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: ACCT120 PRINCIPLES OF ACCOUNTING I.

ACCT 212 INTERMEDIATE ACCOUNTING I
CREDITS: 4
This course is intended to develop each student’s understanding of accounting by focusing on GAAP and the conceptual framework that provides the support for accounting information. It includes a review of the accounting cycle with advanced work in cash flow, inventory valuation methods, current and non-current assets and liabilities, their specific valuation, and balance sheet presentation. PREREQUISITE: ACCT121 PRINCIPLES OF ACCOUNTING II.

ACCT 213 INTERMEDIATE ACCOUNTING II
CREDITS: 4
This course is intended to develop each student’s understanding of accounting information related to stockholders’ equity, including: earnings per share calculations, accounting for investments in securities, revenue recognition, interperiod tax allocation, pensions, leases, and financial statement analysis. PREREQUISITE: ACCT212 INTERMEDIATE ACCOUNTING I.

ACCT 215 PAYROLL ACCOUNTING
CREDITS: 3
The students will study payroll accounting, including the reporting formats for the various governments. Manual payroll applications are covered in the course to enhance the student’s job skills. The governmental reporting will include monthly, quarterly, semi-annual, and year-end reports. PREREQUISITE: ACCT120 PRINCIPLES OF ACCOUNTING I.

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: ACCT120 PRINCIPLES OF ACCOUNTING I.

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: ACCT121 PRINCIPLES OF ACCOUNTING II.

ACCT 227 EXCEL FOR ACCOUNTING
CREDITS: 3
This course develops the use of electronic spreadsheets using Excel in accounting applications. It encourages students to develop spreadsheet formulas for problem solving. Students will create graphs and macros. This encourages the students to develop effective accounting formats in the presentation of financial information. PREREQUISITES: ACCT120 PRINCIPLES OF ACCOUNTING I AND CIS105 MICROCOMPUTER SOFTWARE APPLICATIONS I.

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: ACCT120 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. This 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 CORE 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 137  PROFESSIONAL DEVELOPMENT  
CREDITS:  1  
This course will give students a variety of skills to be successful in the professional workplace. Topics will include ethics, etiquette, and social awareness including the importance of being an active member in their community. PREREQUISITE: CIS105 MICROCOMPUTER SOFTWARE APPLICATIONS I.

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: CIS105 MICROCOMPUTER SOFTWARE APPLICATIONS I.

BUS 142  PROJECT MANAGEMENT  
CREDITS:  2  
Students will learn how to manage a project from start to finish. PREREQUISITE: CIS105 MICROCOMPUTER SOFTWARE APPLICATIONS I.
BUS 150  ADVERTISING  
CREDITS:  3  
This course introduces students to advertising principles and practices that contribute to business success. Through projects, lectures, reading, and discussion, students will learn how to recognize and plan effective advertising. PREREQUISITE: BUS 120 PRINCIPLES OF MARKETING.

BUS 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 MICROCOMPUTER SOFTWARE APPLICATIONS I.

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 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 MICROCOMPUTER SOFTWARE APPLICATIONS I.

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 MICROCOMPUTER SOFTWARE APPLICATIONS I.

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 225  RETAIL MANAGEMENT  
CREDITS:  3  
This course studies retailing with emphasis on the development of retail institutions, store management, merchandising, contemporary problems, and current trends of retailers in today’s business environment. PREREQUISITE: BUS 101 INTRODUCTION TO BUSINESS.
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.

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.

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.

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: CAD132 INTRODUCTION TO 2D CAD and CAD135 ARCHITECTURAL CONSTRUCTION THEORY I.

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.

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.

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: CAD132 INTRODUCTION TO 2D CAD 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: CAD232 MECHANICAL PRINCIPLES and CAD234 MECHANICAL PRINT READING.

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: CAD132 INTRODUCTION TO 2D CAD.

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: CAD140 ADVANCED 2D CAD.

CAD 221  MECHANICAL DIMENSIONING  
CREDITS:  3  
This course covers a working knowledge and application of proper dimensioning techniques for engineering drawings following the ASME Y14.5 dimensioning standards. PREREQUISITE: CAD202 MECHANICAL DRAFTING.

CAD 222  PRINCIPLES OF COMMERCIAL THEORY II  
CREDITS:  3  
This course continues the exploration into concepts of commercial construction theory. Emphasis is placed on methods, materials, and terms that are used in the commercial construction industry including advanced concepts in door, window, cladding, floor, and ceiling construction. PREREQUISITE: CAD203 PRINCIPLES OF COMMERCIAL THEORY I.

