CREDITS: 3**

This course will cover the topics of machine shop safety, semi-precision and precision measurement, layout, inspection, bench work, band saw and drill press work, job planning, order of operations, tooling options, tool grinding, work holding devices and fixtures, and maintenance.

**MACH 115 TURNING THEORY AND OPERATIONS I****CREDITS: 3**

This course introduces the metal cutting lathe, its care, setup, and use as applied to current industry practices. Topics addressed will include lathe safety, machine setup, and carrying out the basic lathe operations of turning, drilling, boring, facing, and thread cutting.

**MACH 120 MILLING THEORY AND OPERATIONS I****CREDITS: 3**

The vertical milling machine and its set-up and operation are introduced in this course. Students will learn milling machine safety, tramming of the mill, and the use of edge finders and dial indicators to locate part features and align work. Use of the Cartesian coordinate system, drilling, surfacing, slotting, pocketing and contour milling procedures will be covered.

**MACH 125 MECHANICAL BLUEPRINT READING****CREDITS: 3**

This course addresses the interpretation of blueprints commonly encountered in the machine shop. Drawing layout, sectional views, auxiliary views, assembly drawings, conventional, baseline, and GT&D dimensioning conventions, bill of materials, and symbols used in the metal working industry are among the topics covered.

**MACH 130 MATERIALS APPLICATIONS****CREDITS: 3**

Training in this course includes metals composition and characteristics, material selection, heat treatment, hardness testing, machinability, and use of the surface grinder and other precision grinding equipment. PREREQUISITES: MACH 110, MACH 115, MACH 120, and MACH 125.

**MACH 135 TURNING THEORY AND OPERATIONS II****CREDITS: 3**

Expands on basic lathe skills by implementing the use of four-jaw chucks, collets, steady rests, follower rests, and face plate work. Taper turning, knurling, parting and machining between centers will be explored. Work will progress to include multi-part assemblies where fit, finish, and attention to detail need to be employed. Basics on operation of the CNC TRAK lathe will also be introduced. PREREQUISITES: MACH 110, MACH 115, and MACH 125.

**MACH 140 MILLING THEORY AND OPERATIONS II****CREDITS: 3**

Expands on basic milling machine skills. Additional work holding methods such as rotary tables, strap clamps, angle plates, and a variety of fixtures will be implemented. The use of sine bars, gauge blocks, boring heads, indexing heads, and special purpose cutters will be explored. Work will progress to include multi-part assemblies where fit, finish, and attention to detail need to be employed. Basics on operation of the two axis ProtoTrak mill will also be introduced. PREREQUISITES: MACH 110, MACH 120, and MACH 125.

**MACH 145 APPLIED COMPUTER AIDED DRAFTING FUNDAMENTALS****CREDITS: 3**

This course provides training in the use of SolidWorks to generate part geometry, shop drawings, and bills of materials for mechanical parts and assemblies. Design intent and strategies for using software to streamline work planning, fixturing, and finding set-up solutions in the machine shop are some of the topics covered. PREREQUISITE: MACH 125.

**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 developed to meet the needs of the traditional post-secondary student and the needs of the mature student whose mathematical proficiency may have declined during years away from formal schooling.

**MATH 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. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 090.

**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. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 100.

**MATH 102 COLLEGE ALGEBRA****CREDITS: 3**

This course involves equations and inequalities; polynomial functions and graphs; exponents, radicals, binomial theorem, and zeros of polynomials; systems of equations; exponential, logarithmic, inverse functions, and applications and graphs. Other topics selected from sequences, series, and complex numbers will be covered. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A 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. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 090.

**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. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 090.

**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: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 101 or MATH 102.

**MDS 210 HEALTHCARE CODING I****CREDITS: 4**

This is an introductory course to the statistical classification system of the International Classification of Diseases, Ninth and Tenth Revision, Clinical Modification (ICD-9-CM and ICD-10-CM and PCS), 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 and/or the ICD-10-CM and PCS classification and coding system. The course also introduces Current Procedural Terminology (CPT). PREREQUISITES: HC 114 and HC 213 or PERMISSION FROM INSTRUCTOR.

**MDS 211 HEALTHCARE CODING II****CREDITS: 3**

This course is a continuation of Health Care Coding I with the introduction of DRG and APC systems of reimbursement. ICD-9-CM, ICD-10-CM and PCS, CPT and HCPCS manuals will be utilized. HCPCS coding system will be investigated. Additionally, this course includes an overview and education of electronic coding systems. PREREQUISITE: MDS 210 or PROGRAM APPROVAL.

