

WESTERN  
DAKOTA



T E C H

**COURSE CATALOG**

**2017-2018**

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WDT - 1  
2017-2018

- This publication and any addenda should not be considered a contract between Western Dakota Tech and any prospective student. As much as possible, program and course offerings will be offered as listed. However, Western Dakota Tech reserves the right to modify course offerings according to current conditions. Western Dakota Tech also retains the right to make changes in programs, policies, and graduation requirements without notice.
- Further, WDT reserves the right to modify requirements and curricula offerings and to add, alter, or delete courses and programs through appropriate procedures. While reasonable efforts are made to publicize such changes, a student is encouraged to seek current information from appropriate offices. WDT also reserves the right to make changes in tuition, fees, refunds, admission requirements, and regulations without notice or obligation. The official program curricula are those contained in the master curricula file maintained in the Vice President of Teaching and Learning's Office. For complete information, students need to refer to WDT policies, the WDT Student Handbook, and the WDT Course Catalog.
- The information contained in this catalog is the most accurate available at the time of publication, but changes may become effective before the next catalog is printed. It is ultimately the student's responsibility to stay abreast of current regulations, curricula, and the status of specific program offerings. Each student is responsible for compliance with the information appearing in the catalog, the current issue of the WDT Student Handbook, and any published addenda. The official catalog includes this catalog plus any published addenda.
- Students who begin their academic program in the spring or summer semester may be placed in the next year's academic catalog to best meet the program's technical and general education requirements.
- Students who sit out for a spring or fall semester or longer will return under a new catalog and may be required to repeat courses or successfully complete new or revised skills or competency assessments. Before readmittance, the program may need to determine if a student is eligible to continue in technical courses. Program sequencing and cohort size may prevent enrollment in technical courses.
- The WDT Student Handbook details the policies and contains beneficial information that can help students achieve their educational goals. It is designed to serve as a ready reference for student rights and responsibilities, academic procedures, graduation requirements, and other useful information. The WDT Student Handbook is available online at <http://www.wdt.edu/current-students/student-handbook/>.
- If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.
- **Notice of Non-Discrimination:** WDT will not tolerate racism, discrimination, harassment, exploitation or victimization of students, school employees, non-employees, or any person who is an invitee of WDT for any reason, including but not limited to race, color, ethnic background, national origin, pregnancy, student marital status, religion, creed, age, sex, citizenship, political affiliation, mental and/or physical challenge, disability, sexual orientation, gender identity, or status as a veteran. WDT is committed to providing an environment free from harassment and other forms of discrimination for students, employees, non-employees and its invitees. The following person has been designated to handle inquiries or complaints regarding the non-discrimination policies: Student Success Director

# TABLE OF CONTENTS

WELCOME.....	6
MISSION.....	6
OBJECTIVES .....	6
VISION STATEMENT.....	6
ACCREDITATION .....	6
PROGRAM CERTIFICATIONS/ACCREDITATIONS .....	7
ADVISORY COMMITTEES.....	7
PROGRAM & COURSE INFORMATION .....	7
CORPORATE EDUCATION CENTER.....	7
<b>GENERAL INFORMATION.....</b>	<b>8</b>
APPLICATION PROCEDURE.....	9
PRE-ENROLLMENT ASSESSMENT .....	9
HOME-SCHOOLED STUDENTS .....	9
SPECIAL PROGRAM REQUIREMENTS .....	9
ACCEPTANCE .....	9
TEXTBOOKS & TOOLS.....	10
ACADEMIC PREPARATION.....	10
LAPTOP COMPUTERS.....	10
ACADEMIC RECORDS .....	10
ACADEMICS .....	10
FINANCIAL AID.....	10
<b>GENERAL EDUCATION.....</b>	<b>11</b>
GENERAL EDUCATION PHILOSOPHY .....	12
PREPARATORY COURSES .....	13
DIPLOMA PROGRAM REQUIREMENTS.....	14
AAS DEGREE REQUIREMENTS.....	14
<b>PROGRAMS .....</b>	<b>15</b>
ACCOUNTING.....	16
ALLIED HEALTH .....	18
BOOKKEEPING .....	19
BUSINESS - BUSINESS AND TECHNOLOGY .....	20
BUSINESS - ENTREPRENEURSHIP .....	22
BUSINESS - OFFICE PROFESSIONAL .....	23
BUSINESS - SOCIAL MEDIA MARKETING.....	24
COMPUTER-AIDED DRAFTING TECHNICIAN.....	25
COMPUTER SCIENCE – INFORMATION TECHNOLOGY SPECIALIST .....	27
CRIMINAL JUSTICE.....	30
CRIMINAL JUSTICE - LAW ENFORCEMENT EMPHASIS.....	32
DENTAL ASSISTING.....	34
DRAFTING AND MACHINING TECHNOLOGY .....	36
ELECTRICAL TRADES .....	38

EMERGENCY MEDICAL TECHNICIAN.....	40
ENVIRONMENTAL ENGINEERING TECHNICIAN .....	41
FIRE SCIENCE.....	43
HEALTH INFORMATION MANAGEMENT.....	45
HVAC/REFRIGERATION TECHNOLOGY .....	48
LIBRARY TECHNICIAN .....	50
MEDICAL ASSISTING.....	53
MEDICAL LABORATORY TECHNICIAN.....	57
PARAMEDIC .....	59
PHARMACY TECHNICIAN .....	63
PHLEBOTOMY/LABORATORY ASSISTANT.....	67
PRACTICAL NURSING.....	69
PRECISION MACHINING TECHNOLOGY.....	72
SURGICAL TECHNOLOGY .....	73
TECHNICAL STUDIES.....	75
TRANSPORTATION TECHNOLOGY – LIGHT DUTY .....	76
TRANSPORTATION TECHNOLOGY – HEAVY DUTY .....	78
WELDING AND FABRICATION.....	80
<b>APPENDIX A - PLUMBING.....</b>	<b>83</b>
<b>COURSE DESCRIPTIONS.....</b>	<b>86</b>

# **WELCOME TO WESTERN DAKOTA TECH**

**WELCOME**

**MISSION**

**OBJECTIVES**

**VISION STATEMENT**

**ACCREDITATION**

**PROGRAM CERTIFICATIONS/ACCREDITATIONS**

**ADVISORY COMMITTEES**

**PROGRAM & COURSE INFORMATION**

**CORPORATE EDUCATION CENTER**

## **WELCOME**

Western Dakota Tech is the only technical institute that serves the western South Dakota region. WDT offers a wide variety of certificate, diploma, and associate of applied science degree programs including Business and Computers, Construction and Manufacturing, Energy and Environmental Technologies, Health Sciences, Public Services, and Transportation Technologies. In addition, a wide variety of non-credit classes, workshops, professional programs, and seminars are available through the Corporate Education Center.

WDT faculty, staff, and administration focus their efforts on helping students gain the skills and experiences they need to succeed. Through hands-on learning, internships, and industry partnerships, WDT students graduate ready to make real and immediate contributions to their employers and their communities.

## **MISSION**

Western Dakota Tech is a public institution of higher learning that embraces quality programs, expert faculty and staff, and a commitment to academic excellence to teach the knowledge, skills, and behaviors students need to be successful.

## **OBJECTIVES**

Students will demonstrate:

1. The occupational skills necessary to obtain and retain successful employment in their field of training.
2. Proficiency in academic skills in the area of communications, mathematics, computer literacy, and social and behavioral sciences appropriate to their program of study.

WDT will:

1. Maintain efficient and effective facilities designed to serve the needs of the students.
2. Develop and retain a staff of technically-competent and highly trained individuals.
3. Secure adequate financial resources necessary to accomplish its mission.
4. Assure equal access to those who are disabled, economically or academically disadvantaged, in non-traditional programs of study, and/or of limited English proficiency.
5. Provide services to those requiring academic assistance, counseling, and career guidance.
6. Provide assistance in securing training-related employment to students and graduates.
7. Provide opportunities for higher learning to high school students.
8. Develop and implement short-term and customized training opportunities through the Corporate Education Center.
9. Promote lifelong learning.

## **VISION STATEMENT**

Western Dakota Tech will be a leader in career and technical education that creates student, institutional, and community success through its practices, policies, and activities. WDT will embrace all students and provide the education they need to be successful. WDT will build a campus culture that inspires faculty and staff to reach their potential and ensures the future of the institution. WDT will build partnerships and undertake projects that strengthen the institution and the communities it serves. Finally, WDT will be a model for postsecondary education in our region and nation.

## **ACCREDITATION**

Western Dakota Tech is accredited by the Higher Learning Commission (HLC). It has been placed on Probation because of concerns related to assessment of student learning, persistence and completion rates, and institutional effectiveness. Western Dakota Tech remains accredited by the Higher Learning Commission during the probationary period, and the finding does not affect the ability of students to receive degrees, diplomas, financial aid, Pell grants, or academic credits or to qualify for certification exams in any field. As a condition of probation, Western Dakota Tech will submit plans and reports leading to a comprehensive evaluation by September 2017. In February 2018, the HLC Board of Trustees will review materials related to this evaluation and determine if the college can be removed from probation. Western Dakota Tech wants to answer any accreditation questions you have. Please contact Kelly Oehlerking, Vice President for Institutional Effectiveness and Student Success, at (605) 718-2931 or [kelly.oehlerking@wdt.edu](mailto:kelly.oehlerking@wdt.edu) if you have questions. You also can contact the Higher Learning Commission at 230 South LaSalle Street, Suite 7-500, Chicago, IL 60604, [info@hlcommission.org](mailto:info@hlcommission.org), and (800) 621-7440.

## **PROGRAM CERTIFICATIONS /ACCREDITATIONS**

Various professional organizations approve or certify all or part of the following programs. These include:

- Medical Laboratory Technician: – the program is currently undergoing the initial accreditation phase through the National Accrediting Agency of Clinical Laboratory Sciences (NAACLS)
- Paramedic: Commission on Accreditation of Allied Health Educational Programs (CAAHEP) as recommended by the Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP)
- Pharmacy Technician: – American Society of Health System Pharmacists (ASHP/ACPE)
- Practical Nursing: South Dakota Board of Nursing\*
- Surgical Technology: Commission on Accreditation of Allied Health Educational Programs (CAAHEP) as recommended by the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting (ARC/STSA)
- Transportation Technology - Light: National Automobile Technicians Education Foundation (NATEF)

*\*The SD Board of Nursing placed the Practical Nursing Program on probation in November 2011. The college is working closely with the SD Board of Nursing to bring the program into full compliance. The SD Board of Nursing visited Western Dakota Tech in the fall of 2015 to review the progress made and at that time, six of ten concerns were met by the nursing program. In addition, a conference call with the SD Board of Nursing occurred in November 2016, and at that time, nine of the ten concerns had been met by the nursing program. The remaining concern is in regard to the pass rate of nursing students for the NCLEX-PN (National Council Licensure Examination). Probationary status does not jeopardize the licenses of graduates or the ability of current students to graduate and sit for the NCLEX-PN. Specific questions regarding the probationary status can be directed to the Program Director of the Practical Nursing Program.*

## **ADVISORY COMMITTEES**

Advisory Committees from business and industry represent the strong partnership Western Dakota Tech enjoys with the region and the Rapid City community. The committees meet at least twice a year with program instructors to discuss current job market trends, recent developments in the industry, and task competencies for courses, equipment selection, and student performance. As resource persons, the committee members are the most direct and up-to-date sources for current trends in the industry. This education and business partnership ensures the validity of the task competencies and the effectiveness of WDT.

## **PROGRAM & COURSE INFORMATION**

Course descriptions in the catalog are only summaries of the actual course content. Western Dakota Tech reserves the right to alter course content and curricula without notice. WDT also reserves the right to cancel any scheduled class and to combine class sections due to insufficient enrollment. In the event of a class cancellation, refunds will be issued. WDT reserves the right to make changes in courses and regulations published in this catalog and other publications without obligation or prior notice.

## **CORPORATE EDUCATION CENTER**

The Corporate Education Center offers non-credit training and certifications to WDT students as well as individuals and businesses in our local area. Regular offerings include Professional Truck Driving, continuing education and certifications for Dental Assistants (Dental Radiology and Nitrous Oxide Sedation Administration), AWS welding certifications, CPR, and EMT/Paramedic testing. We also customize training for local employers and organizations. Topics may include forklift certifications, computer skills, customer service, and everything in between.

The Corporate Education Center is dedicated to working with WDT programs to offer testing and certifications to our students whenever possible in the most cost effective manner. WDT is an official American Heart Association Training Center and provides CPR and First Aid Training. WDT is also authorized by the Department of Public Safety to conduct Third Party Skills Testing for Commercial Driver's Licenses in Class A/B/PS vehicles.

The Corporate Education Center also offers online courses in a variety of areas for adults to learn a new skill, upskill, or to participate in continuing education.

# **GENERAL INFORMATION**

**APPLICATION PROCEDURE**

**PRE-ENROLLMENT ASSESSMENT**

**HOME-SCHOOLED STUDENTS**

**SPECIAL PROGRAM REQUIREMENTS**

**ACCEPTANCE**

**TEXTBOOKS & TOOLS**

**ACADEMIC PREPARATION**

**LAPTOP COMPUTERS**

**ACADEMIC RECORDS**

**ACADEMICS**

**FINANCIAL AID**

## **APPLICATION PROCEDURE**

**EARLY APPLICATION IS RECOMMENDED FOR ALL PROGRAMS.** All applicants seeking admission to WDT must complete the following steps:

1. Submit a completed application for admissions online at [www.wdt.edu](http://www.wdt.edu).
2. Schedule to take the ACCUPLACER test. The ACCUPLACER test is a placement exam over Math, English, and Reading. There is a \$15.00 testing fee. The ACCUPLACER test will be waived if you have an ACT sub score of 18 or better in English, math, and reading, or a SAT sub score of at least 440 in Verbal and Math. The scores must be no more than five years old.
3. Complete an Admissions advising session - in person or by phone.
4. Request an official High School transcript or GED scores be sent to the Admissions Office. An official transcript from a postsecondary institution must be submitted if you want transfer credits to be considered.
5. Submit a certification from a licensed physician that you have received, or are in the process of receiving, the required two doses of immunization against measles, mumps, and rubella (MMR). This is required for all on-campus students.
6. Once you receive your acceptance letter, schedule a time to register for classes.

## **PRE-ENROLLMENT ASSESSMENT**

A pre-enrollment assessment is required of all individuals seeking admission into a program at WDT. The ACCUPLACER is administered during the initial stages of the application process. The ACCUPLACER test will be waived if you have an ACT sub score of 18 or better in English, math, and reading, or a SAT sub score of at least 440 in Verbal and Math. The scores must be no more than five years old.

The information from this assessment is used as a counseling tool to determine proper program placement for the applicant. Program placement may include regular acceptance or recommendations to receive additional assistance from the Student Success Center before or during enrollment. The result of the ACCUPLACER test may require the individual to complete remedial coursework.

## **HOME-SCHOOLED STUDENTS**

Western Dakota Tech welcomes applications from home-schooled students wishing to pursue a technical education. Home-schooled students must submit one of the following items:

1. A transcript of standardized instruction from a nationally recognized home-school organization.
2. A transcript of classes completed, along with a certificate of registration with the school district in which the student lives.
3. A GED as evidence of completing a commonly accepted body of secondary coursework.

Additionally, applicants must satisfactorily complete the standard admissions steps.

## **SPECIAL PROGRAM REQUIREMENTS**

The following programs have special requirements. Please see Admissions for this information.

- Dental Assisting
- Electrical Trades
- EMT
- Fire Science
- Criminal Justice - Law Enforcement Emphasis
- Medical Assisting
- Medical Laboratory Technician
- Paramedic
- Pharmacy Technician
- Phlebotomy/Laboratory Assistant
- Practical Nursing
- Surgical Technology

## **ACCEPTANCE**

Students who successfully complete the admissions process will receive a letter of acceptance. If there are more applicants than space available, acceptance will be based upon the date the admissions process is completed. Waiting lists are established as programs reach maximum enrollment. Individuals will be accepted from the waiting list based on the date assigned to the list.

## **TEXTBOOKS & TOOLS**

Students are required to purchase their own textbooks, tools, software, and supplies. Textbooks are available through the WDT Bookstore. The refund policy for book purchases is posted at the campus bookstore.

Several programs require students to purchase tools. The student is provided a list of required tools. WDT does not endorse any particular brand of tool, and students are encouraged to shop for reasonably priced, quality tools after consulting with the program instructor(s).

## **ACADEMIC PREPARATION**

WDT is dedicated to helping students succeed in their chosen academic field. Upon completion and review of the ACCUPLACER exam, students may be required to enroll in classes designed to upgrade skills in math, writing, and reading. Academic preparation classes do not count toward the graduation requirements. Contact the Admissions or Registrar's Office for specific information.

## **LAPTOP COMPUTERS**

All students are required to have a wireless laptop computer. Please refer to the spec sheets on the WDT website. This can be accessed at <http://www.wdt.edu/current-students/tech-support/>.