CAD 232  MECHANICAL PRINCIPLES  
CREDITS:  3  
This course equips the student with basic principles of mechanical operations, component interaction, and assembly procedure. PREREQUISITE: CAD132 INTRODUCTION TO 2D CAD.

CAD 234  MECHANICAL PRINT READING  
CREDITS:  2  
Students will learn to read a variety of prints from different industries and to extract important construction and design information from each drawing.

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: CAD111 ARCHITECTURAL DRAFTING I.

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. PREREQUISITES: CAD255 INTRODUCTION TO 3D CAD and CAD237 ARCHITECTURAL DRAFTING II.

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: CAD202 MECHANICAL DRAFTING and CAD255 INTRODUCTION TO 3D CAD.
CAD 247  COMPUTER AUTOMATED MANUFACTURING  
CREDITS:  3  
This course covers a working knowledge and application of computer automated manufacturing. PREREQUISITE: CAD255 INTRODUCTION TO 3D CAD.

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: CAD250 INTRODUCTION TO MAPPING/GPS.

CAD 252  INTRODUCTION TO SURVEYING  
CREDITS:  3  
This course exposes students to basic field surveying techniques and related office procedures. PREREQUISITE: CAD 250 INTRODUCTION TO MAPPING/GPS.

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. PREREQUISITE: CAD140 ADVANCED 2D CAD.

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: CAD140 ADVANCED 2D CAD.

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: MATH101 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: CIS126 CISCO ACADEMY/NETWORKING TECHNOLOGIES I.
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: CIS128 CISCO ACADEMY/NETWORKING TECHNOLOGIES II.

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

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: CIS128 CISCO ACADEMY/NETWORKING TECHNOLOGIES III.

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

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: CIS129 WINDOWS OPERATING SYSTEMS.

Students will design a virtualized computer network to be integrated into a networked environment. PREREQUISITES: CIS127 CISCO ACADEMY/NETWORKING TECHNOLOGIES II, CIS211 LINUX OPERATING SYSTEMS, and CIS213 NETWORKING USING WINDOWS SERVER.

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

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: CIS211 LINUX OPERATING SYSTEMS.

In this course, the student will analyze the security risks of a network and be able to design options to mitigate those vulnerabilities. PREREQUISITES: CIS211 LINUX OPERATING SYSTEMS and CIS213 NETWORKING USING WINDOWS SERVER OR APPROVAL OF INSTRUCTOR.

This course introduces students to database creation, manipulation, and the Structured Query Language (SQL). PREREQUISITE: CIS213 NETWORKING USING WINDOWS SERVER (May be taken concurrently.)

Students will inspect digital evidence, analyze the data, and validate the analysis. PREREQUISITES: CIS128 CISCO ACADEMY/NETWORKING TECHNOLOGIES III, CIS211 LINUX OPERATING SYSTEMS and CIS213 NETWORKING USING WINDOWS SERVER.

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: CIS220 NETWORK SECURITY I.
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.

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 125  RECORDS COMPUTATION  
CREDITS: 2  
This course will expose students to basic water resources record computation techniques and office procedures. The course will focus on the compilation of data into a viable format to meet objectives. Students will be involved in exercises both in the classroom and the field using various water resource record keeping parameters while being introduced to the problems and challenges encountered in this profession. Students will be exposed to numerous Internet and specific computer software programs related to both professional and public access to complete documentation.

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: EET102 INTRODUCTION TO ENVIRONMENTAL SCIENCES or EET106 INTRODUCTORY FIELD METHODS, and MATH101 INTERMEDIATE ALGEBRA or EQUIVALENT. COREQUISITES: CHEM106 CHEMISTRY SURVEY and CHEM106L CHEMISTRY SURVEY LAB.
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: EET102 INTRODUCTION TO ENVIRONMENTAL SCIENCES and EET 106 INTRODUCTORY FIELD METHODS.

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: EET102 INTRODUCTION TO ENVIRONMENTAL SCIENCES.

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: EET102 INTRODUCTION TO ENVIRONMENTAL SCIENCES, EET103 ENVIRONMENTAL INSTRUMENTATION, and MATH101 INTERMEDIATE ALGEBRA 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 with other hands-on activities that are both practical and empirical. PREREQUISITES: EET 103 ENVIRONMENTAL INSTRUMENTATION, EET 106 INTRODUCTORY FIELD METHODS, and EET 253 PRINCIPLES OF WATER RESOURCES.

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: IEL132 ELECTRICAL FUNDAMENTALS and IEL133 ELECTRICAL FUNDAMENTALS LAB.

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: EMT105L EMERGENCY MEDICAL TECHNICIAN LAB.