**MDS 212 HEALTHCARE FUNDAMENTALS AND REIMBURSEMENT****CREDITS: 3**

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

**MDS 250 ADVANCED CODING****CREDITS: 2**

Advanced level of coding focusing on surgical procedural coding. Utilization and coding of templates is reviewed. Diagnostic Related Groups (DRG's) in the inpatient hospital setting are analyzed. Surgical instrumentation and operating room processes and coding are evaluated in more depth. The importance of utilizing coding resources is emphasized and utilized for a broader view of the coding arena. PREREQUISITES: HC 213 and MDS 210.

**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 health information management field. **PREREQUISITE: ADVISOR APPROVAL.**

**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: CIS 105, HC 114, and HC 213.**

**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: HC 114, HC 213, and HC 215 or PROGRAM APPROVAL.**

**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 utilizing the language of medicine.

**NRS 100 FUNDAMENTAL SKILLS LAB****CREDITS: 1**

This lab course offers an introduction to the fundamental skills required to safely and effectively care for patients in today's healthcare environment. The focus of this course is the development of fundamental skills that incorporates information on anatomy and physiology, microbiology, geriatric nursing, and basic concepts of clinical judgment related to the nursing process. This course introduces psychomotor nursing skills needed to assist individuals in meeting basic human needs and the skills necessary for maintaining microbial, physical, and psychological safety along with skills needed in therapeutic interventions. **PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 and COMPLETION OF ALL GENERAL EDUCATION COURSES. COREQUISITE: NRS 105. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**

**NRS 105 FUNDAMENTAL NURSING PRACTICE I****CREDITS: 3**

This course establishes the foundation for nursing practice by providing the fundamental concepts and skills needed to meet basic human physiological needs in a safe, legal, and ethical manner. An introduction to the nursing process and critical thinking is presented along with anatomy and physiology, microbiology, geriatric nursing, and basic concepts of clinical judgment related to the nursing process. Students will learn concepts and theories basic to the art and science of nursing. **PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 and COMPLETION OF ALL GENERAL EDUCATION COURSES. COREQUISITE: NRS 100. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**

**NRS 110 FUNDAMENTAL NURSING PRACTICE II****CREDITS: 2**

This course provides opportunities to develop comprehension of the nursing process necessary to meet the needs of individuals in a safe, legal, and ethical manner. This course will emphasize the areas of pharmacology, medical terminology, and nutritional needs of individuals and integrates these components into the overall fundamental concepts and skills needed to meet basic human physiological needs. **PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 and COMPLETION OF ALL GENERAL EDUCATION COURSES. COREQUISITES: NRS 100 and NRS 105. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**

**NRS 115 FUNDAMENTAL NURSING PRACTICE III****CREDITS: 2**

This course presents basic concepts of mental health issues and care for individuals with mental health illnesses. Categories of mental health illness are discussed along with common therapies to treat them. The course addresses issues nurses will incorporate into their work environment to assist them in caring for individuals with special mental and emotional needs. The course will identify behavioral science concepts that relate to interpersonal relationships, communication, and cultural diversity. **PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 and COMPLETION OF ALL GENERAL EDUCATION COURSES. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**

**NRS 120 FUNDAMENTAL NURSING CLINICAL I****CREDITS: 2**

This course will emphasize laboratory and clinical experiences to enhance learning the nursing process around basic human physiological needs. This course involves direct care for adults with a focus on communication, assessment, and professional documentation. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 and COMPLETION OF ALL GENERAL EDUCATION COURSES. PRE- or CO-REQUISITES: NRS 100 and NRS 105. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 100 AND NRS 105 TO PARTICIPATE IN NRS 120 LIVE CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 125 FUNDAMENTAL NURSING CLINICAL II****CREDITS: 2**

This course will focus on clinical experiences that include pharmacology, medical terminology, and nutrition and how it integrates into the nursing process. This course will involve passing medications, identifying signs and symptoms of different diseases, and learning the importance of nutrition and diet therapy in adults. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 and COMPLETION OF ALL GENERAL EDUCATION COURSES. PRE- or CO-REQUISITES: NRS 100, NRS 105, NRS 110, and NRS 120. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 100, NRS 105, NRS 110, and NRS 120 TO PARTICIPATE IN NRS 125 LIVE CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 130 FUNDAMENTAL NURSING CLINICAL III****CREDITS: 1**