## **ACADEMIC RECORDS**

A transcript is a record of courses taken, credits received, grades earned, and the grade point average earned while attending WDT. Also listed on the transcript are credit hours transferred from other institutions. Transcripts are usually required when students are applying for scholarships, employment, or admission to other schools. Students are encouraged to review their official transcript and keep a record of courses, credit hours, and grades for work completed. Students may receive a copy of their transcript by completing a Transcript Request Form in person, paying a generation fee, and submitting it to the Registrar's Office. Students will be required to pay for subsequent transcripts. Official transcripts will not be issued to anyone with outstanding student account charges. Official transcripts can also be requested via <https://www.wdt.edu/foundation-alumni/request-transcripts>.

## **ACADEMICS**

Students need to refer to the WDT Student Handbook which details the policies and contains beneficial information that can help students achieve their educational goals. It is designed to serve as a ready reference for student rights and responsibilities, academic procedures, graduation requirements, and other useful information. The handbook is available online at <http://www.wdt.edu/current-students/student-handbook/>.

## **FINANCIAL AID**

Please refer to the WDT Student Handbook for all your financial aid questions or visit <http://www.wdt.edu/paying-for-school/financial-aid/>.

# **GENERAL EDUCATION**

**GENERAL EDUCATION PHILOSOPHY  
DIPLOMA PROGRAM REQUIREMENTS  
AAS DEGREE REQUIREMENTS  
PREPARATORY COURSES**

## **GENERAL EDUCATION PHILOSOPHY**

General education courses promote and advance essential knowledge, skills, and values students need to succeed in an interdependent, diverse, and changing world. Students are provided a foundation for lifelong learning by gaining a broad knowledge of science, math, communication, technology, human behavior, and society.

Western Dakota Tech faculty designed the general education courses to emphasize a breadth of understanding to help learners succeed in college, on the job, and in daily life. Courses stress high-level intellectual and practical skills, critical thinking, analytical reasoning, and a sense of ethical and social responsibility. General Education at Western Dakota Tech stimulates a learner's ability to integrate and apply knowledge, skills, and values acquired in its courses to new settings and complex challenges.

### **General Education Outcomes (GEO) & Intentions of each GEO**

#### **Communicate Effectively**

A competent communicator can interact with others using appropriate forms of communication resulting in understanding and being understood.

*Written Communication Competencies:* The student will demonstrate the ability to adapt to a variety of audiences and rhetorical situations, organize content with effective transitions and effective introductions and conclusions; develop logical and concrete ideas with effective use of paragraph structure; use appropriate and precise word choice; and demonstrate editing techniques that result in few mechanical and usage errors.

*Oral Communication Competencies:* The student will demonstrate skill in idea development and verbal effectiveness by the use of language and the organization of ideas for a specific audience, setting and occasion to achieve a purpose; nonverbal effectiveness, assuring that the nonverbal message supports and is consistent with the verbal message and responsiveness, communication skills modified based on verbal and nonverbal feedback.

#### **Think Critically**

A competent critical thinker evaluates evidence and employs logical reasoning to decide what to believe and how to act.

*Critical Thinking Competencies:* The student will demonstrate the ability to recognize differences between correlation and causation; determine whether certain conclusions necessarily follow from information; understand and apply scientific reasoning; and distinguish between arguments that are strong and relevant and those that are weak and irrelevant to a particular question at issue.

#### **Process Information**

A person who is competent in processing information recognizes when information is needed and has the ability to locate, evaluate, and use it effectively (information literacy); possesses the skills and knowledge necessary to apply the use of logic, numbers, and mathematics to deal effectively with common problems and issues (quantitative reasoning); and, possesses the skills and knowledge necessary to use computers and associated technology for communicating, researching, organizing, storing, accessing, and presenting information (computer literacy).

*Information Literacy Competencies:* The student will demonstrate the ability to determine the nature and extent of the information needed; access needed information effectively and efficiently; evaluate information and its sources critically; and use information effectively to accomplish a specific purpose.

*Quantitative Literacy Competencies:* The student will demonstrate the ability to explain information presented in mathematical forms (e.g. equations, graphs, diagrams, tables, words); ability to convert relevant information into various mathematical forms (e.g. equations, graphs, diagrams, tables, words); ability to correctly perform calculations; ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis; ability to make and evaluate important assumptions in estimation, modeling and data analysis; and the ability to express quantitative evidence in support of the argument or purpose of the work.

*Computer Literacy Competencies:* The student will demonstrate the ability to use word processing software to create a document; use presentation software to enhance an oral presentation; use spreadsheet software to organize, manipulate, and present numeric data; use the Internet and e-mail to retrieve and communicate information; and develop strategies to address questions by searching and retrieving information available electronically.

## **Understand Behavior and Interactions**

A person who is competent in understanding behavior and interactions demonstrates knowledge of what motivates, influences, and/or determines the behaviors and beliefs of individuals, groups, and one's self.

*Understand Behavior and Interactions Competencies:* The student will demonstrate the ability to identify and understand differences and commonalities within diverse groups; understand the relationship of personal behavioral choices and interactions with other individuals and groups; and develop and express self-awareness.

## **PREPARATORY COURSES**

Some students may be required, according to placement test scores, to complete review/preparatory courses to help strengthen their skills and prepare them for success in diploma or degree courses.

1. Students pursuing a diploma or an AAS Degree with a low placement test score in algebra will be required to complete one or more of the following:
  - MATH 090 Basic Mathematics (2 credits) *before* entering MATH 100 Elementary Algebra, MATH 104 Technical Mathematics, or MATH 112 Business Mathematics.
  - MATH 100 Elementary Algebra (3 credits) *before* entering MATH 101 Intermediate Algebra.
  - MATH 101 Intermediate Algebra (3 credits) *before* entering MATH 102 College Algebra or MATH 120 Trigonometry.
2. Students pursuing a diploma or an AAS Degree with low placement test scores in writing will be required to complete:
  - ENGL 091 Basic Writing (2 credits) *before* entering ENGL 201 Technical Writing I.
  - ENGL 091 Basic Writing (2 credits) or ENGL 201 Technical Writing I (3 credits) *before* entering ENGL 101 Composition.

## **DIPLOMA PROGRAM REQUIREMENTS**

Students pursuing a diploma program are required to complete a minimum of 2\* credits in communications, 3\* credits in computer literacy, 3\* credits in mathematics, and 3\* credits in behavioral science.

<b>Communications</b>			<b>2-3 Credits Required*</b>
ENGL	101	Composition	3
ENGL	102	Career Communications	2
ENGL	201	Technical Writing I	3
<b>Computer Literacy</b>			<b>3 Credits Required*</b>
CIS	105	Microcomputer Software Applications I	3
<b>Mathematics</b>			<b>3 Credits Required*</b>
MATH	100	Elementary Algebra	3
MATH	101	Intermediate Algebra	3
MATH	102	College Algebra	3
MATH	104	Technical Mathematics	3
MATH	112	Business Mathematics	3
<b>Behavioral Science</b>			<b>3 Credits Required*</b>
PSYC	101	General Psychology	3
PSYC	103	Human Relations in the Workplace	3

## **AAS DEGREE REQUIREMENTS**

Students pursuing the associate of applied science degree are required to complete a minimum of 3\* general education credits in each of the following subject areas.

<b>Communications</b>			<b>3 Credits Required*</b>
ENGL	101	Composition	3
ENGL	201	Technical Writing I	3
ENGL	202	Technical Communications	3
SPCM	101	Fundamentals of Speech	3
<b>Mathematics</b>			<b>3 Credits Required*</b>
MATH	100	Elementary Algebra	3
MATH	101	Intermediate Algebra	3
MATH	102	College Algebra	3
MATH	104	Technical Mathematics	3
MATH	112	Business Mathematics	3
MATH	120	Trigonometry	3
<b>Computer Literacy</b>			<b>3 Credits Required*</b>
CIS	105	Microcomputer Software Applications I	3
<b>Behavioral Science</b>			<b>3 Credits Required*</b>
PSYC	101	General Psychology	3
PSYC	103	Human Relations in the Workplace	3
<b>Social Science</b>			<b>3 Credits Required*</b>
ECON	202	Principles of Macroeconomics	3
SOC	100	Introduction to Sociology	3

\* Individual programs may require additional credits or higher-level courses

# PROGRAMS

**ACCOUNTING**  
**ALLIED HEALTH**  
**BOOKKEEPING**  
**BUSINESS**  
    **BUSINESS AND TECHNOLOGY**  
    **ENTREPRENEURSHIP**  
    **OFFICE PROFESSIONAL**  
    **SOCIAL MEDIA MARKETING**  
**COMPUTER-AIDED DRAFTING TECHNICIAN**  
**COMPUTER SCIENCE – INFORMATION TECHNOLOGY  
SPECIALIST**  
**CRIMINAL JUSTICE**  
**CRIMINAL JUSTICE - LAW ENFORCEMENT EMPHASIS**  
**DENTAL ASSISTING**  
**DRAFTING AND MACHINING TECHNOLOGY**  
**ELECTRICAL TRADES**  
**EMERGENCY MEDICAL TECHNICIAN**  
**ENVIRONMENTAL ENGINEERING TECHNICIAN**  
**FIRE SCIENCE**  
**HEALTH INFORMATION MANAGEMENT**  
    **CODING SPECIALTY**  
**HVAC/REFRIGERATION TECHNOLOGY**  
**LIBRARY TECHNICIAN**  
**MEDICAL ASSISTING**  
**MEDICAL LABORATORY TECHNICIAN**  
**PARAMEDIC**  
**PHARMACY TECHNICIAN**  
**PHLEBOTOMY/LABORATORY ASSISTANT**  
**PRACTICAL NURSING**  
**PRECISION MACHINING TECHNOLOGY**  
**SURGICAL TECHNOLOGY**  
**TECHNICAL STUDIES**  
**TRANSPORTATION TECHNOLOGY – LIGHT DUTY**  
**TRANSPORTATION TECHNOLOGY – HEAVY DUTY**  
**WELDING AND FABRICATION**

## ACCOUNTING

### Associate of Applied Science, 70-71-72 Credit Hours, 18-Month Program

The Accounting Program will prepare students for entry-level positions in accounting-related employment opportunities by providing them with technical and social skills.

Because accountants and bookkeepers are an organization's financial record-keepers and assistants to management, graduation from this two-year program with an AAS degree can lead to a number of good-paying employment opportunities. Students will learn the principles of accounting and the concepts behind the principles. Students receive up-to-date training on some of the latest software available. Payroll accounting, taxes, and managerial accounting are included in this program. With the general education and business courses required to obtain this degree, graduates are well equipped to compete for employment.

This degree is available 100% online or with a combination of classes on campus and online.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON	202	PRINCIPLES OF MACROECONOMICS	3
ENGL	101	COMPOSITION*	3
MATH	101	INTERMEDIATE ALGEBRA**	3
MATH	112	BUSINESS MATHEMATICS**	3
PSYC	101	GENERAL PSYCHOLOGY	3
SPCM	101	FUNDAMENTALS OF SPEECH	3
<b>Total</b>			<b>21</b>
<b>Technical Requirements</b>			
ACCT	120	PRINCIPLES OF ACCOUNTING I	3
ACCT	121	PRINCIPLES OF ACCOUNTING II	3
ACCT	212	INTERMEDIATE ACCOUNTING I	4
ACCT	213	INTERMEDIATE ACCOUNTING II	4
ACCT	215	PAYROLL ACCOUNTING	3
ACCT	218	TAX ACCOUNTING I	3
ACCT	223	MANAGERIAL ACCOUNTING	3
ACCT	227	EXCEL FOR ACCOUNTING	3
ACCT	228	QUICKBOOKS ACCOUNTING	3
ACCT	230	TOPICS AND ISSUES IN ACCOUNTING	3
ACCT	281	ETHICS IN ACCOUNTING AND BUSINESS <i>or</i>	2
ACCT	290	INTERNSHIP	2-3
ACCT	285	OPTIONAL INTERNSHIP	0-1
BUS	140	BUSINESS LAW	3
BUS	141	WRITTEN COMMUNICATIONS FOR BUSINESS	3
BUS	210	SUPERVISORY MANAGEMENT	3
BUS	224	PERSONAL FINANCE	3
BUS	228	PERSONAL INVESTMENTS	3
<b>Total</b>			<b>49-50-51</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math/Elementary Algebra.

Semester breakdown on next page

## Semester Breakdown

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
ACCT 120	Principles of Accounting I	3	ACCT 121	Principles of Accounting II	3
BUS 224	Personal Finance	3	ACCT 215	Payroll Accounting	3
CIS 105	Microcomputer Software Applications I	3	ACCT 228	QuickBooks Accounting	3
MATH 112	Business Mathematics	3	ACCT 230	Topics and Issues in Accounting	3
PSYC 101	General Psychology	3	BUS 141	Written Communications for Business	3
SPCM 101	Fundamentals of Speech	3	BUS 228	Personal Investments	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>
<b>Third Semester</b>			<b>Fourth Semester</b>		
		<b>CR</b>			<b>CR</b>
ACCT 212	Intermediate Accounting I	4	ACCT 213	Intermediate Accounting II	4
ACCT 218	Tax Accounting I	3	ACCT 223	Managerial Accounting	3
ACCT 227	Excel for Accounting	3	ACCT 281	Ethics in Accounting & Business <i>or</i>	2
ACCT 285	Optional Internship	0-1	ACCT 290	Internship (2-3 Credits Possible)	2-3
BUS 210	Supervisory Management	3	BUS 140	Business Law	3
ECON 202	Principles of Macroeconomics	3	ENGL 101	Composition	3
			MATH 101	Intermediate Algebra	3
<b>Total Credit Hours</b>		<b>16-17</b>	<b>Total Credit Hours</b>		<b>18-19</b>

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## **ALLIED HEALTH**

### **Associate of Applied Science, 60 Credit Hours, 18- to 21-Month Program**

The Allied Health Associate of Applied Science degree provides students an enhancement of health care and general education competencies and may allow for future educational and workplace advancement. Students entering healthcare diploma programs such as Dental Assisting, Medical Assisting, Phlebotomy/Laboratory Assistant, or Practical Nursing also have the option of pursuing an Associate of Science in Allied Health. Diploma program requirements must be met, along with Allied Health General Education requirements and Allied Health electives to meet a minimum of 60 credit hours.<sup>1</sup>

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CHEM	106	CHEMISTRY SURVEY	3
CHEM	106L	CHEMISTRY SURVEY LAB	1
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	101	COMPOSITION*	3
MATH	101	INTERMEDIATE ALGEBRA** <i>or higher</i>	3
PSYC	101	GENERAL PSYCHOLOGY	3
SOC	100	INTRODUCTION TO SOCIOLOGY	3
<b>Total General Education Requirements</b>			<b>19</b>
<b>Electives</b>			
HC	114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC	124	INTRODUCTION TO PATIENT CARE	1
HC	126	INTRODUCTION TO PATIENT CARE LAB AND CLINICAL	2
HC	135	MEDICAL LAW AND ETHICS	2
HC	145	ELECTRONIC HEALTH RECORDS	2
HC	200	PHARMACOLOGY FOR HEALTHCARE	3
HC	213	MEDICAL TERMINOLOGY I	3
HC	225	PATHOPHYSIOLOGY	3
PHGY	220	HUMAN ANATOMY & PHYSIOLOGY I W/LAB****	4
PHGY	230	HUMAN ANATOMY & PHYSIOLOGY II W/LAB****	4
MATH	102	COLLEGE ALGEBRA***	3
SPCM	101	FUNDAMENTALS OF SPEECH	3
OTHER APPROVED ELECTIVES TO REACH 60 CREDIT HOURS			#
<b>Total Elective Options</b>			
Students must complete the General Education Requirements for an AAS Degree in Allied Health along with additional elective credits in order to meet graduation requirement of 60 credits. See the Registrar's Office to determine the appropriate plan of study.			
<b>Total Requirements for AAS (minimum)</b>			<b>60</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

\*\*\* Prerequisite: Acceptable ACCUPLACER score or Intermediate Algebra.

\*\*\*\* This course is not offered on the WDT Campus. At the time of publication, this course is offered through The University of South Dakota.

<sup>1</sup> Note: For information on Diploma program requirements:

See DENTAL ASSISTING - page 34

See MEDICAL ASSISTING - page 53

See PHLEBOTOMY/LABORATORY ASSISTANT- page 67

See PRACTICAL NURSING - page 69

## BOOKKEEPING

### Diploma, 36 Credit Hours, 9-Month Program

The Bookkeeping program will provide students with technical understanding and skills development by integrating theory with practical experience. Through the program, students will develop skills in accounting principles, finance, payroll accounting, QuickBooks, and more. Students will learn how to complete the typical duties of someone working in the bookkeeping field.