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: EMT105 EMERGENCY MEDICAL TECHNICIAN.

ENGL 091  BASIC WRITING  
CREDITS:  2  
This course will provide the basic elements of grammar and the writing process. Students will learn to communicate effectively by clarifying messages, analyzing a reader’s needs, and identifying different writing types.

ENGL 101  COMPOSITION  
CREDITS:  3  
This course instructs students in reading critically and writing clearly, correctly, and persuasively. Students will study principles of grammar, rhetoric, and logic in order to analyze and compose text effectively. This includes work on personal, expository, and research essays.

ENGL 102  CAREER COMMUNICATIONS  
CREDITS:  2  
This course covers the communication skills required for success during the job hunt and on the job.

ENGL 201  TECHNICAL WRITING I  
CREDITS:  3  
This course presents the basic principles and forms of written communication in the workplace. Instruction leads students through the planning tasks, identifying audiences, and gathering information. More emphasis is on reports.

ENGL 202  TECHNICAL COMMUNICATIONS  
CREDITS:  3  
Students will prepare and deliver professional oral and written communications required in the workplace. PREREQUISITE: ENGL101 COMPOSITION or ENGL201 TECHNICAL WRITING I.

ENGL 203  TECHNICAL WRITING II  
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.

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 PARAMEDIC PREPARATORY I.

FFP 110  PARAMEDIC ASSESSMENT  
CREDITS:  2  
This course consists of research in EMS, history taking, techniques of physical exam, patient assessment, communications, and clinical decision making. PREREQUISITES: CURRENT CPR CARD.

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 FFP110 PARAMEDIC ASSESSMENT.
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. PREREQUISITE: EMT 105 EMERGENCY MEDICAL TECHNICIAN or CURRENT EMT CERTIFICATION.

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. PREREQUISITE: CURRENT CPR CARD.

FFP 130  PARAMEDIC SPECIAL OPERATIONS I  
CREDITS:  2  
This course consists of neonatology, pediatric life support, and neonatal resuscitation. PREREQUISITE: CURRENT CPR CARD.

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 FFP130 PARAMEDIC SPECIAL OPERATIONS I.

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 COURSES.

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 PARAMEDIC ASSESSMENT, FFP 120 PARAMEDIC PREPARATORY I, FFP125 PARAMEDIC MEDICAL, FFP 130 PARAMEDIC SPECIAL OPERATIONS I, and FFP 280 PARAMEDIC CLINICAL I.

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 PARAMEDIC PREPARATORY II, FFP 115 PARAMEDIC CARDIOLOGY, FFP 215 PARAMEDIC SPECIAL OPERATIONS II, and FFP 281 PARAMEDIC CLINICAL II.

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: FFT121 STRUCTURAL FIREFIGHTER I.

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. PREREQUISITES: FFT121 STRUCTURAL FIREFIGHTER I and/or FFT 123 INTRODUCTION TO WILDLAND FIREFIGHTER.

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: FFT123 INTRODUCTION TO WILDLAND FIREFIGHTER.

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: FFT123 INTRODUCTION TO WILDLAND FIREFIGHTER.

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: FFT123 INTRODUCTION TO WILDLAND FIREFIGHTER or FFT121 STRUCTURAL FIREFIGHTER I.

FFT 232  STRUCTURAL FIREFIGHTER II  
CREDITS:  3  
The course is designed to expand on the knowledge and skills learned in FFT121/FFT122. 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: FFT121 STRUCTURAL FIREFIGHTER I, FFT122 STRUCTURAL FIREFIGHTER I LAB, and FFT123 INTRODUCTION TO WILDLAND FIREFIGHTER.
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: FFT123 INTRODUCTION TO WILDLAND FIREFIGHTER and FFT121 STRUCTURAL FIREFIGHTER I.

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 125  INTRODUCTION TO PATIENT CARE
CREDITS:  2
This course is designed to provide the student with the knowledge necessary to provide safe patient care at an introductory level. This course is approved by the South Dakota Board of Nursing pursuant to ARSD 44:04:18:15 as part of a nurse aide training program.

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. This course is approved by the South Dakota Board of Nursing pursuant to ARSD 44:04:18:15 as part of a nurse aide training program. CO-REQUISITE: HC125 INTRODUCTION TO PATIENT CARE.

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. PREREQUISITE: REGISTRATION IN FINAL SEMESTER OF STUDY ONLY UNLESS APPROVED BY THE LEAD INSTRUCTOR OF THE PROGRAM.

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: HC213 MEDICAL TERMINOLOGY I.