This course will apply the nursing process and mental health nursing theory in the care of adults with mental illnesses. This course will stress the importance of milieu in the treatment of mental illnesses and the various contributions of the mental health treatment team. The course will focus on interpersonal relations, communication, and cultural diversity. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 and COMPLETION OF ALL GENERAL EDUCATION COURSES. PRE- or CO-REQUISITE: NRS 115. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 115 TO PARTICIPATE IN NRS 130 LIVE CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 135 TRANSITIONAL NURSING****CREDITS: 2**

This course will provide students with opportunities to gain knowledge and skills necessary to transition from student to practicing nurse. This course will focus on the scope of practice for LPN's, legal and ethical basis of nursing practice, nursing history, and trends in nursing and healthcare delivery. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 AND COMPLETION OF ALL GENERAL EDUCATION COURSES. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 200 ADVANCED SKILLS LAB****CREDITS: 1**

This lab course focuses on nursing skills that emphasize care of patients with disease/disorders that include the following systems: nervous, respiratory, sensory, circulatory, urinary, gastrointestinal, endocrine, musculoskeletal, integumentary, and hematological. The lab will incorporate additional skills related to pharmacology and nutrition. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and NRS 100, NRS 105, NRS 110, and NRS 115. CLINICAL CO-REQUISITE: NRS 205. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 205 ADVANCED NURSING PRACTICE I****CREDITS: 3**

This course will provide opportunities to develop competencies necessary to meet the needs of individuals in a safe, legal, and ethical manner using the nursing process. This course includes nursing theory with an emphasis on care of patients with disease/disorders of the following systems: nervous, sensory, respiratory, circulatory, urinary, gastrointestinal, endocrine, musculoskeletal, integumentary, and hematological. The nursing process is integrated into the study of each disease process. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, and NRS 115. CO-REQUISITE: NRS 200. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.



**NRS 210    ADVANCED NURSING PRACTICE II****CREDITS: 2**

This course includes nursing theory and the care of patients with a variety of disease/disorders with an emphasis on how pharmacology impacts the treatment outcomes, how medical terminology assists with disease identification, and the importance of nutrition on the recovery process. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, and NRS 115. CO-REQUISITES: NRS 200 and NRS 205. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 215    ADVANCED NURSING PRACTICE III****CREDITS: 2**

This course emphasizes the physiological, psychosocial, cultural, and developmental needs of the maternal and child clients. This course will introduce the student to family-centered care, wellness, health promotion, illness prevention, and the growth and development of the child from conception to adolescence. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, and NRS 115. CO-REQUISITES: NRS 200, NRS 205, and NRS 210. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 220    ADVANCED NURSING CLINICAL I****CREDITS: 2**

This course is the clinical component of adult health nursing in which the students provide direct care to patients in a variety of acute, inpatient settings and in physician offices and outpatient care centers. The students utilize various components of the nursing process to design appropriate care for patients. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, NRS 115, NRS 120, NRS 125, and NRS 130. PRE- or CO-REQUISITES: NRS 200, NRS 205, and NRS 210. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 200, NRS 205, and NRS 210 TO PARTICIPATE IN NRS 220 LIVE CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 225    ADVANCED NURSING CLINICAL II****CREDITS: 2**

This course is the clinical component of adult health nursing in which the students provide direct care to patients in a variety of acute inpatient settings. The student is expected to assess, utilize, and apply the concepts of critical thinking, communication, and promotion of safety to the care of patients in the clinical setting. This course will focus on basic phlebotomy and IV infusion skills and advanced nursing skills. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, NRS 115, NRS 120, NRS 125, and NRS 130. PRE- or CO-REQUISITES: NRS 200, NRS 205, NRS 210, and NRS 220. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 200, NRS 205, NRS 210, and NRS 220 TO PARTICIPATE IN NRS 225 LIVE CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 230    ADVANCED NURSING CLINICAL III****CREDITS: 1**

This course includes maternal and child health care experiences. The clinical settings will vary but may include hospitals, clinics, and physician offices. Students will be able to utilize their knowledge base regarding growth and development, medications and vaccines, terminology, and nutritional aspects associated with maternal and pediatric clients. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, NRS 115, NRS 120, NRS 125, and NRS 130. PRE- or CO-REQUISITES: NRS 200, NRS 205, NRS 210, and NRS 215. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 200, NRS 205, NRS 210, and NRS 215 TO PARTICIPATE IN NRS 230 LIVE CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**NRS 235    ADVANCED NURSING CLINICAL IV****CREDITS: 2**