This degree is available 100% online or with a combination of classes on campus and online.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
MATH	112	BUSINESS MATHEMATICS*	3
PSYC	101	GENERAL PSYCHOLOGY	3
SPCM	101	FUNDMENTALS OF SPEECH	3
<b>Total</b>			<b>12</b>
<b>Technical Requirements</b>			
ACCT	120	PRINCIPLES OF ACCOUNTING I	3
ACCT	121	PRINCIPLES OF ACCOUNTING II	3
ACCT	215	PAYROLL ACCOUNTING	3
ACCT	228	QUICKBOOKS ACCOUNTING	3
ACCT	230	TOPICS AND ISSUES IN ACCOUNTING	3
BUS	141	WRITTEN COMMUNICATIONS FOR BUSINESS	3
BUS	224	PERSONAL FINANCE	3
BUS	228	PERSONAL INVESTMENTS	3
<b>Total</b>			<b>24</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

### Semester Breakdown

First Semester			Second Semester		
		CR			CR
ACCT 120	Principles of Accounting I	3	ACCT 121	Principles of Accounting II	3
BUS 224	Personal Finance	3	ACCT 215	Payroll Accounting	3
CIS 105	Microcomputer Software Applications I	3	ACCT 228	QuickBooks Accounting	3
MATH 112	Business Mathematics	3	ACCT 230	Topics and Issues in Accounting	3
PSYC 101	General Psychology	3	BUS 141	Written Communications for Business	3
SPCM 101	Fundamentals of Speech	3	BUS 228	Personal Investments	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>

## **BUSINESS - BUSINESS AND TECHNOLOGY**

### **Associate of Applied Science, 63 Credit Hours, 18-Month Program**

The Business and Technology program exposes students to key business disciplines with an innovative technology focus. Disciplines include industry leading creative software, social media marketing, accounting and entrepreneurship.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON	202	PRINCIPLES OF MACROECONOMICS	3
MATH	112	BUSINESS MATHEMATICS*	3
PSYC	101	GENERAL PSYCHOLOGY	3
SPCM	101	FUNDAMENTALS OF SPEECH	3
		<b>Total</b>	<b>15</b>
<b>Technical Requirements</b>			
ACCT	120	PRINCIPLES OF ACCOUNTING I	3
ACCT	228	QUICKBOOKS ACCOUNTING	3
BUS	120	PRINCIPLES OF MARKETING	3
BUS	140	BUSINESS LAW	3
BUS	141	WRITTEN COMMUNICATIONS FOR BUSINESS	3
BUS	158	WEB DESIGN FOR BUSINESS	3
BUS	162	PROJECT MANAGEMENT	3
BUS	166	DIGITAL IMAGE DESIGN FOR BUSINESS	3
BUS	205	SOCIAL MEDIA MARKETING	3
BUS	210	SUPERVISORY MANAGEMENT	3
BUS	215	SEARCH ENGINE MARKETING	3
BUS	218	DESIGN ESSENTIALS	3
BUS	224	PERSONAL FINANCE	3
BUS	233	SMALL BUSINESS ENTREPRENEURSHIP	3
BUS	241	ADVANCED COMPUTER APPLICATIONS FOR BUSINESS	3
BUS	291	INTERNSHIP <i>or</i>	3
BUS	228	PERSONAL INVESTMENTS	3
		<b>Total</b>	<b>48</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

**Semester breakdown on next page**

### Semester Breakdown – Fall Starts\*\*

First Semester (Fall only)			Second Semester (Spring only)		
		CR			CR
BUS 120	Principles of Marketing***	3	BUS 141	Written Communication for Business	3
BUS 210	Supervisory Management	3	BUS 162	Project Management	3
BUS 224	Personal Finance	3	BUS 166	Digital Image Design for Business	3
CIS 105	Microcomputer Software Applications I	3	BUS 205	Social Media Marketing	3
MATH 112	Business Mathematics	3	SPCM 101	Fundamentals of Speech	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

  

Third Semester (Fall only)			Fourth Semester (Spring only)		
		CR			CR
ACCT 120	Principles of Accounting I	3	ACCT 228	QuickBooks Accounting	3
BUS 140	Business Law	3	BUS 158	Web Design for Business	3
BUS 218	Design Essentials	3	BUS 215	Search Engine Marketing	3
BUS 241	Advanced Computer Applications for Business	3	BUS 233	Small Business Entrepreneurship	3
ECON 202	Principles of Macroeconomics	3	BUS 228	Personal Investments <i>or</i>	3
			BUS 291	Internship***	
			PSYC 101	General Psychology	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>18</b>

\*\*All courses are offered online and on-campus in their semester.

### Semester Breakdown – Spring Starts\*\*

First Semester (Spring only)			Second Semester (Fall only)		
		CR			CR
BUS 162	Project Management	3	ACCT 120	Principles of Accounting I	3
BUS 166	Digital Image Design for Business	3	BUS 120	Principles of Marketing***	3
BUS 205	Social Media Marketing	3	BUS 210	Supervisory Management	3
CIS 105	Microcomputer Software Applications I	3	BUS 224	Personal Finance	3
SPCM 101	Fundamentals of Speech	3	MATH 112	Business Mathematics	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

  

Third Semester (Spring only)			Fourth Semester (Fall only)		
		CR			CR
ACCT 228	QuickBooks Accounting	3	BUS 140	Business Law	3
BUS 141	Written Communication for Business	3	BUS 218	Design Essentials	3
BUS 158	Web Design for Business	3	BUS 241	Advanced Computer Applications for Business	3
BUS 215	Search Engine Marketing	3	ECON 202	Principles of Macroeconomics	3
BUS 233	Small Business Entrepreneurship	3	PSYC 101	General Psychology	3
BUS 228	Personal Investments <i>or</i>	3			
BUS 291	Internship***				
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>15</b>

\*\*All courses are offered online and on-campus in their semester.

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\*\*\*Students that have completed the Social Media Marketing certificate and later decide to return for the Business and Technology AAS will have BUS 227 sub for BUS 120 and BUS 250 sub for BUS 228 or BUS 291.

## **BUSINESS - ENTREPRENEURSHIP**

### **Certificate, 18 Credit Hours, 9-Month Program**

An Entrepreneurship Certificate will prepare students who want to start and operate a successful business. Students will prepare a comprehensive business plan while also learning technical and professional skills through a variety of courses including accounting, project management, supervisory management, and small business entrepreneurship.

This certificate is available through classes on campus, online, or a combination of both.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
		<b>Technical Requirements</b>	
ACCT	120	PRINCIPLES OF ACCOUNTING I	3
ACCT	228	QUICKBOOKS ACCOUNTING	3
BUS	120	PRINCIPLES OF MARKETING	3
BUS	162	PROJECT MANAGEMENT	3
BUS	210	SUPERVISORY MANAGEMENT	3
BUS	233	SMALL BUSINESS ENTREPRENEURSHIP	3
		<b>Total</b>	<b>18</b>

### **Semester Breakdown**

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
ACCT 120	Principles of Accounting I	3	ACCT 228	QuickBooks Accounting	3
BUS 120	Principles of Marketing	3	BUS 162	Project Management	3
BUS 210	Supervisory Management	3	BUS 233	Small Business Entrepreneurship	3
	<b>Total Credit Hours</b>	<b>9</b>		<b>Total Credit Hours</b>	<b>9</b>

## **BUSINESS - OFFICE PROFESSIONAL**

### **Diploma, 30 Credit Hours, 9-Month Program**

An Office Professional Diploma will prepare students for a career as an office manager or an executive assistant. Students will learn technical and professional skills through a variety of courses including written and oral communications, customer service, professional development, and project management. Students will also obtain computer skills with the latest software.

This diploma is available through classes on campus, online, or a combination of both.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
MATH	112	BUSINESS MATHEMATICS*	
PSYC	101	GENERAL PSYCHOLOGY	3
<b>Total</b>			<b>9</b>
<b>Technical Requirements</b>			
ACCT	120	PRINCIPLES OF ACCOUNTING I	3
ACCT	228	QUICKBOOKS ACCOUNTING	3
BUS	141	WRITTEN COMMUNICATIONS FOR BUSINESS	3
BUS	162	PROJECT MANAGEMENT	3
BUS	210	SUPERVISORY MANAGEMENT	3
BUS	224	PERSONAL FINANCE	3
BUS	241	ADVANCED COMPUTER APPLICATIONS FOR BUSINESS	3
<b>Total</b>			<b>21</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

### **Semester Breakdown**

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
ACCT 120	Principles of Accounting I	3	ACCT 228	QuickBooks Accounting	3
BUS 210	Supervisory Management	3	BUS 141	Written Communications for Business	3
BUS 224	Personal Finance	3	BUS 162	Project Management	3
CIS 105	Microcomputer Software Applications I	3	BUS 241	Advanced Computer Applications for Business	3
MATH 112	Business Mathematics	3	PSYC 101	General Psychology	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

**BUSINESS - SOCIAL MEDIA MARKETING**  
**Certificate, 18 Credit Hours, 9-Month Program**

A certificate in Social Media Marketing will prepare students for this specialized field to meet the needs of businesses who want to reach customers where they are by utilizing the most current social media platforms.

This certificate is available 100% online or with a combination of classes on campus and online.

Course	No.	Course Title	Credits
		<b>Technical Requirements</b>	
BUS	158	WEB DESIGN FOR BUSINESS	3
BUS	166	DIGITAL IMAGE DESIGN FOR BUSINESS	3
BUS	205	SOCIAL MEDIA MARKETING	3
BUS	215	SEARCH ENGINE MARKETING	3
BUS	227	WRITING FOR SOCIAL MEDIA MARKETING*	3
BUS	250	SOCIAL MEDIA MARKETING CAMPAIGN*	3
		<b>Total</b>	<b>18</b>

**Semester Breakdown**

First Semester			Second Semester		
		CR			CR
BUS 205	Social Media Marketing	3	BUS 158	Web Design for Business	3
BUS 227	Writing for Social Media Marketing	3	BUS 166	Digital Image Design for Business	3
			BUS 215	Search Engine Marketing	3
			BUS 250	Social Media Marketing Campaign	3
<b>Total Credit Hours</b>		<b>6</b>	<b>Total Credit Hours</b>		<b>12</b>

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\*Students that complete this certificate and later decide to return for the Business and Technology AAS will have BUS227 sub for BUS 120 and BUS 250 sub for BUS 228 or BUS 291.

# COMPUTER-AIDED DRAFTING TECHNICIAN

## Associate of Applied Science, 71 Credit Hours, 18-Month Program

The Computer-Aided Drafting Technician program at WDT equips students with the skills and knowledge necessary to produce accurate technical drawings using industry standard CAD systems.

Graduates of the program receive training in a full range of knowledge and skills needed to succeed in the diverse and varied field of drafting and design. This degree is widely accepted as the industry standard in qualifying for an entry level position in the architectural, civil, and mechanical CAD fields.

Architectural drafters assist architects by preparing technical plans and details showing the dimensions, construction materials, and processes used for residential and commercial building projects. Mechanical drafters prepare detail and assembly drawings of a wide variety of machinery and mechanical devices, indicating dimensions, fastening methods, and other requirements. Civil drafters create drawings that detail the construction related to land, roads, bridges, and other infrastructure. The Computer-Aided Drafting Technician program at WDT provides students with a solid base of knowledge in all three of these fields, maximizing their versatility when entering the job market.

Course No.	Course Title	Credits
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON 202	PRINCIPLES OF MACROECONOMICS	3
ENGL 101	COMPOSITION* <i>or</i>	3
ENGL 201	TECHNICAL WRITING I*	
MATH 101	INTERMEDIATE ALGEBRA** <i>or</i>	3
MATH 102	COLLEGE ALGEBRA***	
MATH 120	TRIGONOMETRY****	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
	<b>Total</b>	<b>18</b>
<b>Technical Requirements</b>		
CAD 101	DRAFTING FUNDAMENTALS	3
CAD 111	ARCHITECTURAL DRAFTING I	3
CAD 135	ARCHITECTURAL CONSTRUCTION THEORY I	3
CAD 139	2D CAD	3
CAD 141	ARCHITECTURAL 3D CAD	3
CAD 142	MECHANICAL 3D CAD	3
CAD 150	ARCHITECTURAL PRINT READING	1
CAD 202	MECHANICAL DRAFTING	3
CAD 203	PRINCIPLES OF COMMERCIAL THEORY I	3
CAD 214	INTRODUCTION TO CIVIL DRAFTING	3
CAD 232	MECHANICAL PRINCIPLES	3
CAD 234	MECHANICAL PRINT READING	2
CAD 237	ARCHITECTURAL DRAFTING II	3
CAD 250	INTRODUCTION TO MAPPING/GPS	2
CAD 252	INTRODUCTION TO SURVEYING	3
	ELECTIVES	12
	<b>Total</b>	<b>53</b>
<b>Technical Electives-Choose minimum 12 credits</b>		
CAD 215	LIGHT COMMERCIAL CONSTRUCTION WITH MECHANICAL AND ELECTRICAL	3
CAD 240	3D ARCHITECTURAL DESIGN	3
CAD 244	3D ENGINEERING DESIGN	3
CAD 247	COMPUTER AUTOMATED MANUFACTURING	3
CAD 297	INTERNSHIP	3

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

\*\*\*Prerequisite: Acceptable ACCUPLACER score or Intermediate Algebra.

\*\*\*\*Prerequisite: Acceptable ACCUPLACER score, Intermediate Algebra, or College Algebra.

**Semester breakdown on next page**

## Semester Breakdown AAS

First Semester			Second Semester		
		CR			CR
CAD 101	Drafting Fundamentals	3	CAD 111	Architectural Drafting I	3
CAD 135	Architectural Construction Theory I	3	CAD 141	Architectural 3D CAD	3
CAD 139	2D CAD	3	CAD 142	Mechanical 3D CAD	3
CAD 250	Introduction to Mapping/GPS	2	CAD 150	Architectural Print Reading	1
CIS 105	Microcomputer Software Applications I	3	CAD 232	Mechanical Principles	3
MATH 101	Intermediate Algebra <i>or</i>	3	CAD 234	Mechanical Print Reading	2
MATH 102	College Algebra		MATH 120	Trigonometry	3
<b>Total Credit Hours</b>		<b>17</b>	<b>Total Credit Hours</b>		<b>18</b>
Third Semester			Fourth Semester		
		CR			CR
CAD 202	Mechanical Drafting	3	ECON 202	Principles of Macroeconomics	3
CAD 203	Principles of Commercial Theory I	3	PSYC 101	General Psychology <i>or</i>	3
CAD 214	Introduction to Civil Drafting	3	PSYC 103	Human Relations in the Workplace	
CAD 237	Architectural Drafting II	3		Technical Electives	12
CAD 252	Introduction to Surveying	3			
ENGL 101	Composition <i>or</i>	3			
ENGL 201	Technical Writing I				
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>

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# COMPUTER SCIENCE – INFORMATION TECHNOLOGY SPECIALIST

## Associate of Applied Science, 69 Credit Hours, 18-Month Program

The Computer Science - Information Technology Specialist program strikes a balance between theory and application. Students will learn about real-life networking and security environments, making them immediately productive upon graduation and prepared to take on a variety of information technology (IT) roles. The first year builds a solid foundation of basic hands-on computer skills and networking concepts. The second year challenges students to learn to adapt and react to the changing world of computers. Deeper networking concepts are introduced, including security, complex networks, and programming skills. The emphasis of coursework will be based on preparing students for Microsoft certification testing. Students also will be prepared to continue learning and advancing within the field, allowing them to work within an organization to apply networking to business strategy, tactics, and goals.

A typical job description for an information technology specialist would generally include working in an office environment. The job is often performed alone, and the IT Specialist must possess strong troubleshooting and technical skills, including strong math skills. Conversely, the IT Specialist must also work with users who are not comfortable with the system or who are experiencing difficulties, thus the requirement for strong communications skills. Configuring a network can require long hours of work in a short period of time. Maintaining the network can alternate between routine tasks to install, maintain, and update programs, as well as the hectic work of troubleshooting and fixing network problems. If a network crashes, the Information Technology Specialist must work quickly and purposefully to solve problems and restore the network operation. In addition, the task of updating and maintaining network services can require late hours and work on an irregular schedule. The IT worker must also be prepared to maintain related technology within an organization, including audio-visual equipment, televisions, phones, and cabling infrastructure. Physical duties may include climbing and working using ladders, installing cabling, moving computers and related equipment, and installing equipment.

Course No.	Course Title	Credits
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION*	3
ENGL 202	TECHNICAL COMMUNICATIONS	3
ECON 202	PRINCIPLES OF MACROECONOMICS <i>or</i>	3
SOC 100	INTRODUCTION TO SOCIOLOGY	
MATH 102	COLLEGE ALGEBRA**	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
	<b>Total</b>	<b>18</b>
<b>Technical Requirements</b>		
CIS 122	INFORMATION TECHNOLOGY HARDWARE/SOFTWARE	6
CIS 129	WINDOWS OPERATING SYSTEMS	3
CIS 131	NETWORKING TECHNOLOGIES I	3
CIS 132	NETWORKING TECHNOLOGIES II	3
CIS 133	NETWORKING TECHNOLOGIES III	3
CIS 134	NETWORKING TECHNOLOGIES IV	3
CIS 201	LINUX TECHNOLOGIES	3
CIS 213	NETWORKING USING WINDOWS SERVER	3
CIS 215	NETWORK DESIGN AND VIRTUALIZATION	3
CIS 216	INTRODUCTION TO PROGRAMMING	3
CIS 219	ADVANCED SERVER TECHNOLOGIES	3
CIS 220	NETWORK SECURITY I	3
CIS 225	DATABASES	3
CIS 230	COMPUTER FORENSICS	3
CIS 235	NETWORK SECURITY II	3
INT 299	INTERNSHIP	3
	<b>Total</b>	<b>51</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Intermediate Algebra.