HC 225  PATHOPHYSIOLOGY
CREDITS:  3
This course includes the study of various diseases and disorders of each of the body systems. PREREQUISITES: HC213 MEDICAL TERMINOLOGY I and HC114 ANATOMY AND PHYSIOLOGY FOR THE HEALTH PROFESSIONS.

HUM 102  CRITICAL THINKING
CREDITS:  3
A comprehensive and systematic approach to critical thinking, this course introduces the student to a process that results in decisions regarding what to believe and what to do. Critical thinking is careful reasoning. A critical thinker is committed to clarity, accuracy, and precision. The student will develop the skills necessary to solve legal problems.

HVAC 120  ELECTRICAL APPLICATIONS FOR HVAC I
CREDITS:  3
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.

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 sheet metal fabrication and installation, 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 130  HVAC PLAN AND PRINT READING
CREDITS:  2
This course covers the fundamentals of blueprints and floor plans used in the HVAC industry. This course includes dimensions, measurements and scales, and interpretation of details and symbols found on typical sets of plans.

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. Motors and transformers in their typical applications are also included. PREREQUISITE: HVAC 120 ELECTRICAL APPLICATIONS FOR HVAC I.

HVAC 140  PIPE JOINING METHODS
CREDITS:  3
This course covers the correct techniques to use when joining pipes. Students learn correct techniques for making a solder joint, a brazed joint and a threaded joint. Alternative techniques are also taught, including flare, crimp and compression.

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 INSTALLATION I.
IEL 133 ELECTRICAL FUNDAMENTALS LAB
CREDITS: 2
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 134 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: IEL132 ELECTRICAL FUNDAMENTALS and IEL133 ELECTRICAL FUNDAMENTALS LAB.

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: IEL223 ELECTRICAL MOTOR LAB and IEL226 ELECTRICAL MOTOR FUNDAMENTALS AND MAINTENANCE.

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: IEL132 ELECTRICAL FUNDAMENTALS and IEL133 ELECTRICAL FUNDAMENTALS LAB.
IEL 214  ELECTRICAL CODE STUDY II  CREDITS:  2
This course deals with commercial and industrial wiring standards with heavy emphasis on the National Electrical Code. Electrical services are studied in more depth, grounding and bonding are emphasized, and wiring methods for several types of specific locations are studied. PREREQUISITES: IEL122 ELECTRICAL CODE STUDY I.

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: IEL130 INTRODUCTION TO ELECTRICAL WIRING, IEL226 ELECTRICAL MOTOR FUNDAMENTALS AND MAINTENANCE, and IEL223 ELECTRICAL MOTOR FUNDAMENTALS AND MAINTENANCE LAB. CO-REQUISITE: IEL211 ELECTRICAL MOTOR CONTROL.

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: IEL129 INTRO TO ELECTRICAL WIRING LAB AND IEL130 INTRODUCTION TO ELECTRICAL WIRING.

IEL 220  WIRING LAB II  CREDITS:  3
This course is a study of the National Electrical Code in relation to commercial and industrial electrical installations. Actual electrical installations, compiling pertinent facts for bidding purposes, and on-the-job training through the wiring of WDT projects are included in this course. PREREQUISITE: IEL218 WIRING LAB I

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: IEL211 ELECTRICAL MOTOR CONTROL and IEL216 MOTOR CONTROL LAB.

IEL 222  PLC 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: IEL211 ELECTRICAL MOTOR CONTROL and IEL216 ELECTRICAL MOTOR CONTROL LAB. CO-REQUISITE: IEL221 PROGRAMMABLE LOGIC CONTROLLERS.

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 IEL226 Electric Motor Fundamentals and Maintenance. PREREQUISITES: IEL132 ELECTRICAL FUNDAMENTALS, IEL133 ELECTRICAL FUNDAMENTALS LAB, and CURRENT CPR CARD.

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: IEL132 ELECTRICAL FUNDAMENTALS, IEL133 ELECTRICAL FUNDAMENTALS LAB, and CURRENT CPR CARD.

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: IEL132 ELECTRICAL FUNDAMENTALS, IEL133 ELECTRICAL FUNDAMENTALS LAB, and CURRENT CPR CARD.
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: IEL129 INTRODUCTION TO ELECTRICAL WIRING LAB and IEL 130 INTRODUCTION TO ELECTRICAL WIRING.

IEL 299  ELECTRICIAN INTERNESHIP/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.

LET 106  LAW ENFORCEMENT MEDICAL RESPONDER  
CREDITS:  3  
Students will be instructed in common law enforcement medical responder situations. Students will be instructed in cardiopulmonary resuscitation, basic airway management, patient assessment, bleeding/shock, wound management, and spinal immobilization protocols.