This course builds on previous course concepts of leadership and management. The student is expected to demonstrate ability to apply the concepts of critical thinking, communication, and promotion of safety with patients in the clinical setting. This course provides the opportunity for students to apply concepts of leadership and management while under the supervision of an RN instructor or RN/LPN preceptor. PREREQUISITES: CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, NRS 115, NRS 120, NRS 125, and NRS 130. PRE- or CO-REQUISITES: NRS 200, NRS 205, NRS 210, NRS 215, NRS 220, NRS 225, and NRS 230. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 200, NRS 205, NRS 210, NRS 215, NRS 220, NRS 225, and NRS 230 TO PARTICIPATE IN NRS 235 LIVE CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**PH 103 PHLEBOTOMY PRINCIPLES AND PRACTICES****CREDITS: 3**

This course introduces students to the practice of phlebotomy and the role of the phlebotomist as part of the healthcare 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 are stressed. COREQUISITE: PH 125.

**PH 105 LABORATORY ASSISTANT TECHNIQUES LAB****CREDITS: 1**

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, and 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, HC 213, and PH 125. COREQUISITE: PH 126.

**PH 125 PHLEBOTOMY PRINCIPLES AND PRACTICES LAB****CREDITS: 2**

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. CO-REQUISITE: PH 103.

**PH 126 LABORATORY ASSISTANT TECHNIQUES****CREDITS: 2**

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, and CLIA waived and point-of-care laboratory testing. PREREQUISITES: HC 114, HC 213, and PH 125. COREQUISITE: PH 105.

**PH 151 PHLEBOTOMY/LABORATORY ASSISTANT CAPSTONE****CREDITS: 1**

The 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. PREREQUISITES: SUCCESSFUL COMPLETION OF FIRST SEMESTER PHLEBOTOMY/LABORATORY ASSISTANT PROGRAM COURSES and ENROLLMENT IN SECOND SEMESTER COURSES FOR COMPLETION OF THE PROGRAM REQUIREMENTS.

**PH 160 PHLEBOTOMY/LABORATORY ASSISTANT CLINICALS****CREDITS: 3**

The clinical section consists of clinical practice in phlebotomy and laboratory assistant training at various healthcare institutions and laboratories. The program director will coordinate clinical schedules and evaluations. PREREQUISITE: SUCCESSFUL COMPLETION OF PROGRAM COURSE REQUIREMENTS.

**PHGY 220 HUMAN ANATOMY & PHYSIOLOGY I W/LAB (Offered through USD)****CREDITS: 4**

This course is the first part in the study of the physiology and anatomical structure of the human body. We will explore basic concepts of biochemistry, cell structure, tissues, histology, metabolism, and the different systems, integument, skeletal, muscular and nervous. Integration of anatomical structure as it relates to physiology will also be incorporated. The course is designed for students interested in health care careers.

**PHGY 230 HUMAN ANATOMY & PHYSIOLOGY II W/LAB (Offered through USD)****CREDITS: 4**

This course is the second part in the study of the physiology and anatomical structure of the human body. We will explore basic concepts of multiple body systems/areas to include endocrine, lymphatic, immune, cardiovascular, respiratory, digestive, urinary, and reproductive systems. Other areas of study will include the blood anatomy and physiology, nutrition and metabolism, and fluid and electrolytes. Integration of anatomical structure as it relates to physiology will also be incorporated. The course is designed for students interested in healthcare careers. PREREQUISITE: PHGY 220 (C OR BETTER REQUIRED)

**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. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.

**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. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**

**PHR 113 PHARMACY OPERATIONS LAB****CREDITS: 2**

This course is designed to provide the pharmacy technician student with hands-on experience in institutional and retail pharmacies. All aspects of institutional and retail pharmacies will be covered to include organization and function of pharmacists and technicians, institutional medication distribution systems, and prescription filling in retail pharmacies. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**

**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. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**

**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. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**

**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. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**

**PHR 129 PHARMACY II****CREDITS: 2**

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. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**

**PHR 130 PHARMACY PRACTICAL LAB****CREDITS: 1**

This 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. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**

**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 setting. **PREREQUISITE: SUCCESSFUL COMPLETION OF ALL TECHNICAL COURSE REQUIREMENTS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**