Semester breakdown on next page

## Semester Breakdown AAS

First Semester			Second Semester		
		CR			CR
CIS 122	Information Technology Hardware/Software	6	CIS 132	Networking Technologies II	3
CIS 129	Windows Operating Systems	3	CIS 201	Linux Technologies	3
CIS 131	Networking Technologies I	3	CIS 213	Networking Using Windows Server	3
CIS 105	Microcomputer Software Applications I	3	CIS 225	Databases	3
MATH 102	College Algebra	3	ENGL 101	Composition	3
			PSYC 101	General Psychology <i>or</i>	3
			PSYC 103	Human Relations in the Workplace	
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>
Third Semester			Fourth Semester		
		CR			CR
CIS 133	Networking Technologies III	3	CIS 134	Networking Technologies IV	3
CIS 216	Introduction to Programming	3	CIS 215	Network Design & Virtualization	3
CIS 219	Advanced Server Technologies	3	CIS 230	Computer Forensics	3
CIS 220	Network Security I	3	CIS 235	Network Security II	3
ECON 202	Principles of Macroeconomics <i>or</i>	3	INT 299	Internship	3
SOC 100	Introduction to Sociology		ENGL 202	Technical Communications	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>18</b>

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# COMPUTER SCIENCE – INFORMATION TECHNOLOGY SPECIALIST

## Diploma, 36 Credit Hours, 9-Month Program

The Computer Science - Information Technology Specialist program strikes a balance between theory and application. Students will learn about real-life networking and security environments, making them immediately productive upon graduation and prepared to take on a variety of information technology (IT) roles. The first year builds a solid foundation of basic hands-on computer skills and networking concepts. The second year challenges students to learn to adapt and react to the changing world of computers. Deeper networking concepts are introduced, including security, complex networks, and programming skills. The emphasis of coursework will be based on preparing students for Microsoft certification testing. Students also will be prepared to continue learning and advancing within the field, allowing them to work within an organization to apply networking to business strategy, tactics, and goals.

A typical job description for an information technology specialist would generally include working in an office environment. The job is often performed alone, and the IT Specialist must possess strong troubleshooting and technical skills, including strong math skills. Conversely, the IT Specialist must also work with users who are not comfortable with the system or who are experiencing difficulties, thus the requirement for strong communications skills. Configuring a network can require long hours of work in a short period of time. Maintaining the network can alternate between routine tasks to install, maintain, and update programs, as well as the hectic work of troubleshooting and fixing network problems. If a network crashes, the Information Technology Specialist must work quickly and purposefully to solve problems and restore the network operation. In addition, the task of updating and maintaining network services can require late hours and work on an irregular schedule. The IT worker must also be prepared to maintain related technology within an organization, including audio-visual equipment, televisions, phones, and cabling infrastructure. Physical duties may include climbing and working using ladders, installing cabling, moving computers and related equipment, and installing equipment.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	101	COMPOSITION*	3
MATH	102	COLLEGE ALGEBRA**	3
PSYC	101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
<b>Total</b>			<b>12</b>
<b>Technical Requirements</b>			
CIS	122	INFORMATION TECHNOLOGY HARDWARE/SOFTWARE	6
CIS	129	WINDOWS OPERATING SYSTEMS	3
CIS	131	NETWORKING TECHNOLOGIES I	3
CIS	132	NETWORKING TECHNOLOGIES II	3
CIS	201	LINUX TECHNOLOGIES	3
CIS	213	NETWORKING USING WINDOWS SERVER	3
CIS	225	DATABASES	3
<b>Total</b>			<b>24</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Intermediate Algebra.

### Semester Breakdown Diploma

First Semester			Second Semester		
		CR			CR
CIS 122	Information Technology Hardware/Software	6	CIS 132	Networking Technologies II	3
CIS 129	Windows Operating Systems	3	CIS 201	Linux Technologies	3
CIS 131	Networking Technologies I	3	CIS 213	Networking Using Windows Server	3
CIS 105	Microcomputer Software Applications I	3	CIS 225	Databases	3
MATH 102	College Algebra	3	ENGL 101	Composition	3
			PSYC 101	General Psychology <i>or</i>	3
			PSYC 103	Human Relations in the Workplace	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>

# CRIMINAL JUSTICE

## Associate of Applied Science, 64 Credit Hours, 18-Month Program

As the population grows, so does the need for trained workers in a variety of criminal justice fields. This program will graduate skilled technicians who are able to bring value to the criminal justice field in multiple ways because they will have a broad understanding of the criminal justice system and will be skilled to fill a variety of roles.

This program has been designed to be broad in nature and to include coursework in a wide variety of criminal justice topics. Students will complete classes in criminal justice, corrections, juvenile justice, criminal law, criminal investigation, ethics in criminal justice, forensics and crime scene investigation, probation and parole, security, terrorism and counterterrorism, domestic violence, and more.

Course	No.	Course Title	Credit
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	101	COMPOSITION*	3
MATH	101	INTERMEDIATE ALGEBRA** <i>or higher</i>	3
PSYC	101	GENERAL PSYCHOLOGY	3
SOC	100	INTRODUCTION TO SOCIOLOGY	3
<b>Total</b>			<b>15</b>
<b>Technical Requirements</b>			
CJUS	115	CONSTITUTIONAL LAW FOR LAW ENFORCEMENT	3
CJUS	119	CRIMINAL LAW AND PROCEDURES	3
CJUS	121	CRIMINAL INVESTIGATIONS	4
CJUS	124	JUVENILE METHODS	3
CJUS	200	COMMUNITY CORRECTIONS	3
CJUS	201	INTRODUCTION TO CRIMINAL JUSTICE	3
CJUS	205	CRIMINAL JUSTICE FORENSICS	3
CJUS	210	CONTEMPORARY SECURITY PRACTICES	3
CJUS	215	ETHICS IN CRIMINAL JUSTICE	3
CJUS	220	TERRORISM AND COUNTERTERRORISM	3
CJUS	225	DOMESTIC VIOLENCE	3
CJUS	229	CORRECTIONS	3
CJUS	230	AGENCY ORGANIZATION AND MANAGEMENT	3
CJUS	235	CRIMINOLOGY	3
CJUS	240	COURT SYSTEMS AND PRACTICES	3
CJUS	245	LAW ENFORCEMENT OPERATIONS AND PROCEDURES <i>or</i>	3
INT	299	INTERNSHIP	
<b>Total</b>			<b>49</b>

\* Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

Semester breakdown on next page

## Semester Breakdown

First Semester			Second Semester		
		<b>CR</b>			<b>CR</b>
CIS 105	Microcomputer Software Applications I	3	CJUS 121	Criminal Investigations	4
CJUS 115	Constitutional Law for Law Enforcement	3	CJUS 124	Juvenile Methods	3
CJUS 119	Criminal Law and Procedures	3	CJUS 210	Contemporary Security Practices	3
CJUS 200	Community Corrections	3	ENGL 101	Composition	3
CJUS 201	Introduction to Criminal Justice	3	MATH 101	Intermediate Algebra <i>or higher</i>	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>16</b>
Third Semester			Fourth Semester		
		<b>CR</b>			<b>CR</b>
CJUS 205	Criminal Justice Forensics	3	CJUS 229	Corrections	3
CJUS 215	Ethics in Criminal Justice	3	CJUS 230	Agency Organization and Management	3
CJUS 220	Terrorism and Counterterrorism	3	CJUS 235	Criminology	3
CJUS 225	Domestic Violence	3	CJUS 240	Court Systems and Practices	3
PSYC 101	General Psychology	3	CJUS 245	Law Enforcement Operations and Procedures <i>or</i>	3
SOC 100	Introduction to Sociology	3	INT 299	Internship	
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>15</b>

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

## CRIMINAL JUSTICE - LAW ENFORCEMENT EMPHASIS

### Associate of Applied Science, 63 Credit Hours, 18-Month Program

The mission of the Criminal Justice: Law Enforcement emphasis program is to prepare students with the knowledge and skills necessary for employment as entry-level law enforcement officers. This is not a strictly academic program. It has an extensive hands-on component to it.

A law enforcement officer is an official representative of government who is entrusted with a wide variety of duties. Regardless of the type and size of the organization they work for, law enforcement officers are expected to perform in a professional manner. The highly competitive nature of obtaining most law enforcement positions requires applicants to be prepared academically, be physically fit, and have the hands-on skills necessary to do the job. Many entry-level applicants for law enforcement positions are encouraged or required to have completed at least two years of formal postsecondary education. The WDT Law Enforcement program will help prepare students with these requirements.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	101	COMPOSITION*	3
MATH	101	INTERMEDIATE ALGEBRA** <i>or higher</i>	3
PSYC	101	GENERAL PSYCHOLOGY	3
SOC	100	INTRODUCTION TO SOCIOLOGY	3
<b>Total</b>			<b>15</b>
<b>Technical Requirements</b>			
CJUS	115	CONSTITUTIONAL LAW FOR LAW ENFORCEMENT	3
CJUS	119	CRIMINAL LAW AND PROCEDURES	3
CJUS	121	CRIMINAL INVESTIGATIONS	4
CJUS	124	JUVENILE METHODS	3
CJUS	200	COMMUNITY CORRECTIONS	3
CJUS	201	INTRODUCTION TO CRIMINAL JUSTICE	3
CJUS	205	CRIMINAL JUSTICE FORENSICS	3
CJUS	210	CONTEMPORARY SECURITY PRACTICES	3
CJUS	215	ETHICS IN CRIMINAL JUSTICE	3
CJUS	220	TERRORISM AND COUNTERTERRORISM	3
CJUS	225	DOMESTIC VIOLENCE	3
CJUS	275	LAW ENFORCEMENT ACADEMY	14
<b>Total</b>			<b>48</b>

\* Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

In accordance with South Dakota Codified Law, and the South Dakota Law Enforcement Officers Standards and Training Commission, all individuals serving in the capacity of law enforcement officers in the State of South Dakota must be at least 21 years of age prior to appointment.

Semester breakdown on next page

## Semester Breakdown

First Semester			Second Semester		
		<b>CR</b>			<b>CR</b>
CIS 105	Microcomputer Software Applications I	3	CJUS 121	Criminal Investigations	4
CJUS 115	Constitutional Law for Law Enforcement	3	CJUS 124	Juvenile Methods	3
CJUS 119	Criminal Law and Procedures	3	CJUS 210	Contemporary Security Practices	3
CJUS 200	Community Corrections	3	ENGL 101	Composition	3
CJUS 201	Introduction to Criminal Justice		MATH 101	Intermediate Algebra <i>or higher</i>	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>16</b>
Third Semester			Fourth Semester		
		<b>CR</b>			<b>CR</b>
CJUS 205	Criminal Justice Forensics	3	CJUS 275	Law Enforcement Academy	14
CJUS 215	Ethics in Criminal Justice	3			
CJUS 220	Terrorism and Counterterrorism	3			
CJUS 225	Domestic Violence	3			
PSYC 101	General Psychology	3			
SOC 100	Introduction to Sociology	3			
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>14</b>

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

In accordance with South Dakota Codified Law, and the South Dakota Law Enforcement Officers Standards and Training Commission, all individuals serving in the capacity of law enforcement officers in the State of South Dakota must be at least 21 years of age prior to appointment.

Semester breakdown on next page

## DENTAL ASSISTING

### Diploma, 35 Credit Hours, 11-Month Program

The dental assistant is an integral, valued member of the dental team. Graduates of the diploma program will be highly trained dental assisting students who have the skills required to be competent members of a dental healthcare team, deliver quality dental healthcare to the public, and have the knowledge necessary to become a Registered Dental Assistant (RDA) in the state of South Dakota. Dental assisting tasks include providing direct patient care, assisting during a variety of dental procedures, obtaining medical/dental histories, vital signs, dental radiographs, and impressions for dental models, teaching patients appropriate oral hygiene strategies, applying preventive agents, placing pit and fissure sealants, developing, coordinating, and serving as an infection control officer, and performing office management tasks. The dental assistant may work in a private or group practice setting specializing in general dentistry, oral surgery, orthodontics, endodontics, periodontics, prosthodontics, or pedodontics. Dental sales and marketing of products is another career opportunity for the dental assistant. Dental assistants must have strong communication skills, a desire to work with their hands, and a passion for a challenging career with responsibilities that increase the efficiency and quality of oral health care delivery.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	101	COMPOSITION <i>or</i>	3
ENGL	201	TECHNICAL WRITING I*	
MATH	100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
PSYC	101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	
		<b>Total</b>	<b>12</b>
<b>Technical Requirements</b>			
DEN	110	DENTAL SCIENCES	2
DEN	115	DENTAL SCIENCES LAB	1
DEN	120	DENTAL RADIOGRAPHY	2
DEN	125	ORAL EMBRYOLOGY AND HISTOLOGY	2
DEN	130	DENTAL MATERIALS AND INSTRUMENTATION	2
DEN	135	DENTAL RADIOGRAPHY LAB	2
DEN	150	PRECLINICAL DENTAL SCIENCES	2
DEN	152	DENTAL SCIENCES EXPANDED FUNCTIONS LAB	1
DEN	154	DENTAL CLINICAL PRACTICE I***	2
DEN	156	DENTAL CLINICAL PRACTICE II	6
HC	205	PROFESSIONALISM IN HEALTHCARE	1
		<b>Total</b>	<b>23</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

\*\*\*Must provide evidence of a current American Heart Association CPR Card before DEN 154 Dental Clinical Practice I.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

Semester breakdown on next page

## Semester Breakdown

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
DEN 110	Dental Sciences	2	CIS 105	Microcomputer Software Applications I	3
DEN 115	Dental Sciences Lab	1	DEN 130	Dental Materials and Instrumentation	2
DEN 120	Dental Radiography	2	DEN 135	Dental Radiography Lab	2
DEN 125	Oral Embryology and Histology	2	DEN 152	Dental Sciences Expanded Functions Lab	1
DEN 150	Preclinical Dental Sciences	2	DEN 154	Dental Clinical Practice I	2
MATH 100	Elementary Algebra <i>or higher</i>	3	ENGL 101	Composition <i>or</i>	3
PSYC 101	General Psychology <i>or</i>	3	ENGL 201	Technical Writing I	
PSYC 103	Human Relations in the Workplace		HC 205	Professionalism in Healthcare	1
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>14</b>
<b>Third Semester (Summer)</b>					
		<b>CR</b>			
DEN 156	Dental Clinical Practice II	6			
<b>Total Credit Hours</b>		<b>6</b>			

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

# **DRAFTING AND MACHINING TECHNOLOGY**

## **Associate of Applied Science, 65-68 Credit Hours, 18-Month Program**

This program will graduate skilled technicians who are able to bring value to those employers in multiple ways because they will be skilled enough to participate in multiple areas of the business. These workers will be flexible and will be seen as a valuable asset by any of these employers.

In the drafting area, graduates will be able to meet the growing demand from industry for skilled technicians who can demonstrate skill and knowledge in 2D and 3D computer-aided drafting. In addition, graduates will leave the program prepared to apply the basic fundamentals of drafting and blueprint reading.

In the machining area, graduates will be able to set up and operate a variety of machine tools to produce precision metal parts, instruments, and tools. Machinists use machine tools that are either conventionally controlled or computer numerically controlled, such as lathes, milling machines, and grinders, to produce precision metal parts. Although they may produce large quantities of one part, precision machinists often produce small batches or one-of-a-kind items. The parts that machinists make range from simple bolts of steel or brass to titanium bone screws for orthopedic implants. Hydraulic parts, anti-lock brakes and automobile pistons are other widely known products that machinists make.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON	202	PRINCIPLES OF MACROECONOMICS	3
ENGL	201	TECHNICAL WRITING I*	3
MATH	100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
MATH	101	INTERMEDIATE ALGEBRA*** <i>or higher</i>	3
MATH	120	TRIGONOMETRY	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
<b>Total</b>			<b>21</b>
<b>Technical Requirements</b>			
CAD	101	DRAFTING FUNDAMENTALS	3
CAD	139	2D CAD	3
CAD	142	MECHANICAL 3D CAD	3
CAD	232	MECHANICAL PRINCIPLES	3
CAD	234	MECHANICAL PRINT READING	2
CAD	244	3D ENGINEERING DESIGN	3
CAD	247	COMPUTER AUTOMATED MANUFACTURING	3
INT	299	INTERNSHIP (OPTIONAL)	3
MACH	110	MACHINCE SHOP OPERATIONS	3
MACH	115	TURNING THEORY AND OPERATIONS I	3
MACH	120	MILLING THEORY AND OPERATIONS I	3
MACH	125	MECHANICAL BLUEPRINT READING	3
MACH	130	MATERIALS APPLICATIONS	3
MACH	135	TURNING THEORY AND OPERATIONS II	3
MACH	140	MILLING THEORY AND OPERATIONS II	3
MACH	145	APPLIED COMPUTER AIDED DRAFTING FUNDAMENTALS	3
<b>Total</b>			<b>44-47</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

\*\*\*Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

**Semester breakdown on next page**

### Semester Breakdown\*

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
MACH 110	Machine Shop Operations	3	MACH 130	Materials Applications	3
MACH 115	Turning Theory & Operations I	3	MACH 135	Turning Theory & Operations II	3
MACH 120	Milling Theory & Operations I	3	MACH 140	Milling Theory & Operations II	3
MACH 125	Mechanical Blueprint Reading	3	MACH 145	Applied Computer Aided Drafting Fundamentals	3
CIS 105	Microcomputer Software Applications I	3	ENGL 201	Technical Writing I	3
MATH 100	Elementary Algebra <i>or higher</i>	3	PSYC 103	Human Relations in the Workplace	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>
<b>Third Semester</b>			<b>Fourth Semester</b>		
		<b>CR</b>			<b>CR</b>
CAD 101	Drafting Fundamentals	3	CAD 232	Mechanical Principles	3
CAD 139	2D CAD	3	CAD 234	Mechanical Print Reading	2
CAD 142	Mechanical 3D CAD	3	CAD 244	3D Engineering Design	3
ECON 202	Principles of Macroeconomics	3	CAD 247	Computer Automated Manufacturing	3
MATH 101	Intermediate Algebra <i>or higher</i>	3	INT 299	Internship <i>optional</i>	3
			MATH 120	Trigonometry	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>14-17</b>

# **ELECTRICAL TRADES**

## **Associate of Applied Science, 71-77 Credit Hours, 18-Month Program**

This program provides in-depth instruction in the theories and principles of electricity and electrical construction. Strong math skills are a requirement. Principles of operation for electrical devices and equipment, and correct and safe operation of tools are covered. A typical job description for an electrician may include typically working 40 hours per week. However, some jobs may require working evenings or weekends. Electricians must be physically capable of climbing and working at heights and outside. Other physical work may be required.