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. PREREQUISITES: LET 119 CRIMINAL LAW AND PROCEDURES and LET 240 CONSTITUTIONAL LAW FOR LAW ENFORCEMENT or PERMISSION FROM LEAD LET INSTRUCTOR.

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 in the escalation of force model 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, 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.
PREREQUISITES: ENROLLED STUDENT IN THE LAW ENFORCEMENT PROGRAM or BE A LAW ENFORCEMENT OFFICER WITH A RECOGNIZED DEPARTMENT.

LET 213  CRIMINOLOGY AND ABNORMAL BEHAVIOR
CREDITS:  3
Criminology is the systematic inquiry into the causes of crime. Students will become familiar with the nature and causes of crime and various aspects and theories dealing with criminal behavior.

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.
PREREQUISITES: ACCEPTANCE INTO THE LAW ENFORCEMENT TECHNOLOGY PROGRAM or PRIOR APPROVAL FROM THE LET LEAD INSTRUCTOR.

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. THIS COURSE REQUIRE A VALID DRIVER’S LICENSE.

LET 222  ADVANCED ISSUES IN POLICING
CREDITS:  2
This course will provide a survey of relevant contemporary issues affecting the law enforcement career field and public safety. The format will be interactive, focusing on current events and trends, court decisions, new technologies, and subjects not addressed in any of the students’ previous course offerings. 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 PRIOR 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, report writing, preliminary investigation, and testifying in court. PREREQUISITES: COMPLETION OF LET SEMESTERS 1, 2, 3 or PERMISSION OF THE LEAD LAW ENFORCEMENT TECHNOLOGY INSTRUCTOR.

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. PREREQUISITES: COMPLETION OF LET SEMESTERS 1, 2, 3 or PERMISSION OF THE LEAD LAW ENFORCEMENT TECHNOLOGY INSTRUCTOR.

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. PREREQUISITES: COMPLETION OF LET SEMESTERS 1, 2, 3 or APPROVAL FROM THE LEAD LAW ENFORCEMENT TECHNOLOGY INSTRUCTOR.

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. PREREQUISITES: STUDENTS MUST HAVE SUCCESSFULLY COMPLETED THE THREE PREVIOUS SEMESTERS OF THE LET PROGRAM, OR RECEIVE LET INSTRUCTOR’S PERMISSION TO ATTEND. STUDENTS MUST HAVE A 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.

WDT - 95
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.

MA 213  MEDICAL ASSISTING I LAB AND CLINICAL  
CREDITS: 3  
This course provides the medical assisting students the opportunity to apply their skills and knowledge in the medical office setting after completing their lab hours. Students are placed in medical facilities of Rapid City and surrounding areas 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. PREREQUISITES: CURRENT CPR CARD and ADVISOR APPROVAL. COREQUISITE: MA 210 MEDICAL ASSISTING I.
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: HC125 INTRODUCTION TO PATIENT CARE and HC126 INTRODUCTION TO PATIENT CARE LAB AND CLINICAL.

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 MEDICAL ASSISTING II.

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: MACH110 MACHINE SHOP OPERATIONS, MACH115 TURNING THEORY AND OPERATIONS I, MACH120 MILLING THEORY AND OPERATIONS I, and MACH125 MECHANICAL BLUEPRINT READING.

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: MACH110 MACHINE SHOP OPERATIONS, MACH115 TURNING THEORY AND OPERATIONS I, and MACH125 MECHANICAL BLUEPRINT READING.

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 Proto-Trak mill will also be introduced. PREREQUISITES: MACH110 MACHINE SHOP OPERATIONS, MACH120 MILLING THEORY AND OPERATIONS I, and MACH125 MECHANICAL BLUEPRINT READING.
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: MACH125 MECHANICAL BLUEPRINT READING.

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: ACCUPLACER SCORE IN PRE-ALGEBRA DOMAIN OF 40 OR HIGHER.

MATH 101  INTERMEDIATE ALGEBRA
CREDITS:  3
This course includes real numbers and variable expressions, first-degree equations, polynomials, factoring, rational expressions, rational exponents and radicals, and quadratic equations. Other areas covered will be linear equations; systems of linear equations; linear, exponential and logarithmic functions; and an introduction to conic sections. PREREQUISITE: ACCUPLACER SCORE IN ALGEBRA DOMAIN OF 30 OR HIGHER.

MATH 102  COLLEGE ALGEBRA
CREDITS:  3
This course involves equations and inequalities; polynomial functions and graphs; exponents, radicals, binomial theorem, 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. PREREQUISITES: ACCUPLACER SCORE IN ALGEBRA DOMAIN OF 42 OR ABOVE, or PASSING GRADE IN MATH 101.