**PHR 200 RX ABBREVIATIONS/SIG DECODING****CREDITS: 2**

This course is designed to increase the student's understanding of pharmacy abbreviations and prescription sig decoding. COREQUISITE: MATH 101. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN ASSOCIATE IN APPLIED SCIENCE PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**PHR 205 PHARMACOKINETICS/PHARMACODYNAMICS****CREDITS: 3**

This course is designed to increase the student's success as a pharmacy technician by providing a basic understanding of how medications affect the body systems and how those same body systems affect medications. PREREQUISITES: MATH 101 and PHR 121. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN ASSOCIATE IN APPLIED SCIENCE PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**PHR 210 U.S. HEALTHCARE AND MEDICAL INSURANCE****CREDITS: 3**

This course is designed to increase the student's employability in a pharmacy by providing an in-depth understanding of U.S. healthcare systems and the types of medical insurances they will experience every day. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN ASSOCIATE IN APPLIED SCIENCE PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**PSYC 101 GENERAL PSYCHOLOGY****CREDITS: 3**

This course is an introduction survey of the field of psychology with consideration of the biological bases of behavior, sensory and perceptual processes, learning and memory, human growth and development, social behavior, and normal and abnormal behavior.

**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.

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

Comprehensive study of society with analysis of group life and other forces shaping human behavior.

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

Introduces the study of speech fundamentals and critical thinking through frequent public speaking practice, including setting, purpose, audience, and subject.

**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.

**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: HC 114, HC 213, ST 102, and ST 111.

**ST 130 SURGICAL PROCEDURES I****CREDITS: 3**

This course is designed to introduce the students to diagnostic procedures and minor and major procedures in all surgical areas. PREREQUISITES: HC 114, HC 213, ST 102, and ST 111.

**ST 131 PRINCIPLES AND PRACTICE OF SURGICAL TECHNOLOGY I****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, 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: HC 114, HC 213, ST 102, and ST 111.

**ST 230 SURGICAL PROCEDURES II****CREDITS: 3**

This course is a continuation of Surgical Procedures I and introduces the student to diagnostic procedures and minor and major procedures in all surgical areas. PREREQUISITES: HC 114, HC 213, ST 102, ST 111, and ST 130.

**ST 231 PRINCIPLES AND PRACTICES OF SURGICAL TECHNOLOGY II****CREDITS: 3**

Students will apply techniques and concepts mastered in the second semester. Students will continue to learn surgical instrumentation, basic instrument setups, patient draping, safe handling/handling of surgical instrumentation, sharps, 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: HC 114, HC 213, ST 102, and ST 111.

**ST 250 SURGICAL TECHNOLOGY CLINICALS****CREDITS: 13**

Surgical Technology Clinicals take place at a healthcare facility. It consists of work experience in the perioperative environment. Students will participate in a minimum of 120 surgical procedures in the scrub role. The procedures will be completed in a variety of areas and must meet ARC/STSA requirements. Students will perform and develop to entry-level competency as a surgical technologist. At the completion of the course students will return to main campus to take the Certified Surgical Technologist exam required of accreditation. PREREQUISITES: SUCCESSFUL COMPLETION OF ALL FIRST THROUGH THIRD SEMESTER ST TECHNICAL COURSES.

**ST 251 SURGICAL TECHNOLOGY CERTIFICATION REVIEW****CREDITS: 1**

This course serves as a comprehensive review for the national certification exam in surgical technology. Students will assess their knowledge in required content areas of surgical technology including perioperative case management and basic sciences of anatomy and physiology, pharmacology, pathophysiology and microbiology. PREREQUISITES: ST 230 and ST 231.

**TTT 110 VEHICLE ELECTRICITY AND ELECTRONICS****CREDITS: 4**

This course is designed to provide the students with knowledge of shop safety while learning the electronics background necessary to understand and diagnose the sophisticated electronic systems of the modern automobile.

**TTT 112 VEHICLE ELECTRICITY AND ELECTRONICS LAB****CREDITS: 6**

This course is designed to provide the students with knowledge of shop safety while learning hands-on vehicle electrical systems.

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

This course is designed to instruct the student on the operation and diagnosis of engines. Particular attention will be paid to the techniques of analyzing internal failures of the compression, lubrication, and cooling systems.

**TTT 120 SHOP AND 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.

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

In this class, the students will learn the different types of hybrids, how hybrids work, and precautions and maintenance of hybrids.