Students will study and learn to interpret and apply the requirements of the National Electrical Code. A solid background in the theory and technology of the electrical field will give the knowledge and ability to install, maintain, troubleshoot, and repair electrical circuits and equipment. The training gives students the flexibility to pursue different areas of employment as entry-level electricians. Most of our lab experience mimics outside work-sites and allows students to have first-hand experience in a controlled environment. The Electrical Trades program prepares students for employment as an apprentice electrician in the construction, mining, and industrial manufacturing sectors of the Trades and Construction Industry.

The South Dakota Electrical Commission requires successful completion of First Aid/CPR training in order to graduate from an electrical trades program.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON	202	PRINCIPLES OF MACROECONOMICS <i>or</i>	3
SOC	100	INTRODUCTION TO SOCIOLOGY	
ENGL	201	TECHNICAL WRITING I*	3
MATH	104	TECHNICAL MATHEMATICS**	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
<b>Total</b>			<b>15</b>
<b>Technical Requirements***</b>			
ELT	217	COMPUTER HARDWARE INSTALLATION & TROUBLESHOOTING	4
IEL	122	ELECTRICAL CODE STUDY I	3
IEL	123	INDUSTRIAL DATA COMMUNICATION	2
IEL	129	INTRODUCTION TO ELECTRICAL WIRING LAB	1
IEL	130	INTRODUCTION TO ELECTRICAL WIRING	2
IEL	132	ELECTRICAL FUNDAMENTALS	5
IEL	133	ELECTRICAL FUNDAMENTALS LAB	7
IEL	135	BASIC ELECTRICAL MATERIALS AND DEVICES	1
IEL	140	WELDING & FABRICATION FOR LIGHT COMMERCIAL APPLICATIONS	2
IEL	211	ELECTRICAL MOTOR CONTROL	3
IEL	213	ELECTRICAL HEATING AND APPLIANCES	2
IEL	214	ELECTRICAL CODE STUDY II	2
IEL	216	ELECTRICAL MOTOR CONTROL LAB	2
IEL	218	WIRING LAB I	3
IEL	220	WIRING LAB II	3
IEL	221	PROGRAMMABLE LOGIC CONTROLLERS	2
IEL	222	PROGRAMMABLE LOGIC CONTROLLERS LAB	3
IEL	223	ELECTRICAL MOTOR LAB	1
IEL	224	POWER DISTRIBUTION	2
IEL	226	ELECTRICAL MOTOR FUNDAMENTALS AND MAINTENANCE	2
IEL	230	BLUEPRINT READING, ELECTRICAL PLANNING AND ESTIMATING	4
IEL	299	ELECTRICIAN INTERNSHIP/CO-OP (OPTIONAL)	6
<b>Total</b>			<b>56-62</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

\*\*\*CPR/First Aid must be completed before graduation.

Semester breakdown on next page

## Semester Breakdown

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
IEL 132	Electrical Fundamentals	5	ELT 217	Computer Hardware Installation/ Troubleshooting	4
IEL 133	Electrical Fundamentals Lab	7	IEL 123	Industrial Data Communication	2
CIS 105	Microcomputer Software Applications I	3	IEL 129	Introduction to Electrical Wiring Lab	1
MATH 104	Technical Mathematics	3	IEL 130	Introduction to Electrical Wiring	2
			IEL 135	Basic Electrical Materials and Devices	1
			IEL 140	Welding & Fabrication for Light Commercial Application	2
			IEL 223	Electrical Motor Lab	1
			IEL 226	Electrical Motor Fundamentals and Maintenance	2
			ENGL 201	Technical Writing I	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>
<b>Third Semester</b>			<b>Fourth Semester</b>		
		<b>CR</b>			<b>CR</b>
IEL 122	Electrical Code Study I	3	IEL 213	Electrical Heating & Appliances	2
IEL 211	Electrical Motor Control	3	IEL 214	Electrical Code Study II	2
IEL 216	Motor Control Lab	2	IEL 220	Wiring Lab II	3
IEL 218	Wiring Lab I	3	IEL 221	Programmable Logic Controllers	2
IEL 230	Blueprint Reading, Electrical Planning, and Estimating	4	IEL 222	PLC Lab	3
ECON 202	Principles of Macroeconomics <i>or</i>	3	IEL 224	Power Distribution	2
SOC 100	Introduction to Sociology		PSYC 103	Human Relations in the Workplace	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>17</b>
<b>Optional Summer Semester</b>					
		<b>CR</b>			
IEL 299	Electrician Internship/CO-OP	6			
<b>Total Credit Hours</b>		<b>6</b>			

# **EMERGENCY MEDICAL TECHNICIAN**

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## **Certificate, 6 Credit Hours, 4 Month Program**

Students will gain instruction and hands-on practice in providing emergency care including life-threatening conditions, non-life threatening situations, and transporting patients to the hospital by ambulance. Upon completion, eligible students are qualified to take the National Registry Exam or pursue an advanced degree in Paramedic or Fire Science. Students opting to become licensed in the State of South Dakota will need to register and pay for the National Registry Exam separately.\*

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
		<b>Technical Requirements</b>	
EMS	101	EMERGENCY MEDICAL TECHNICIAN	6
		<b>Total</b>	<b>6</b>

\*Age Requirement: **You must be at least 18 years of age to be eligible to certify as an EMT.**

If you are not yet 18 years old, you may enroll in the course with the understanding that your certificate will be held until the age requirement is met.

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

# ENVIRONMENTAL ENGINEERING TECHNICIAN

## **Associate of Applied Science, 68-70 Credit Hours, 18-Month Program**

The Environmental Engineering Technician program is designed to prepare students for work in an exciting and growing field. As our population grows, society puts an ever increasing demand on our natural resources. Program graduates primarily work outdoors in the field, collecting information used to assess how increased demand affects the quality and quantity of our nation's natural resources. Program graduates work in a broad range of jobs such as collecting and analyzing water and soil samples, measuring stream flow and groundwater levels, and conducting soils testing. The work can be physically demanding, requiring technicians to climb or hike long distances, carrying equipment to remote locations. Field work often entails working under varying climatic conditions such as hot summers or cold winters. Technicians may be required to drive off-road vehicles such as 4-wheelers and snowmobiles, or even ride on horses, boats or helicopters, to access some remote sampling sites.

Upon graduation, students can be employed with federal, state, county, and city environmental departments; water treatment facilities; or with private businesses such as consulting engineers, mining companies, and testing labs.

Students will gain experience in environmental sampling and monitoring throughout the program. Field Engineering courses provide students with an excellent balance of theory and hands-on experience that will enable them, upon graduation, to conduct environmental investigations under the supervision of professional Geologists, Engineers, or Hydrologists.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CHEM	106	CHEMISTRY SURVEY	3
CHEM	106L	CHEMISTRY SURVEY LAB	1
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON	202	PRINCIPLES OF MACROECONOMICS	3
ENGL	101	COMPOSITION* <i>or</i>	3
ENGL	201	TECHNICAL WRITING I*	
MATH	101	INTERMEDIATE ALGEBRA <sup>1**</sup> <i>or</i>	3
MATH	102	COLLEGE ALGEBRA <sup>1***</sup> <i>or</i>	3
MATH	120	TRIGONOMETRY <sup>1****</sup>	
PSYC	101	GENERAL PSYCHOLOGY	3
<b>Total</b>			<b>22</b>
<b>Technical Requirements</b>			
CAD	250	INTRODUCTION TO MAPPING/GPS	2
CAD	251	INTRODUCTION TO GIS	3
CAD	252	INTRODUCTION TO SURVEYING	3
EET	102	INTRODUCTION TO ENVIRONMENTAL SCIENCES	4
EET	103	ENVIRONMENTAL INSTRUMENTATION	4
EET	106	INTRODUCTORY FIELD METHODS	3
EET	202	WATER QUALITY	3
EET	203	ENVIRONMENTAL HAZMAT AWARENESS	2
EET	204	ENVIRONMENTAL REGULATIONS	2
EET	222	INTRODUCTION TO WATERWATER TECHNOLOGIES	3
<i>or</i>			
EET	298	TECHNICAL COOPERATIVE WORK EXPERIENCE	
EET	225	AIR QUALITY	2
EET	235	CONSTRUCTION MATERIALS SAMPLING & TESTING	3
EET	250	SOILS TESTING	3
EET	251	ENVIRONMENTAL GEOLOGY	3
EET	253	PRINCIPLES OF WATER RESOURCES	3
EET	255	INTRODUCTION TO GEOMORPHOLOGY	3
EET	299	FIELD INTERNSHIP (OPTIONAL)	2
<b>Total</b>			<b>46-48</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

\*\*\*Prerequisite: Acceptable ACCUPLACER score or Intermediate Algebra.

\*\*\*\*Prerequisite: Acceptable ACCUPLACER score, Intermediate Algebra, or College Algebra.

<sup>1</sup>Choose two of the three math classes (taken in 1<sup>st</sup> and 2<sup>nd</sup> semester)

**Semester breakdown on next page**

## Semester Breakdown

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
CAD 250	Introduction to Mapping/GPS	2	CAD 251	Introduction to GIS	3
EET 102	Introduction to Environmental Sciences	4	EET 103	Environmental Instrumentation	4
EET 106	Introductory Field Methods	3	MATH 102	College Algebra <i>or</i>	3
CIS 105	Microcomputer Software Applications I	3	MATH 120	Trigonometry	3
ENGL 101	Composition <i>or</i>	3	CHEM 106	Chemistry Survey	3
ENGL 201	Technical Writing I	3	CHEM 106L	Chemistry Survey Lab	1
MATH 101	Intermediate Algebra <i>or</i>	3	PSYC 101	General Psychology	3
MATH 102	College Algebra				
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>17</b>
<b>Third Semester</b>			<b>Fourth Semester</b>		
		<b>CR</b>			<b>CR</b>
CAD 252	Introduction to Surveying	3	EET 222	Introduction to Wastewater Technologies <i>or</i>	3
EET 202	Water Quality	3	EET 298	Technical Cooperative Work Experience	
EET 203	Environmental Hazmat Awareness	2	EET 225	Air Quality	2
EET 204	Environmental Regulations	2	EET 235	Construction Materials Sampling & Testing	3
EET 251	Environmental Geology	3	EET 250	Soils Testing	3
ECON 202	Principles of Macroeconomics	3	EET 253	Principles of Water Resources	3
			EET 255	Introduction to Geomorphology	3
<b>Total Credit Hours</b>		<b>16</b>	<b>Total Credit Hours</b>		<b>17</b>
<b>Optional Summer Semester</b>					
		<b>CR</b>			
EET 299	Field Internship	2			
<b>Total Credit Hours</b>		<b>2</b>			

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# **FIRE SCIENCE**

## **Associate of Applied Science, 64 Credit Hours, 18-Month Program**

The Fire Science program prepares students for careers in the wildland and structural fire service. The combination of classroom instruction, extensive hands on training, in-the-field experience, and internships allow the student to develop skills required for successful employment in the Fire Service. This program is designed to meet the requirements of municipal and wildland firefighting agencies throughout the country. The successful student will have the opportunity to achieve certification from the National Board on Fire Service Professional Qualifications (Pro Board) and National Wildland Coordinating Group (NWCWG).

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	101	COMPOSITION* <i>or</i>	3
ENGL	201	TECHNICAL WRITING I*	
MATH	100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
PSYC	101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	
SOC	100	INTRODUCTION TO SOCIOLOGY	3
<b>Total</b>			<b>15</b>
<b>Technical Requirements</b>			
EMS	101	EMERGENCY MEDICAL TECHNICIAN	6
FFT	110	BUILDING CONSTRUCTION	3
FFT	116	HAZARDOUS MATERIALS OPERATIONS	3
FFT	121	STRUCTURAL FIREFIGHTER I	3
FFT	122	STRUCTURAL FIREFIGHTER I LAB	3
FFT	123	INTRODUCTION TO WILDLAND FIREFIGHTER	3
FFT	140	PHYSICAL FITNESS I	1
FFT	150	PUMPING APPARATUS DRIVER-OPERATOR	3
FFT	151	WILDLAND PUMPS AND SAWS	2
FFT	190	PHYSICAL FITNESS II	1
FFT	215	WILDLAND/URBAN INTERFACE FIRE SUPPRESSION & PREVENTION	3
FFT	218	STRATEGY & TACTICS	3
FFT	232	STRUCTURAL FIREFIGHTER II	3
FFT	233	FIRE CAUSES & INVESTIGATIONS	3
FFT	234	RESCUE PRACTICES FOR THE FIRE SERVICE	4
FFT	240	PHYSICAL FITNESS III	1
FFT	290	PHYSICAL FITNESS IV	1
FFT	298	INTERNSHIP	3
<b>Total</b>			<b>49</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

**Semester breakdown on next page**

## Semester Breakdown

First Semester			Second Semester		
		CR			CR
FFT 121	Structural Firefighter I	3	EMS 101	Emergency Medical Technician	6
FFT 122	Structural Firefighter I Lab	3	FFT 150	Pumping Apparatus Driver-Operator	3
FFT 123	Introduction to Wildland Firefighter	3	FFT 151	Wildland Pumps and Saws	2
FFT 140	Physical Fitness I	1	FFT 190	Physical Fitness II	1
CIS 105	Microcomputer Software Applications I	3	MATH100	Elementary Algebra <i>or higher</i>	3
SOC 100	Introduction to Sociology	3			
<b>Total Credit Hours</b>		<b>16</b>	<b>Total Credit Hours</b>		<b>15</b>
Third Semester			Fourth Semester		
		CR			CR
FFT 215	Wildland/Urban Interface Fire Suppression & Prevention	3	FFT 110	Building Construction	3
FFT 232	Structural Firefighter II	3	FFT 116	Hazardous Materials Operations	3
FFT 233	Fire Causes & Investigations	3	FFT 218	Strategy & Tactics	3
FFT 234	Rescue Practices for the Fire Service	4	FFT 290	Physical Fitness IV	1
FFT 240	Physical Fitness III	1	FFT 298	Internship	3
ENGL 101	Composition <i>or</i>	3	PSYC 101	General Psychology <i>or</i>	3
ENGL 201	Technical Writing I		PSYC 103	Human Relations in the Workplace	
<b>Total Credit Hours</b>		<b>17</b>	<b>Total Credit Hours</b>		<b>16</b>

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## **HEALTH INFORMATION MANAGEMENT**

### **Associate of Applied Science, 60-61 Credit Hours, 18-Month Program Coding Specialty**

The primary objective of the Health Information Management program is to prepare students with the necessary skills to work in the medical field maintaining a patient's health information. Students in both the diploma option and the degree option will take coursework in anatomy & physiology, medical terminology, medical office software, records management, electronic health records, and billing/reimbursement. This program will also provide education and training in soft skills such as communication, teamwork, interpersonal skills, and attention to detail.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	101	COMPOSITION*	3
MATH	100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
PSYC	101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	
ECON	202	PRINCIPLES OF MACROECONOMICS <i>or</i>	3
SOC	100	INTRODUCTION TO SOCIOLOGY	
<b>Total</b>			<b>15</b>
<b>Technical Requirements</b>			
BUS	141	WRITTEN COMMUNICATIONS FOR BUSINESS	3
BUS	175	RECORDS MANAGEMENT	3
BUS	210	SUPERVISORY MANAGEMENT	3
BUS	241	ADVANCED COMPUTER APPLICATIONS FOR BUSINESS	3
HC	114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC	130	MEDICAL COMPUTERIZED OFFICE APPLICATIONS	2
HC	135	MEDICAL LAW AND ETHICS	2
HC	145	ELECTRONIC HEALTH RECORDS	2
HC	200	PHARMACOLOGY FOR HEALTHCARE	3
HC	205	PROFESSIONALISM IN HEALTHCARE	1
HC	213	MEDICAL TERMINOLOGY I	3
HC	225	PATHOPHYSIOLOGY	3
MDS	210	HEALTHCARE CODING I	4
MDS	211	HEALTHCARE CODING II	3
MDS	212	HEALTHCARE FUNDAMENTALS & REIMBURSEMENT	3
MDS	250	ADVANCED CODING	2
INT	299	INTERNSHIP <i>or</i> ELECTIVE	2-3
<b>Total</b>			<b>45-46</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