MATH 104  TECHNICAL MATHEMATICS
CREDITS:  3
This course includes real numbers and variable expressions, first-degree equations, polynomials, factoring, rational expressions, rational exponents and radicals, geometry, quadratic equations, and trigonometry. This course is designed for students who are preparing for technical careers. It stresses a working knowledge of applied mathematical concepts. The practice problems are applications from various technical fields but do not require prior knowledge of the technical applications. Problems are selected to help develop an understanding of where and how mathematics is used in the various fields of employment. PREREQUISITE: ACCUPLACER SCORE IN PRE-ALGEBRA DOMAIN OF 40 OR HIGHER.

MATH 112  BUSINESS MATHEMATICS
CREDITS:  3
A practical, working knowledge of relevant mathematical ideas and computations is developed for preparation in many careers, as well as in daily and consumer life. PREREQUISITE: ACCUPLACER SCORE IN PRE-ALGEBRA DOMAIN OF 40 OR HIGHER.

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: ACCUPLACER SCORE IN ALGEBRA DOMAIN OF 42 or HIGHER, or PASSING GRADE IN MATH101 or MATH102.

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: HC213 MEDICAL TERMINOLOGY I AND HC114 ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS 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: MDS210 HEALTHCARE CODING I.
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: HC213 MEDICAL TERMINOLOGY I and MDS210 HEALTHCARE CODING I.

MDS 299  INTERNSHIP
CREDITS: 3
This course is designed to place the student in an actual work situation for which they have been trained. It is designed to give them experience in the medical administration field. 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: CIS105 MICROCOMPUTER SOFTWARE APPLICATIONS I, BUS 115 KEYBOARDING, HC213 MEDICAL TERMINOLOGY I, and HC 114 ANATOMY AND PHYSIOLOGY FOR THE HEALTH PROFESSIONS.

MTS 124  DISEASE PROCESSES I
CREDITS: 3
This course is offered for students entering allied health careers and for students interested in learning the fundamentals of human disease. This course also introduces important terminology, the study of disease, inflammation and allergy, neoplasia, heredity and disease, and dietary factors and disease, as well as the major diseases associated with each body system and the role stress and aging play in health and disease. Students are also introduced to the concept of wellness. PREREQUISITES: HC114 ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS, HC213 MEDICAL TERMINOLOGY I, and HC215 MEDICAL TERMINOLOGY II.

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.

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.

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 ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS, HC 213 MEDICAL TERMINOLOGY I, and PH 125 PHLEBOTOMY PRINCIPLES AND PRACTICES LAB. COREQUISITES: PH126 LABORATORY ASSISTANT TECHNIQUES.

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: PH103 PHLEBOTOMY PRINCIPLES AND PRACTICES.

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 ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS, HC 213 MEDICAL TERMINOLOGY I, and PH 125 PHLEBOTOMY PRINCIPLES AND PRACTICES LAB.
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. PREREQUISITES: SUCCESSFUL COMPLETION OF PROGRAM COURSE REQUIREMENTS.

PHGY 220    HUMAN ANATOMY & PHYSIOLOGY I W/LAB  
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  
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: PHGY220 HUMAN ANATOMY & PHYSIOLOGY II W/LAB. (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.

PHR 111     PHARMACY I  
CREDITS:  3  
This course is designed to present material to the pharmacy technician as an introduction to the field of pharmacy. The course will introduce the student to all aspects of the pharmacy from the relationship between the pharmacist and the pharmacy technician to the details necessary to be a successful pharmacy technician.

PHR 120     PHARMACY II  
CREDITS:  3  
The course will continue to introduce the student to all aspects of pharmacy to include pharmacy manufacturing, pharmacy repackaging, purchasing and inventory control, drug categories, medication errors, and drug interactions.

PHR 121     PHARMACOLOGY/PHARMACEUTICAL PRODUCTS II  
CREDITS:  3  
This course is designed to present material to the pharmacy technician as it applies to the preparation and dispensing of pharmacologic agents. Drugs are discussed according to their classification, trade and generic name, drug action (mechanism), side effects, toxicity, and contraindications. Drugs will include review of prescriptions as well as non-prescription (over-the-counter) products.

PHR 122     PHARMACY LAW AND ETHICS  
CREDITS:  2  
This course is designed to present material to the pharmacy technician on professional ethics and the philosophy, requirements, administration, and enforcement of local, state, and federal laws related to the practice of the profession of pharmacy.