**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.

**TTT 125 ENGINE PERFORMANCE****CREDITS: 4**

This course is designed to provide the student with the necessary instruction to diagnose and repair ignition-, fuel-, and emissions-related drivability problems.

**TTT 126 ENGINE PERFORMANCE LAB**

**CREDITS: 6**

This course is designed to provide the student with the necessary hands-on instruction to diagnose and repair ignition-, fuel-, and emissions-related drivability problems.

**TTT 129 WELDING AND 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.

**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).

**TTT 201 UNDER-CAR DIAGNOSIS**

**CREDITS: 3**

The theory of construction, operation, and repair of automotive brakes, steering, and suspension systems will be covered in this course. Vehicle alignment theory will also be taught during this course.

**TTT 203 HVAC-LIGHT DUTY**

**CREDITS: 3**

HVAC is a course designed to enable the student to understand the principles of heating, ventilation, and air conditioning systems. The student will use modern equipment for testing and diagnosing related systems.

**TTT 204 ENGINE OVERHAUL**

**CREDITS: 4**

The construction and repair of automotive engines will be covered.

**TTT 205 UNDER-CAR DIAGNOSIS LAB**

**CREDITS: 5**

The hands-on construction, operation, and repair of automotive brakes, steering, and suspension systems will be covered in this course. Vehicle alignment procedures will also be taught during this course.

**TTT 210 UNDER-TRUCK DIAGNOSIS**

**CREDITS: 3**

The theory of construction, operation, and repair of heavy duty vehicle brakes, steering, and suspension systems will be covered in this course. Vehicle alignment theory will also be taught during this course.

**TTT 211 HEAVY DUTY DRIVETRAINS**

**CREDITS: 4**

This course introduces the basic principles of transmissions, differentials, and drivetrains. Students will understand the operation of all drivetrain components and the procedure for disassembly, repair, and the reassembling of each component. Included are how to perform failure analysis and how to troubleshoot drivetrain problems. Additional areas included are automatic transmissions, agriculture transmissions, and power shift transmissions.

**TTT 212 DIESEL ENGINES**

**CREDITS: 5**

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, fuel systems, troubleshooting, and repair.

**TTT 213 HVAC-HEAVY DUTY**

**CREDITS: 3**

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, troubleshoot, and repair heating and air conditioning systems.

**TTT 215 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, students will learn to read hydraulic schematics and troubleshoot hydraulic problems.

**TTT 222 LIGHT DUTY DRIVETRAINS**

**CREDITS: 4**

This course will teach the theory of construction, operation, and repair of automatic and standard transmissions/transaxles, clutches, drivelines, and differentials of automobiles. The theories of hydraulics will also be introduced to get a better understanding of how the internals of an automatic transmission and slave cylinders work.

**TTT 223 LIGHT DUTY DRIVETRAINS LAB****CREDITS: 6**

This course will demonstrate the hands-on construction, operation, and repair of automatic and standard transmissions/transaxles, clutches, drivelines, and differentials of automobiles. The hands-on application of hydraulics will also be introduced to get a better understanding of how the internals of an automatic transmission and slave cylinders work.

**TTT 240 UNDER-TRUCK DIAGNOSIS LAB****CREDITS: 5**

The hands-on construction, operation, and repair of heavy duty vehicle brakes, steering, and suspension systems will be covered in this course. Vehicle alignment procedure will also be taught during this course.

**TTT 299 INTERNSHIP****CREDITS: 3**

Students will be placed throughout the area in automotive or diesel shops. They will work with different mechanics learning the various methods of repairing engines, drivetrains, suspension systems, brake systems, hydraulic systems, and electrical systems. **PREREQUISITE: INSTRUCTOR APPROVAL REQUIRED.**

**WDM 102 SHIELDED METAL ARC WELDING I****CREDITS: 3**

Shielded Metal Arc Welding theory and skills training will allow the student to attain an acceptable level of welding skills. Equipment safety, setup, operation, and maintenance and 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 103 GAS METAL ARC WELDING I****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 weld in all positions.

**WDM 104 FABRICATION I****CREDITS: 3**

This course is an introduction to fabrication concepts. It focuses on safety fundamentals, basic skills of measurement, industry math practices, hand tools, pattern development, beginning metal forming, joint design, and an introduction to metallurgy. Projects will be designated by the instructor.