**Semester breakdown on next page**

### Semester Breakdown AAS Coding Specialty

First Semester			Second Semester		
		CR			CR
HC 114	Anatomy & Physiology for the Health Professions	3	BUS 141	Written Communication for Business	3
HC 130	Medical Computerized Office Applications	2	BUS 175	Records Management	3
HC 135	Medical Law & Ethics	2	BUS 241	Advanced Computer Applications for Business <i>online</i>	3
HC 213	Medical Terminology I	3	HC 145	Electronic Health Records	2
CIS 105	Microcomputer Software Applications I	3	MDS 212	Healthcare Fundamentals and Reimbursement	3
PSYC 101	General Psychology <i>or</i>	3	MATH100	Elementary Algebra <i>or higher</i>	3
PSYC 103	Human Relations in the Workplace				
<b>Total Credit Hours</b>		<b>16</b>	<b>Total Credit Hours</b>		<b>17</b>
Third Semester			Fourth Semester		
		CR			CR
BUS 210	Supervisory Management	3	HC 200	Pharmacology for Healthcare	3
MDS 210	Healthcare Coding I (1 <sup>st</sup> 8 weeks)	4	HC 205	Professionalism in Healthcare	1
MDS 211	Healthcare Coding II (2 <sup>nd</sup> 8 weeks)	3	HC 225	Pathophysiology	3
ENGL 101	Composition	3	MDS 250	Advanced Coding	2
ECON 202	Principles of Macroeconomics <i>or</i>	3	INT 299	Internship or Elective	2-3
SOC 100	Introduction to Sociology				
<b>Total Credit Hours</b>		<b>16</b>	<b>Total Credit Hours</b>		<b>11-12</b>

# HEALTH INFORMATION MANAGEMENT

## Diploma, 33 Credit Hours, 9-Month Program

The primary objective of the Health Information Management program is to prepare students with the necessary skills to work in the medical field maintaining a patient's health information. Students in both the diploma option and the degree option will take coursework in anatomy & physiology, medical terminology, medical office software, records management, electronic health records, and billing/reimbursement. This program will also provide education and training in soft skills such as communication, teamwork, interpersonal skills, and attention to detail.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
MATH	100	ELEMENTARY ALGEBRA** <sup>1</sup> <i>or</i>	3
MATH	112	BUSINESS MATHEMATICS** <sup>2</sup>	
PSYC	101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	
<b>Total</b>			<b>9</b>
<b>Technical Requirements</b>			
BUS	141	WRITTEN COMMUNICATIONS FOR BUSINESS	3
BUS	175	RECORDS MANAGEMENT	3
BUS	241	ADVANCED COMPUTER APPLICATIONS FOR BUSINESS ( <i>online</i> )	3
HC	114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC	130	MEDICAL COMPUTERIZED OFFICE APPLICATIONS	2
HC	135	MEDICAL LAW AND ETHICS	2
HC	145	ELECTRONIC HEALTH RECORDS	2
HC	213	MEDICAL TERMINOLOGY I	3
MDS	212	HEALTHCARE FUNDAMENTALS & REIMBURSEMENT	3
<b>Total</b>			<b>24</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

<sup>1</sup>Elementary Algebra recommended for students planning to complete the HIM AAS degree in the future.

<sup>2</sup>Business Mathematics recommended for student planning to complete the HIM diploma only.

## Semester Breakdown Diploma

First Semester			Second Semester		
		CR			CR
CIS 105	Microcomputer Software Applications I	3	BUS 141	Written Communications for Business	3
HC 114	Anatomy & Physiology for the Health Professions	3	BUS 175	Records Management	3
HC 130	Medical Computerized Office Applications	2	BUS 241	Advanced Computer Applications for Business <i>online</i>	3
HC 135	Medical Law & Ethics	2	HC 145	Electronic Health Records	2
HC 213	Medical Terminology I	3	MDS 212	Healthcare Fundamentals and Reimbursement	3
PSYC 101	General Psychology <i>or</i>	3	MATH 100	Elementary Algebra <i>or</i>	3
PSYC 103	Human Relations in the Workplace		MATH 112	Business Mathematics	
<b>Total Credit Hours</b>		<b>16</b>	<b>Total Credit Hours</b>		<b>17</b>

# **HVAC/REFRIGERATION TECHNOLOGY**

## **Associate of Applied Science, 61-64 Credit Hours, 18-Month Program**

The Heating, Ventilating, Air-Conditioning/Refrigeration (HVAC/R) program prepares students with the necessary skills to be successful in the career field. Students will take coursework in theory, HVAC electrical applications, installation practices, low, medium, and high temperature commercial refrigeration and other technical skills.

The HVAC graduate will be able to work on residential heating, air conditioning, heat pump, low, medium, and high temperature commercial refrigeration systems. Install, troubleshoot, and repair equipment using copper tubing, PVC, and other accepted materials. The graduate will install a wide range of gas and electric forced-air furnaces. Students will install, troubleshoot, test, and repair electrical components on heating, air conditioning, heat pump and refrigeration systems. Learn to troubleshoot and repair various types of commercial ice machines, water coolers and common domestic and commercial HVAC/R appliances. They will be introduced to commercial air conditioning, chilled water, hydronic heating, and numerous unique refrigeration systems found in the HVAC/R industry. Students will study indoor air quality, air distribution and balancing methods used in the field. In addition, basic Direct Digital Controls (DDC) and electronic control circuits will be explored. Many of the theory lessons will be applied in lab settings and scenarios commonly found in the HVAC/R field. This program also will provide education and training in soft skills such as communication and math.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON	202	PRINCIPLES OF MACROECONOMICS	3
ENGL	101	COMPOSITION* <i>or</i>	3
ENGL	201	TECHNICAL WRITING I*	
MATH	100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
MATH	104	TECHNICAL MATHEMATICS** <i>or higher</i>	3
PSYC	101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	
<b>Total</b>			<b>18</b>
<b>Technical Requirements</b>			
HVAC	121	ELECTRICAL APPLICATIONS FOR HVAC I	4
HVAC	125	HVAC INSTALLATION I	3
HVAC	126	HVAC INSTALLATION I LAB	4
HVAC	135	ELECTRICAL APPLICATIONS FOR HVAC II	3
HVAC	145	HVAC INSTALLATION II	3
HVAC	146	HVAC INSTALLATION II LAB	4
HVAC	220	HVAC/R I	3
HVAC	221	HVAC/R I LAB	4
HVAC	225	ELECTRICAL APPLICATIONS FOR HVAC/R III	3
HVAC	230	HVAC/R II	3
HVAC	231	HVAC/R II LAB	4
HVAC	235	ELECTRICAL APPLICATIONS FOR HVAC/R IV	3
HVAC	240	SPECIALIZED HVAC/R EQUIPMENT	2
INT	299	INTERNSHIP (OPTIONAL)	3
<b>Total</b>			<b>43-46</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

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**Semester breakdown on next page**

## Semester Breakdown

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
HVAC 121	Electrical Applications for HVAC I	4	HVAC 135	Electrical Applications for HVAC II	3
HVAC 125	HVAC Installation I	3	HVAC 145	HVAC Installation II	3
HVAC 126	HVAC Installation I Lab	4	HVAC 146	HVAC Installation II Lab	4
CIS 105	Microcomputer Software Applications I	3	MATH 100	Elementary Algebra <i>or higher</i>	3
MATH 104	Technical Mathematics <i>or higher</i>	3			
<b>Total Credit Hours</b>		<b>17</b>	<b>Total Credit Hours</b>		<b>13</b>
<b>Third Semester</b>			<b>Fourth Semester</b>		
		<b>CR</b>			<b>CR</b>
HVAC 220	HVAC/R I	3	HVAC 230	HVAC/R II	3
HVAC 221	HVAC/R I Lab	4	HVAC 231	HVAC/R II Lab	4
HVAC 225	Electrical Applications for HVAC/R III	3	HVAC 235	Electrical Applications for HVAC/R IV	3
ENGL 101	Composition <i>or</i>	3	HVAC 240	Specialized HVAC/R Equipment	2
ENGL 201	Technical Writing I		INT 299	Internship <i>optional</i>	3
PSYC 101	General Psychology <i>or</i>	3	ECON 202	Principles of Macroeconomics	3
PSYC 103	Human Relations in the Workplace				
<b>Total Credit Hours</b>		<b>16</b>	<b>Total Credit Hours</b>		<b>15-18</b>

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# LIBRARY TECHNICIAN

## Associate of Applied Science, 63 Credit Hours, 18-Month Program

The primary objective of the Library Technician program is to prepare students with the necessary skills to work in a supportive capacity to librarians and patrons. The aim of this program is to provide a solid foundation in core library technical skills, and provide students with the skills and knowledge of new trends in technology including gaining the skills to manage library software. Through their education and experience in this program, students will learn how to catalogue, maintain, and retrieve print, digital, and audiovisual resources, and specialized media. They will also be introduced to research strategies for library catalogues, databases, and the Internet and learn skills in website development. In addition, this program will provide education and training in soft skills such as communication, teamwork, and interpersonal skills.

The Library Technician program is designed for students who are interested in working in a library and assisting patrons, supporting librarians, maintaining library databases, cataloguing and researching materials, and serving as a team member in a library setting. Library technicians are employed in settings such as public libraries, higher education libraries, K-12 libraries, and special libraries such as medical, law, corporate, and government facilities.

Course No.	Course Title	Credits
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ECON 202	PRINCIPLES OF MACROECONOMICS <i>or</i>	3
SOC 100	INTRODUCTION TO SOCIOLOGY	
ENGL 101	COMPOSITION*	3
MATH 100	ELEMENTARY ALGEBRA** <i>or higher or</i>	3
MATH 112	BUSINESS MATHEMATICS**	
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
	<b>Total</b>	<b>15</b>
<b>Technical Requirements</b>		
BUS 120	PRINCIPLES OF MARKETING	3
BUS 158	WEB DESIGN FOR BUSINESS	3
BUS 210	SUPERVISORY MANAGEMENT	3
BUS 218	DESIGN ESSENTIALS	3
LIBR 100	INTRODUCTION TO LIBRARY SERVICES	3
LIBR 102	INTRODUCTION TO LIBRARY CIRCULATION AND CUSTOMER SERVICE	3
LIBR 104	PUBLIC SERVICES FOR LIBRARY TECHNICIANS	3
LIBR 122	CHILDREN'S AND YOUNG ADULT LITERATURE	3
LIBR 125	LIBRARY OUTREACH FOR DIVERSE POPULATIONS	3
LIBR 200	INTRODUCTION TO TECHNICAL SERVICES: ACQUISITIONS, SERIALS, AND PROCESSING	3
LIBR 202	CONTENT CREATION AND MOBILE LIBRARY SERVICES	3
LIBR 204	SELECTION AND ACCESS RESOURCES	3
LIBR 220	INTRODUCTION TO CATALOGING AND CLASSIFICATION	3
LIBR 222	REFERENCE RESOURCES	3
LIBR 224	TECHNOLOGY INFORMATION RESOURCES AND ONLINE SOCIAL NETWORKING	3
LIBR 299	INTERNSHIP <i>or</i>	3
BUS 241	ADVANCED COMPUTER APPLICATIONS FOR BUSINESS	
	<b>Total</b>	<b>48</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

Semester breakdown on next page

WDT - 50  
2017-2018

## Semester Breakdown

First Semester			Second Semester		
		CR			CR
LIBR 100	Introduction to Library Services	3	LIBR 104	Public Services for Library Technicians	3
LIBR 102	Introduction to Library Circulation and Customer Service	3	LIBR 125	Library Outreach for Diverse Populations	3
ENGL 101	Composition	3	LIBR 122	Children's and Young Adult Literature	3
CIS 105	Microcomputer Software Applications I	3	BUS 158	Web Design for Business	3
MATH 100	Elementary Algebra <i>or higher or</i>	3	PSYC 101	General Psychology <i>or</i>	3
MATH 112	Business Mathematics		PSYC 103	Human Relations in the Workplace	
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>
Third Semester			Fourth Semester		
		CR			CR
LIBR 200	Introduction to Technical Services: Acquisitions, Serials, and Processing	3	LIBR 220	Introduction to Cataloging and Classification	3
LIBR 202	Content Creation and Mobile Library Services	3	LIBR 222	Reference Resources	3
LIBR 204	Selection and Access Resources	3	LIBR 224	Technology Information Resources & Online Social Networking	3
BUS 210	Supervisory Management	3	LIBR 299	Internship <i>or</i>	3
BUS 218	Design Essentials	3	BUS 241	Computer Applications for Business	3
ECON 202	Principles of Macroeconomics <i>or</i>	3	BUS 120	Principles of Marketing	3
SOC 100	Introduction to Sociology				
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>15</b>

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## LIBRARY TECHNICIAN

### Diploma, 30 Credit Hours, 9-Month Program

The primary objective of the Library Technician program is to prepare students with the necessary skills to work in a supportive capacity to librarians and patrons. The aim of this program is to provide a solid foundation in core library technical skills, and provide students with the skills and knowledge of new trends in technology including gaining the skills to manage library software. Through their education and experience in this program, students will learn how to catalogue, maintain, and retrieve print, digital, and audiovisual resources, and specialized media. They will also be introduced to research strategies for library catalogues, databases, and the Internet and learn skills in website development. In addition, this program will provide education and training in soft skills such as communication, teamwork, and interpersonal skills.

The Library Technician program is designed for students who are interested in working in a library and assisting patrons, supporting librarians, maintaining library databases, cataloguing and researching materials, and serving as a team member in a library setting. Library technicians are employed in settings such as public libraries, higher education libraries, K-12 libraries, and special libraries such as medical, law, corporate, and government facilities.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	101	COMPOSITION*	3
MATH	100	ELEMENTARY ALGEBRA <i>or higher or</i>	3
MATH	112	BUSINESS MATHEMATICS**	
PSYC	101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	
<b>Total</b>			<b>12</b>
<b>Technical Requirements</b>			
BUS	158	WEB DESIGN FOR BUSINESS	3
LIBR	100	INTRODUCTION TO LIBRARY SERVICES	3
LIBR	102	INTRODUCTION TO LIBRARY CIRCULATION AND CUSTOMER SERVICE	3
LIBR	104	PUBLIC SERVICES FOR LIBRARY TECHNICIANS	3
LIBR	125	LIBRARY OUTREACH FOR DIVERSE POPULATIONS	3
LIBR	122	CHILDREN'S AND YOUNG ADULT LITERATURE	3
<b>Total</b>			<b>18</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

### Semester Breakdown Diploma

First Semester			Second Semester		
		CR			CR
LIBR 100	Introduction to Library Services	3	LIBR 104	Public Services for Library Technicians	3
LIBR 102	Introduction to Library Circulation and Customer Service	3	LIBR 125	Library Outreach for Diverse Populations	3
ENGL 101	Composition	3	LIBR 122	Children's and Young Adult Literature	3
CIS 105	Microcomputer Software Applications I	3	BUS 158	Web Design for Business	3
MATH 100	Elementary Algebra <i>or higher or</i>	3	PSYC 101	General Psychology <i>or</i>	3
MATH 112	Business Mathematics		PSYC 103	Human Relations in the Workplace	
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

## **MEDICAL ASSISTING**

### **Certificate, 30 Credit Hours, 9-Month Program**

The Medical Assisting program prepares students for a variety of careers in the medical profession. A Medical Assistant is a professional, multi-skilled person who assists in all aspects of medical care and is primarily employed in a medical office setting. Medical Assistants help physicians with patient care management. They also execute administrative and clinical procedures and perform managerial functions.

Administrative duties may include using computer applications, answering telephones, greeting patients, updating and filing patient medical records, coding and filling out insurance forms, scheduling appointments, arranging for hospital admissions and laboratory services, and handling correspondence, billing, and bookkeeping in a medical office setting.

Clinical duties may include taking medical histories, taking vital signs, explaining treatment procedures to patients, preparing patient for examination, assisting the physician during the exam, collecting and preparing laboratory specimens, performing basic laboratory tests, instructing patients about medication and special diets, preparing and administering medications as directed by a physician, and taking electrocardiograms. Medical Assisting is a rapidly growing and expanding career.