PHR 127     PHARMACY CALCULATIONS  
CREDITS:  2  
This course is designed to present material to the pharmacy technician in the areas of pharmacy math. All aspects of pharmacy math will be covered including metric and household measurements, special calculations for compounding, understanding the apothecary system, pharmacy business math, and preparing injectable medications.

PHR 128     PHARMACY OPERATIONS  
CREDITS:  2  
This course is designed to present material to the pharmacy technician as an introduction to institutional pharmacy and retail pharmacy. All aspects of institutional pharmacy and retail pharmacy will be covered to include organization and function of pharmacists and technicians in these settings. Also included are the institutional medication distribution systems and prescription filling in retail pharmacy.

WDT - 100
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.

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.

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: MATH101 INTERMEDIATE ALGEBRA.

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. PREREQUISITE: MATH101 INTERMEDIATE ALGEBRA and PHR121 PHARMACOLOGY/PHARMACEUTICAL PRODUCTS II.

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.

PLL 111    INTRODUCTION TO PARALEGALISM
CREDITS:   2
This course provides the student with an introduction to the fundamental concepts and techniques essential to the practicing paralegal. Lecture topics include an overview of the American legal system and a survey of such legal sub-fields as torts, criminal law, litigation, contract law, and real property. Several weeks of the course are devoted to the study of professional ethics for the paralegal.

PLL 123    REAL PROPERTY
CREDITS:   2
This course offers the paralegal student a practical introduction to the basics of real property law and real estate law. During the course, the student examines legal forms, checklists, and problems that a paralegal would encounter in a law firm involved in handling real estate transactions and litigating real property cases.

PLL 124    CRIMINAL LAW
CREDITS:   2
This course is designed to provide the student with an introduction to the basic concepts of criminal law and criminal procedure and the terminology associated with the practice of criminal law.

PLL 125    TORTS
CREDITS:   3
This course introduces the student to substantive tort law in the context of trial preparation. The focus of the course is on the skills needed by a paralegal to be an effective litigation assistant.

PLL 126    CONTRACTS
CREDITS:   3
This is an introduction to the law of contracts. The course includes instruction in the elements of a contract, the formation of a contract, drafting a contract, mistakes, conditions, discharge of legal obligations, assignments, delegations, third-party beneficiaries, and contract remedies.

PLL 132    LEGAL RESEARCH AND WRITING I
CREDITS:   4
This course provides the student with an introduction to the basic tools of legal research and writing as used in the modern law office. The course includes an overview of our system of government and law, methods of legal research, research resources, an introduction to computerized research, and the drafting of legal documents.

PLL 133    LEGAL RESEARCH AND WRITING II
CREDITS:   4
This course is designed to further refine the research and writing skills acquired in the prerequisite course, Legal Research and Writing I. The emphasis in this course is placed on successful completion of more difficult research assignments and further refinement of the student's legal writing skills. PREREQUISITE: PLL132 LEGAL RESEARCH AND WRITING I.
PLL 150  WILLS, TRUSTS, AND ESTATES  
CREDITS: 2  
This course covers the role of the paralegal in estate planning practice, emphasizing those aspects most related to paralegal functions. Topics include the control and disposition of property during life and death and intestate succession. Federal gift and estate taxes are also explored.

PLL 211  AMERICAN LEGAL SYSTEM AND CONSTITUTIONAL LAW  
CREDITS: 3  
This course concentrates on instructing the student concerning the function of the United States legal system and a broad overview of constitutional law. The course also instructs students in the interaction of the legal system with other branches of government.

PLL 212  LITIGATION AND CIVIL PROCEDURE  
CREDITS: 3  
This course uses the casebook method, supplemented by the Federal Rules of Civil Procedure and the South Dakota Rules of Civil Procedure, to instruct students in the basic requirements of jurisdiction, service of process, joinder, discovery, depositions, motions, trial, and appeal.

PLL 215  LAW OF BUSINESS ORGANIZATIONS  
CREDITS: 2  
This course introduces the student to the basic concepts, terminology, and doctrines involved in business law. The student is instructed in the procedures necessary for the formation of sole proprietorships, limited and general partnerships, and corporations and is introduced to the essential case opinions in business and corporate litigation.

PLL 220  LAW OFFICE PROCEDURE  
CREDITS: 2  
This course familiarizes students with practical inner workings of a law office. Topics include office organization, legal terminology, fees and billing procedures, scheduling and calendaring, preparation and maintenance of case files, preparation of law office forms, and an introduction to a variety of legal-specific software applications.

PLL 232  LITIGATION CLINIC I  
CREDITS: 2  
This course introduces the student to the proper methods of conducting an investigation through interviewing techniques, records investigation, the taking of statements, and reporting of obtained information. The bulk of the course is based on a single fact pattern exercise, allowing the student to follow the progress of one case from beginning to the early stages of the discovery process.