**WDM 105 OXY FUEL WELDING/CUTTING****CREDITS: 3**

This course is the study of welding and cutting using oxygen and acetylene gases. Students will learn the proper setup, shut down, and safety associated with this process. Shop work will cover manual cutting, semi-automated cutting, filler and autogenous welding.

**WDM 150 SHIELDED METAL ARC WELDING II****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. **PREREQUISITE: WDM 102.**

**WDM 151 GAS METAL ARC WELDING II****CREDITS: 3**

This course is designed to provide the student with a technical understanding of wire welding processes, equipment set-up, metal transfers, and shielding gases including solid and flux core wires. Students will practice developing their welding skills in and out of positions using differing processes to successfully weld various types and thickness of structural metal. Students will weld grooved plate with backing in all positions. **PREREQUISITE: WDM 103.**

**WDM 152 FABRICATION II****CREDITS: 3**

This course continues the study of fabrication concepts with a focus on material selection, blueprint reading, fastener selection, weld symbols, and application of joint design with proper part fitment. It will also cover material preparation, part assemblies, and welding procedure. Projects will be designated by instructor. **PREREQUISITE: WDM 104.**

**WDM 153 GAS TUNGSTEN ARC WELDING I****CREDITS: 3**

This course is an introduction to GTAW theory and skills training. Students will learn and apply proper equipment setup and safety related to this process. Fundamentals will be taught on light gauge ferrous material and be joined autogenously and with filler.

**WDM 201 GAS TUNGSTEN ARC WELDING II****CREDITS: 3**

This course continues the study of GTAW theory and skills training. Students will apply fundamental skills to weld in and out of position on light gauge material, tubing, and open root pipe. Ferrous and nonferrous materials will be used. PREREQUISITE: WDM 153.

**WDM 202 FABRICATION III****CREDITS: 3**

This course continues the study of fabrication concepts with a focus on preliminary manufacturing modules. The course will cover an introduction to project design and layout, manufacturing implementation, jigs and fixtures, and quality control. It will also cover the use of manufacturing techniques, welding economics, and application of a BOM (bill of materials). Projects will be designated by instructor. PREREQUISITE: WDM 152.

**WDM 203 GAS METAL ARC WELDING III****CREDITS: 3**

This course is designed to give students the ability to use their fundamental MIG welding skills and apply them to various real-world applications. Fillet welding techniques will be expanded to encompass welding parameter settings on light gauge through unlimited thickness. Emphasis will be placed on operator understanding and selection of solid-wire (mild steel), metal-core (mild steel, and or low-alloy steels), and flux-cored (mild, steel, and or low-alloy steels) for the correct application. Equipment understanding, setup, and variations will be explored. PREREQUISITE: WDM 151.

**WDM 204 SHIELDED METAL ARC WELDING III****CREDITS: 3**

This course continues the study of SMAW theory and skills training with a focus on open root welding in the 3G and 4G positions as well as 1G pipe. Students will complete these tasks using E7018 and E6010 electrodes. PREREQUISITE: WDM 150.

**WDM 252 FABRICATION IV****CREDITS: 3**

This course will encompass all concepts and techniques used in Fabrication 1, 2, and 3 to design and develop a final project in a complete manufacturing module process. Final project will be designated by instructor. PREREQUISITE: WDM 202.

**WDM 253 GAS METAL ARC WELDING IV****CREDITS: 3**

Advanced semi-automated wire fed processes will be explored with ferrous, non-ferrous, and alloyed materials. Newest industry technologies will be studied as appropriate. PREREQUISITE: WDM 203.

**WDM 254 SHIELDED METAL ARC WELDING IV****CREDITS: 3**

This course continues the study of SMAW theory and skills training with a focus on 2G, 5G and 6G pipe. Students will complete these tasks using E7018 and E6010 electrodes. PREREQUISITE: WDM 204.

**WDM 255 WELDING CAPSTONE****CREDITS: 3**

This class will provide the graduating student skills to prepare them for management, supervisor, and foreman positions in the welding industry. This will be accomplished by taking a critical look at the economics behind successful weld production and manufacturing. Topics covered during theory will be, but not limited to, expenditures, productivity, AWS code, research and development, team building, specialized welding processes, and industry trends. Skills training in the lab will be based on the industry that the student has chosen as a career path and, when applicable, the student will work with standards set by a future employer or by industry. PREREQUISITE: INSTRUCTOR APPROVAL.