<b>Course No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
	<b>Total</b>	<b>3</b>
<b>Technical Requirements</b>		
HC 114	ANATOMY AND PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC 135	MEDICAL LAW AND ETHICS	2
HC 200	PHARMACOLOGY FOR HEALTHCARE	3
HC 205	PROFESSIONALISM IN HEALTHCARE	1
HC 213	MEDICAL TERMINOLOGY I	3
HC 225	PATHOPHYSIOLOGY	3
MA 210	MEDICAL ASSISTING I	3
MA 214	MEDICAL ASSISTING I CLINICAL	1
MA 250	MEDICAL ASSISTING II	3
MA 253	MEDICAL ASSISTING II LAB & CLINICAL	5
	<b>Total</b>	<b>27</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

**Semester breakdown on next page**

## Semester Breakdown

First Semester			Second Semester		
		CR			CR
CIS 105	Microcomputer Software Applications I	3	HC 200	Pharmacology for Healthcare	3
HC 114	Anatomy & Physiology for the Health Professions	3	HC 205	Professionalism in Healthcare	1
HC 135	Medical Law and Ethics	2	HC 225	Pathophysiology	3
HC 213	Medical Terminology I	3	MA 250	Medical Assisting II	3
MA 210	Medical Assisting I	3	MA 253	Medical Assisting II Lab & Clinical	5
MA 214	Medical Assisting I Clinical	1			
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

## MEDICAL ASSISTING

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### Diploma, 39 Credit Hours, 12-Month Program

The Medical Assisting program prepares students for a variety of careers in the medical profession. A Medical Assistant is a professional, multi-skilled person who assists in all aspects of medical care and is primarily employed in a medical office setting. Medical Assistants help physicians with patient care management. They also execute administrative and clinical procedures and perform managerial functions.

Administrative duties may include using computer applications, answering telephones, greeting patients, updating and filing patient medical records, coding and filling out insurance forms, scheduling appointments, arranging for hospital admissions and laboratory services, and handling correspondence, billing, and bookkeeping in a medical office setting.

Clinical duties may include taking medical histories, taking vital signs, explaining treatment procedures to patients, preparing patient for examination, assisting the physician during the exam, collecting and preparing laboratory specimens, performing basic laboratory tests, instructing patients about medication and special diets, preparing and administering medications as directed by a physician, and taking electrocardiograms. Medical Assisting is a rapidly growing and expanding career.

The Medical Assisting diploma enhances the skills a student obtains in the Medical Assisting certificate. In addition to medical office skills and skills to assist physicians with patient care management, students will expand their knowledge in English, mathematics, and psychology. These additional courses promote and advance essential knowledge, skills, and values students need to advance in a competitive workforce. Since the exact duties a Medical Assistant performs are unique to the setting in which she or he is employed, an enhanced skill set can only expand the possibilities for their career in the medical profession.

Course No.	Course Title	Credits
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION* or	3
ENGL 201	TECHNICAL WRITING	
MATH 100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
<b>Total</b>		<b>12</b>
<b>Technical Requirements</b>		
HC 114	ANATOMY AND PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC 135	MEDICAL LAW AND ETHICS	2
HC 200	PHARMACOLOGY FOR HEALTHCARE	3
HC 205	PROFESSIONALISM IN HEALTHCARE	1
HC 213	MEDICAL TERMINOLOGY I	3
HC 225	PATHOPHYSIOLOGY	3
MA 210	MEDICAL ASSISTING I	3
MA 214	MEDICAL ASSISTING I CLINICAL	1
MA 250	MEDICAL ASSISTING II	3
MA 253	MEDICAL ASSISTING II LAB & CLINICAL	5
<b>Total</b>		<b>27</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

**Semester breakdown on next page**

## Semester Breakdown

First Semester			Second Semester		
		CR			CR
CIS 105	Microcomputer Software Applications I	3	HC 200	Pharmacology for Healthcare	3
HC 114	Anatomy & Physiology for the Health Professions	3	HC 205	Professionalism in Healthcare	1
HC 135	Medical Law and Ethics	2	HC 225	Pathophysiology	3
HC 213	Medical Terminology I	3	MA 250	Medical Assisting II	3
MA 210	Medical Assisting I	3	MA 253	Medical Assisting II Lab & Clinical	5
MA 214	Medical Assisting I Clinical	1			
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>
Third Semester					
		CR			
ENGL 101	Composition <i>or</i>	3			
ENGL 201	Technical Writing				
MATH 100	Elementary Algebra <i>or higher</i>	3			
PSYC 101	General Psychology <i>or</i>	3			
PSYC 103	Human Relations in the Workplace				
<b>Total Credit Hours</b>		<b>9</b>			

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

## **MEDICAL LABORATORY TECHNICIAN**

Associate of Applied Science, 68 Credit Hours, 18-Month Program

The goal of the Medical Laboratory Technician Program at Western Dakota Tech is to educate and train students with a wide range of academic and clinical skills in order to gain employment as competent, entry-level Medical Laboratory Technicians. Students graduating from the MLT Program at WDT will possess psychomotor, cognitive, and affective skills necessary to sustain professional employment in a variety of clinical settings.

Medical Laboratory Technicians collect, process, and analyze blood, biological specimens, and other substances for laboratory analysis. They perform low-and high-complexity analytical testing of cells and body fluids, perform and monitor quality control within predetermined limits, relate laboratory findings to common disease processes, recognize factors that affect procedures and results, apply basic scientific principles in learning new techniques, and perform preventative maintenance on equipment and instruments. Medical laboratory technicians adhere to principles of safety and infection control and maintain continuing education as a function of growth and development in their profession. They play a vital role in the healthcare system by recognizing the responsibilities of other laboratory and health care personnel.

Medical laboratory technicians are employed in hospitals, medical clinics, physician offices, medical and industrial laboratories, blood bank centers, and public health facilities. Upon successful completion of the MLT Program and clinical rotations, students will sit for the American Society of Clinical Pathologists (ASCP) Board of Certification exam. Students entering this profession will find excellent employment opportunities.

<b>Course No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>		
CHEM 106	CHEMISTRY SURVEY	3
CHEM 106L	CHEMISTRY SURVEY LAB	1
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION* <i>or</i>	3
ENGL 201	TECHNICAL WRITING I*	
MATH 101	INTERMEDIATE ALGEBRA** <i>or higher</i>	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
SOC 100	INTRODUCTION TO SOCIOLOGY	3
	<b>Total</b>	<b>19</b>
<b>Technical Requirements</b>		
HC 114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC 213	MEDICAL TERMINOLOGY I	3
MLT 205	IMMUNOLOGY	3
MLT 210	CLINICAL CHEMISTRY	4
MLT 215	IMMUNOHEMATOLOGY	4
MLT 220	URINALYSIS/BODY FLUIDS	3
MLT 230	HEMATOLOGY/COAGULATION	4
MLT 240	CLINICAL MICROBIOLOGY/ PARASITOLOGY/MYCOLOGY	4
MLT 275	MEDICAL LABORATORY TECHNICIAN CLINICAL	12
MLT 280	MEDICAL LABORATORY TECHNICIAN CERTIFICATION REVIEW <i>online</i>	1
PH 103	PHLEBOTOMY PRINCIPLES AND PRACTICES	3
PH 105	LABORATORY ASSISTANT TECHNIQUES LAB	1
PH 125	PHLEBOTOMY PRINCIPLES AND PRACTICES LAB	2
PH 126	LABORATORY ASSISTANT TECHNIQUES	2
	<b>Total</b>	<b>49</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

Clinicals, practicums, and internships may include, but are not limited to differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. Clinicals may occur during summer semester depending on program enrollments. This may require travel outside the Rapid City area.

**Semester breakdown on next page**

## Semester Breakdown

First Semester			Second Semester		
		CR			CR
HC 114	Anatomy & Physiology for the Health Professions	3	MLT 210	Clinical Chemistry	4
HC 213	Medical Terminology I	3	MLT 215	Immunochemistry	4
MLT 205	Immunology	3	PH 105	Laboratory Assistant Techniques Lab	1
PH 103	Phlebotomy Principles and Practices	3	PH 126	Laboratory Assistant Techniques	2
PH 125	Phlebotomy Principles and Practices Lab	2	CHEM 106	Chemistry Survey	3
MATH 101	Intermediate Algebra <i>or higher</i>	3	CHEM 106L	Chemistry Survey Lab	1
			CIS 105	Microcomputer Software Applications I	3
<b>Total Credit Hours</b>		<b>17</b>	<b>Total Credit Hours</b>		<b>18</b>
Third Semester			Fourth Semester		
		CR			CR
MLT 220	Urinalysis/Body Fluids	3	MLT 275	Medical Laboratory Technician Clinical	12
MLT 230	Hematology/Coagulation	4	MLT 280	Medical Laboratory Technician Certification Review <i>online</i>	1
MLT 240	Clinical Microbiology/Parasitology/Mycology	4	SOC 100	Introduction to Sociology <i>online</i>	3
ENGL 101	Composition <i>or</i>	3			
ENGL 201	Technical Writing I				
PSYC 101	General Psychology <i>or</i>	3			
PSYC 103	Human Relations in the Workplace				
<b>Total Credit Hours</b>		<b>17</b>	<b>Total Credit Hours</b>		<b>16</b>

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

## PARAMEDIC

### Associate of Applied Science, 63 Credit Hours, 21-Month Program\*\*\*

Extraordinary circumstances call for extraordinary people to take the first step to lead others to safety. The Paramedic program at Western Dakota Tech produces this caliber of individual. The select few that answer the calling to help others will experience over one thousand hours of training here at Western Dakota Tech, and that training entails didactic experience and a vigorous and stringent clinical program that will produce a pre-hospital caregiver that will meet the demands of society.

Delivering high caliber medical care is taught to our students by instructors with years of experience providing pre-hospital care. Beyond paramedicine, emphasis is also placed on critical thinking skills, written and oral communication, and basic concepts in biology, mathematics, psychology, and sociology.

At the end of the paramedic program the successful candidate will have the following: American Heart Association (AHA) – Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS); National Association of Emergency Medical Technicians (NAEMT) – Pre-Hospital Trauma Life Support (PHTLS) as well as Advanced Medical Life Support (AMLS). These courses aid in the successful candidate’s approach to the national certification exam that will allow them to obtain the title of Paramedic.

Course No.	Course Title	Credits
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION* <i>or</i>	3
ENGL 201	TECHNICAL WRITING I*	
MATH 101	INTERMEDIATE ALGEBRA** <i>or higher</i>	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
SOC 100	INTRODUCTION TO SOCIOLOGY	3
	<b>Total</b>	<b>15</b>
<b>Technical Requirements</b>		
EMS 101	EMERGENCY MEDICAL TECHNICIAN	6
EMS 210	PARAMEDIC CARDIOLOGY	4
EMS 215	PARAMEDIC PREPARATORY I	4
EMS 220	PARAMEDIC MEDICAL	4
EMS 225	PARAMEDIC PREPARATORY II	4
EMS 230	PARAMEDIC SPECIAL OPERATIONS	2
EMS 250	PARAMEDIC CLINICAL I	2
EMS 255	PARAMEDIC CLINICAL II	4
EMS 275	PARAMEDIC INTERNSHIP	10
EMS 280	NREMT PREP	2
HC 114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC 213	MEDICAL TERMINOLOGY I	3
	<b>Total</b>	<b>48</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

\*\*\*Students must successfully complete the program to sit for the National Registry Exam to become a Licensed Paramedic.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

Students may be subject to a background check for the South Dakota Medical and Osteopathic Examiners in order to receive the required “student status.” Student status is required to complete the clinical portions and some of the lab activities in the Paramedic program.

If you are not a resident in the state of South Dakota, please be aware that licensing requirements vary from state to state. It is your responsibility to determine if your Paramedic testing results and status are valid in your state of residence, or the state in which you plan to practice as a Paramedic.

**Semester breakdown on next page**

## Semester Breakdown

<b>First Semester</b>			<b>CR</b>	<b>Second Semester</b>			<b>CR</b>
EMS 101	Emergency Medical Technician	6		HC 114	Anatomy & Physiology for the Health Professions	3	
HC 213	Medical Terminology I	3		MATH 101	Intermediate Algebra <i>or higher</i>	3	
ENGL 101	Composition <i>or</i>	3		PSYC 101	General Psychology <i>or</i>	3	
ENGL 201	Technical Writing I			PSYC 103	Human Relations in the Workplace		
CIS 105	Microcomputer Software Applications I	3		SOC 100	Introduction to Sociology	3	
<b>Total Credit Hours</b>			<b>15</b>	<b>Total Credit Hours</b>			<b>12</b>
<b>Third Semester</b>			<b>CR</b>	<b>Fourth Semester</b>			<b>CR</b>
EMS 210	Paramedic Cardiology	4		EMS 225	Paramedic Preparatory II	4	
EMS 215	Paramedic Preparatory I	4		EMS 230	Paramedic Special Operations	2	
EMS 220	Paramedic Medical	4		EMS 250	Paramedic Clinical I	2	
				EMS 255	Paramedic Clinical II	4	
<b>Total Credit Hours</b>			<b>12</b>	<b>Total Credit Hours</b>			<b>12</b>
<b>Fifth Semester</b>			<b>CR</b>				
EMS 275	Paramedic Internship	10					
EMS 280	NREMT Prep	2					
<b>Total Credit Hours</b>			<b>12</b>				

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## **PARAMEDIC**

### **Certificate, 42 Credit Hours, 18-Month Program\***

The Paramedic certificate at Western Dakota Tech is available to participants that are currently certified and/or licensed as Emergency Medical Technicians at the state or national level. The Paramedic certificate student will experience over one thousand hours of training that entails didactic experience and a vigorous and stringent clinical program that will produce a pre-hospital caregiver that will meet the demands of society.

At the end of the paramedic certificate training and education the successful candidate will have the following: American Heart Association (AHA) – Advanced Cardiac Life Support (ACLS) and Pediatric Advanced Life Support (PALS); National Association of Emergency Medical Technicians (NAEMT) – Pre-Hospital Trauma Life Support (PHTLS) as well as Advanced Medical Life Support (AMLS). These courses aid in the successful candidate’s approach to the national certification exam that will allow them to obtain the title of Paramedic.

<b>Course No.</b>	<b>Course Title</b>	<b>Credits</b>
	<b>Technical Requirements</b>	
EMS 210	PARAMEDIC CARDIOLOGY	4
EMS 215	PARAMEDIC PREPARATORY I	4
EMS 225	PARAMEDIC PREPARATORY II	4
EMS 220	PARAMEDIC MEDICAL	4
EMS 230	PARAMEDIC SPECIAL OPERATIONS	2
EMS 250	PARAMEDIC CLINICAL I	2
EMS 255	PARAMEDIC CLINICAL II	4
EMS 275	PARAMEDIC INTERNSHIP	10
EMS 280	NREMT PREP	2
HC 114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS**	3
HC 213	MEDICAL TERMINOLOGY I**	3
	<b>Total</b>	<b>42</b>

\*Students must successfully complete the certificate requirements to sit for the National Registry Exam to become a Licensed Paramedic.

\*\*Students must have an approved 3 credit Anatomy & Physiology and 3 credit Medical Terminology course through an accredited post-secondary institute before advancing into EMS courses.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

Students may be subject to a background check for the South Dakota Medical and Osteopathic Examiners in order to receive the required “student status.” Student status is required to complete the clinical portions and some of the lab activities in the Paramedic program.

If you are not a resident in the state of South Dakota, please be aware that licensing requirements vary from state to state. It is your responsibility to determine if your Paramedic testing results and status are valid in your state of residence, or the state in which you plan to practice as a Paramedic.

**Semester breakdown on next page**

## Certificate Requirements

			<b>First Semester</b>		<b>CR</b>
			EMS 210	Paramedic Cardiology	4
			EMS 215	Paramedic Preparatory I	4
			EMS 220	Paramedic Medical	4
			<b>Total Credit Hours</b>		<b>12</b>
			<b>Second Semester</b>		<b>CR</b>
EMS 225	Paramedic Preparatory II	4			
EMS 230	Paramedic Special Operations	2			
EMS 250	Paramedic Clinical I	2			
EMS 255	Paramedic Clinical II	4			
<b>Total Credit Hours</b>		<b>12</b>			
			<b>Third Semester</b>		<b>CR</b>
			EMS 275	Paramedic Internship	10
			EMS 280	NREMT Prep	2
			<b>Total Credit Hours</b>		<b>12</b>

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## PHARMACY TECHNICIAN

### Associate of Applied Science, 69 Credit Hours, 20-Month Program

The goal of the Pharmacy Technician program at WDT is to educate and train students for positions in hospitals, retail pharmacies, and other medical facilities working as pharmacy technicians assisting registered pharmacists in all aspects of pharmaceutical care.

Pharmacy Technicians fill orders for unit doses and prepackaged pharmaceuticals and perform other related duties under the supervision and direction of a pharmacy supervisor or staff pharmacist. Pharmacy Technician duties include processing new orders and prescriptions, IV preparation, ordering, inventory, customer service, insurance billing, record retention, compounding, and storing incoming merchandise in proper locations. Technicians may also clean equipment used in the performance of duties and assist in the care and maintenance of equipment and supplies. People entering this field will find excellent employment opportunities.