PLL 233  LITIGATION CLINIC II  
CREDITS: 2  
This course effectively ties together the operation of the rules of civil procedure, rules of evidence, and common law principles. The student will be instructed regarding proper preparation of a case file for trial. The foundation of the course is the fact pattern exercise introduced to the student in Litigation Clinic I. Picking up from where that course concluded, the student follows the progress of the case from the early discovery stages through the trial and post-trial stages. PREREQUISITE: PLL232 LITIGATION CLINIC I.

PLL 235  FAMILY LAW  
CREDITS: 3  
This course teaches students about the various legal and social issues involved in the practice of family law. Students are taught techniques for the drafting of pleadings necessary in a family law case. Students also receive instruction in client interviewing techniques and trial preparation in the areas of divorce, legal separation, adoption, and child custody.

PLL 298  INTERNSHIP  
CREDITS: 7  
The internship is an on-the-job training work experience. The student works at a law firm, governmental agency, or other appropriate office in the final semester of study for 280 hours of documented work experience. During this internship the student is under the direct supervision of an attorney or other qualified person. The requirements and responsibilities for the paralegal student must be agreed upon in advance. The students are also required to meet with the instructor of the course to prepare their resumes. PREREQUISITE: REGISTRATION IN FINAL SEMESTER OF STUDY or INSTRUCTOR APPROVAL.

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 127  SCIENCE AND TECHNOLOGIES FOR THE SURGICAL TECHNOLOGIST
CREDITS:  1
This course introduces the Surgical Technology student to the applications of a wide variety of specialty equipment used in the operating room. The students will also be able to relate the concepts of electricity and physics as they apply to the surgical environment. The impact and uses of robotics in surgery will also be discussed. PREREQUISITES: PHGY 220 HUMAN ANATOMY & PHYSIOLOGY I W/LAB, HC 213 MEDICAL TERMINOLOGY I, ST 102 INTRODUCTION TO SURGICAL TECHNOLOGY, and ST 111 INTRODUCTION TO SURGICAL TECHNOLOGY LAB.

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: PHGY 220 HUMAN ANATOMY & PHYSIOLOGY I W/LAB, HC 213 MEDICAL TERMINOLOGY I, ST 102 INTRODUCTION TO SURGICAL TECHNOLOGY, and ST 111 INTRODUCTION TO SURGICAL TECHNOLOGY LAB.

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: PHGY 220 HUMAN ANATOMY & PHYSIOLOGY I W/LAB, HC 213 MEDICAL TERMINOLOGY I, ST 102 INTRODUCTION TO SURGICAL TECHNOLOGY, and ST 111 INTRODUCTION TO SURGICAL TECHNOLOGY LAB.

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 handing/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 213 MEDICAL TERMINOLOGY I, PHGY 220 HUMAN ANATOMY & PHYSIOLOGY I W/LAB, ST 102 INTRODUCTION TO SURGICAL TECHNOLOGY, and ST 111 INTRODUCTION TO SURGICAL TECHNOLOGY LAB.

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: PHGY 220 HUMAN ANATOMY & PHYSIOLOGY I W/LAB, HC 213 MEDICAL TERMINOLOGY I, ST 102 INTRODUCTION TO SURGICAL TECHNOLOGY, ST 111 INTRODUCTION TO SURGICAL TECHNOLOGY LAB, and ST 130 SURGICAL PROCEDURES I.

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: PHGY 220 HUMAN ANATOMY & PHYSIOLOGY I W/LAB, HC 213 MEDICAL TERMINOLOGY I, ST 102 INTRODUCTION TO SURGICAL TECHNOLOGY, and ST 111 INTRODUCTION TO SURGICAL TECHNOLOGY LAB.
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 PROGRAM CLASSES.

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.
TGT 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.

TGT 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.

TGT 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.

TGT 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.

TGT 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.

TGT 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.

TGT 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.

TGT 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.

TGT 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.

TGT 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: WDM102 SHIELDED METAL ARC WELDING I. 

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: WDM103 GAS METAL ARC WELDING I. 

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: WDM104 FABRICATION I. 

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: WDM153 GAS TUNGSTEN ARC WELDING I. 

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: WDM152 FABRICATION II. 

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 GAS METAL ARC WELDING II. 

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: WDM150 SHIELDED METAL ARC WELDING II. 

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: WDM202 FABRICATION III.
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: WDM203 GAS METAL ARC WELDING III.

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: WDM204 SHIELDED METAL ARC WELDING III.

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.