Course No.	Course Title	Credits
<b>General Education Requirements</b>		
CHEM 106	CHEMISTRY SURVEY	3
CHEM 106L	CHEMISTRY SURVEY LAB	1
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION* <i>or</i>	3
ENGL 201	TECHNICAL WRITING I*	
ENGL 202	TECHNICAL COMMUNICATIONS	3
MATH 100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
MATH 101	INTERMEDIATE ALGEBRA*** <i>or higher</i>	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
SOC 100	INTRODUCTION TO SOCIOLOGY	3
SPCM 101	FUNDAMENTALS OF SPEECH	3
	<b>Total</b>	<b>28</b>
<b>Technical Requirements</b>		
HC 114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC 205	PROFESSIONALISM IN HEALTHCARE	1
HC 213	MEDICAL TERMINOLOGY I	3
PHR 110	PHARMACOLOGY/PHARMACEUTICAL PRODUCTS I	3
PHR 111	PHARMACY I	3
PHR 113	PHARMACY OPERATIONS LAB	2
PHR 121	PHARMACOLOGY/PHARMACEUTICAL PRODUCTS II	3
PHR 122	PHARMACY LAW & ETHICS	2
PHR 127	PHARMACY CALCULATIONS	2
PHR 129	PHARMACY II	2
PHR 130	PHARMACY PRACTICAL LAB	1
PHR 131	CLINICAL ROTATIONS	8
PHR 200	RX ABBREVIATIONS/SIG DECODING <i>online</i>	2
PHR 205	PHARMACOKINETICS/PHARMACODYNAMICS <i>online</i>	3
PHR 210	U.S. HEALTHCARE AND MEDICAL INSURANCE <i>online</i>	3
	<b>Total</b>	<b>41</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

\*\*\*Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

Semester breakdown on next page

## Semester Breakdown AAS

First Semester			Second Semester		
		CR			CR
HC 114	Anatomy & Physiology for the Health Professions	3	PHR 121	Pharmacology/Pharmaceutical Products II	3
HC 213	Medical Terminology I	3	PHR 122	Pharmacy Law & Ethics	2
PHR 110	Pharmacology/Pharmaceutical Products I	3	PHR 127	Pharmacy Calculations	2
PHR 111	Pharmacy I	3	PHR 129	Pharmacy II	2
PHR 113	Pharmacy Operations Lab	2	PHR 130	Pharmacy Practical Lab	1
MATH 100	Elementary Algebra <i>or higher</i>	3	CIS 105	Microcomputer Software Applications I	3
			PSYC 101	General Psychology <i>or</i>	3
			PSYC 103	Human Relations in the Workplace	
<b>Total Credit Hours</b>			<b>Total Credit Hours</b>		
<b>17</b>			<b>16</b>		
Third Semester (Summer)					
		CR			
PHR 131	Clinical Rotations	8			
<b>Total Credit Hours</b>					
<b>8</b>					
Fourth Semester			Fifth Semester		
		CR			CR
PHR 200	Rx Abbreviations/Sig Decoding <i>online</i>	2	HC 205	Professionalism in Healthcare	1
ENGL 101	Composition <i>or</i>	3	PHR 205	Pharmacokinetics/ Pharmacodynamics <i>online</i>	3
ENGL 201	Technical Writing I		PHR 210	U.S. Healthcare & Medical Insurance <i>online</i>	3
SPCM 101	Fundamentals of Speech	3	CHEM 106	Chemistry Survey	3
MATH 101	Intermediate Algebra <i>or higher</i>	3	CHEM 106L	Chemistry Survey Lab	1
SOC 100	Introduction to Sociology	3	ENGL 202	Technical Communications	3
<b>Total Credit Hours</b>			<b>Total Credit Hours</b>		
<b>14</b>			<b>14</b>		

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

## PHARMACY TECHNICIAN

### Diploma, 43 Credit Hours, 11-Month Program

The goal of the Pharmacy Technician program at WDT is to educate and train students for positions in hospitals, retail pharmacies, and other medical facilities working as pharmacy technicians assisting registered pharmacists in all aspects of pharmaceutical care.

Pharmacy Technicians fill orders for unit doses and prepackaged pharmaceuticals and perform other related duties under the supervision and direction of a pharmacy supervisor or staff pharmacist. Pharmacy Technician duties include processing new orders and prescriptions, IV preparation, ordering, inventory, customer service, insurance billing, record retention, compounding, and storing incoming merchandise in proper locations. Technicians may also clean equipment used in the performance of duties and assist in the care and maintenance of equipment and supplies. People entering this field will find excellent employment opportunities.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	102	CAREER COMMUNICATIONS	2
MATH	100	ELEMENTARY ALGEBRA* <i>or higher</i>	3
PSYC	101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	
		<b>Total</b>	<b>11</b>
<b>Technical Requirements</b>			
HC	114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC	213	MEDICAL TERMINOLOGY I	3
PHR	110	PHARMACOLOGY/PHARMACEUTICAL PRODUCTS I	3
PHR	111	PHARMACY I	3
PHR	113	PHARMACY OPERATIONS LAB	2
PHR	121	PHARMACOLOGY/PHARMACEUTICAL PRODUCTS II	3
PHR	122	PHARMACY LAW & ETHICS	2
PHR	127	PHARMACY CALCULATIONS	2
PHR	129	PHARMACY II	2
PHR	130	PHARMACY PRACTICAL LAB	1
PHR	131	CLINICAL ROTATIONS	8
		<b>Total</b>	<b>32</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

Semester breakdown on next page

## Semester Breakdown Diploma

First Semester			Second Semester		
		CR			CR
HC 114	Anatomy & Physiology for the Health Professions	3	PHR 121	Pharmacology/Pharmaceutical Products II	3
HC 213	Medical Terminology I	3	PHR 122	Pharmacy Law & Ethics	2
PHR 110	Pharmacology/Pharmaceutical Products I	3	PHR 127	Pharmacy Calculations	2
PHR 111	Pharmacy I	3	PHR 129	Pharmacy II	2
PHR 113	Pharmacy Operations Lab	2	PHR 130	Pharmacy Practical Lab	1
MATH 100	Elementary Algebra <i>or higher</i>	3	CIS 105	Microcomputer Software Applications I	3
			ENGL 102	Career Communications	2
			PSYC 101	General Psychology <i>or</i>	3
			PSYC 103	Human Relations in the Workplace	
<b>Total Credit Hours</b>		<b>17</b>	<b>Total Credit Hours</b>		<b>18</b>
Third Semester (Summer)					
		CR			
PHR 131	Clinical Rotations	8			
<b>Total Credit Hours</b>		<b>8</b>			

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**PHLEBOTOMY/LABORATORY ASSISTANT**  
**Diploma, 32 Credit Hours, 9-10 Month Program**

The Phlebotomy/Laboratory Assistant program prepares students for employment as entry-level phlebotomy technicians and clinical laboratory assistants.

Phlebotomists collect, transport, and process blood and other specimens for laboratory analysis. They identify and select equipment, supplies, and additives used in blood collection and understand factors that affect specimen collection procedures and test results. Recognizing the importance of specimen collection in the overall patient care system, phlebotomists adhere to infection control and safety policies and procedures. They monitor quality control within predetermined limits while demonstrating professional conduct, stress management, and communication skills with patients, peers, and other healthcare personnel as well as with the public.

Phlebotomists are employed in hospitals, physician offices and clinics, medical laboratories, and blood banks as blood procurement specialists.

Course No.	Course Title	Credits
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION* <i>or</i>	3
ENGL 201	TECHNICAL WRITING I*	
MATH 100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
	<b>Total</b>	<b>12</b>
<b>Technical Requirements</b>		
HC 114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC 135	MEDICAL LAW AND ETHICS	2
HC 205	PROFESSIONALISM IN HEALTHCARE	1
HC 213	MEDICAL TERMINOLOGY I	3
PH 103	PHLEBOTOMY PRINCIPLES AND PRACTICES	3
PH 105	LABORATORY ASSISTANT TECHNIQUES LAB	1
PH 125	PHLEBOTOMY PRINCIPLES AND PRACTICES LAB	2
PH 126	LABORATORY ASSISTANT TECHNIQUES	2
PH 160	PHLEBOTOMY/LABORATORY ASSISTANT CLINICALS	3
	<b>Total</b>	<b>20</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

Clinicals, practicums, and internships may include, but are not limited to differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. Clinicals may occur during summer semester depending on program enrollments. This may require travel outside the Rapid City area.

Semester breakdown on next page

## Semester Breakdown

First Semester			Second Semester		
		CR			CR
HC 114	Anatomy & Physiology for the Health Professions	3	HC 205	Professionalism in Healthcare	1
HC 135	Medical Law and Ethics	2	PH 105	Laboratory Assistant Techniques Lab	1
HC 213	Medical Terminology I	3	PH 126	Laboratory Assistant Techniques	2
PH 103	Phlebotomy Principles and Practices	3	PH 160	Phlebotomy/Laboratory Assistant Clinicals	3
PH 125	Phlebotomy Principles and Practices Lab	2	CIS 105	Microcomputer Software Applications I	3
MATH 100	Elementary Algebra <i>or higher</i>	3	ENGL 101	Composition <i>or</i>	3
			ENGL 201	Technical Writing I	
			PSYC 101	General Psychology <i>or</i>	3
			PSYC 103	Human Relations in the Workplace	
<b>Total Credit Hours</b>		<b>16</b>	<b>Total Credit Hours</b>		<b>16</b>

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## **PRACTICAL NURSING**

### **Diploma, 45 Credit Hours, 14-Month Program**

The mission of the Practical Nursing program is to provide graduates with the knowledge, skills, attitude, and integrity to provide safe, prudent, and patient-centered care necessary to prepare them to successfully complete the National Council Licensure Examination for Practical Nursing (NCLEX-PN) and become employed as a Licensed Practical Nurse.

Licensed Practical Nurses (LPN's) are an important member of the healthcare team, and, in many settings, including long-term care, medical offices and transitional care, their role has expanded to include IV therapy and supervision. The Practical Nursing program stresses the importance of incorporating a variety of experiences including lecture, lab, and clinical hours to ensure graduates have the knowledge, skills, and experiences needed to be successful after graduation.

Students considering the Practical Nursing program are required to fulfill additional requirements before entering technical program courses. Please refer to the Practical Nursing Application Process or contact the Practical Nursing Administrative Assistant.

<b>Course No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION* <i>or</i>	3
ENGL 201	TECHNICAL WRITING I*	
MATH 101	INTERMEDIATE ALGEBRA** <i>or higher</i>	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
HC 114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
	<b>Total</b>	<b>15</b>
<b>Technical Requirements</b>		
NRS 100	FUNDAMENTAL SKILLS LAB	1
NRS 105	FUNDAMENTAL NURSING PRACTICE I	3
NRS 110	FUNDAMENTAL NURSING PRACTICE II	2
NRS 115	FUNDAMENTAL NURSING PRACTICE III	2
NRS 121	FUNDAMENTAL NURSING CLINICAL I & II	4
NRS 130	FUNDAMENTAL NURSING CLINICAL III	1
NRS 135	TRANSITIONAL NURSING	2
NRS 200	ADVANCED SKILLS LAB	1
NRS 205	ADVANCED NURSING PRACTICE I	3
NRS 210	ADVANCED NURSING PRACTICE II	2
NRS 215	ADVANCED NURSING PRACTICE III	2
NRS 221	ADVANCED NURSING CLINICAL I & II	4
NRS 230	ADVANCED NURSING CLINICAL III	1
NRS 235	ADVANCED NURSING CLINICAL IV	2
	<b>Total</b>	<b>30</b>

\* Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\* Prerequisite: Acceptable ACCUPLACER score or Basic Math/Elementary Algebra.

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. This may require travel outside the Rapid City area.

**Semester breakdown on next page**

## Semester Breakdown for Option 1

<b>General Education Requirements must be completed before enrolling in NRS Technical Courses.</b> <b>Required General Education courses are offered in the Fall, Spring, and Summer Semesters.</b> <b>Students must hold a current CNA certification or receive a C or better in HC 124 and HC 126 before entering NRS Technical Courses.</b>				CR
CIS 105	Microcomputer Software Applications I			3
ENGL 101	Composition <i>or</i>			3
ENGL 201	Technical Writing I			
MATH 101	Intermediate Algebra <i>or higher</i>			3
PSYC 101	General Psychology <i>or</i>			3
PSYC 103	Human Relations in the Workplace			
HC 114	Anatomy & Physiology for the Health Professions			3
<b>Total Credit Hours</b>				<b>15</b>

  

<b>Fall Semester</b>		CR	<b>Spring Semester</b>		CR
NRS 100	Fundamental Skills Lab	1	NRS 200	Advanced Skills Lab	1
NRS 105	Fundamental Nursing Practice I	3	NRS 205	Advanced Nursing Practice I	3
NRS 110	Fundamental Nursing Practice II	2	NRS 210	Advanced Nursing Practice II	2
NRS 115	Fundamental Nursing Practice III	2	NRS 215	Advanced Nursing Practice III	2
NRS 121	Fundamental Nursing Clinical I & II	4	NRS 221	Advanced Nursing Clinical I & II	4
NRS 130	Fundamental Nursing Clinical III	1	NRS 230	Advanced Nursing Clinical III	1
NRS 135	Transitional Nursing	2	NRS 235	Advanced Nursing Clinical IV	2
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

## Semester Breakdown for Option 2

<b>General Education Requirements must be completed before enrolling in NRS Technical Courses.</b> <b>Required General Education courses are offered in the Fall, Spring, and Summer Semesters.</b> <b>Students must hold a current CNA certification or receive a C or better in HC 124 and HC 126 before entering NRS Technical Courses.</b>				CR
CIS 105	Microcomputer Software Applications I			3
ENGL 101	Composition <i>or</i>			3
ENGL 201	Technical Writing I			
MATH 101	Intermediate Algebra <i>or higher</i>			3
PSYC 101	General Psychology <i>or</i>			3
PSYC 103	Human Relations in the Workplace			
HC 114	Anatomy & Physiology for the Health Professions			3
<b>Total Credit Hours</b>				<b>15</b>

  

<b>Fall Semester</b>		CR	<b>Spring Semester</b>		CR
NRS 100	Fundamental Skills Lab	1	NRS 121	Fundamental Nursing Clinical I & II	4
NRS 105	Fundamental Nursing Practice I	3	NRS 130	Fundamental Nursing Clinical III	1
NRS 110	Fundamental Nursing Practice II	2	NRS 200	Advanced Skills Lab	1
NRS 115	Fundamental Nursing Practice III	2	NRS 205	Advanced Nursing Practice I	3
NRS 135	Transitional Nursing	2	NRS 210	Advanced Nursing Practice II	2
			NRS 215	Advanced Nursing Practice III	2
<b>Total Credit Hours</b>		<b>10</b>	<b>Total Credit Hours</b>		<b>13</b>

  

<b>Summer Semester</b>		CR
NRS 221	Advanced Nursing Clinical I & II	4
NRS 230	Advanced Nursing Clinical III	1
NRS 235	Advanced Nursing Clinical IV	2
<b>Total Credit Hours</b>		<b>7</b>

Semester breakdown on next page

### Semester Breakdown for Option 3

<b>General Education Requirements must be completed before enrolling in NRS Technical Courses.</b> <b>Required General Education courses are offered in the Fall, Spring, and Summer Semesters.</b> <b>Students must hold a current CNA certification or receive a C or better in HC 124 and HC 126 before entering NRS Technical Courses.</b>			<b>CR</b>
CIS 105	Microcomputer Software Applications I		3
ENGL 101	Composition <i>or</i>		3
ENGL 201	Technical Writing I		
MATH 101	Intermediate Algebra <i>or higher</i>		3
PSYC 101	General Psychology <i>or</i>		3
PSYC 103	Human Relations in the Workplace		
HC 114	Anatomy & Physiology for the Health Professions		3
<b>Total Credit Hours</b>			<b>15</b>

Spring Semester			CR	Summer Semester			CR
NRS 100	Fundamental Skills Lab		1	NRS 121	Fundamental Nursing Clinical I & II		4
NRS 105	Fundamental Nursing Practice I		3	NRS 130	Fundamental Nursing Clinical III		1
NRS 110	Fundamental Nursing Practice II		2	NRS 135	Transitional Nursing		2
NRS 115	Fundamental Nursing Practice III		2				
<b>Total Credit Hours</b>			<b>8</b>	<b>Total Credit Hours</b>			<b>7</b>

Fall Semester			CR
NRS 200	Advanced Skills Lab		1
NRS 205	Advanced Nursing Practice I		3
NRS 210	Advanced Nursing Practice II		2
NRS 215	Advanced Nursing Practice III		2
NRS 221	Advanced Nursing Clinical I & II		4
NRS 230	Advanced Nursing Clinical III		1
NRS 235	Advanced Nursing Clinical IV		2
<b>Total Credit Hours</b>			<b>15</b>

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## PRECISION MACHINING TECHNOLOGY

### Diploma, 36 Credit Hours, 9-Month Program

The Precision Machining Technology graduate will be able to set up and operate a variety of machine tools to produce precision metal parts, instruments, and tools. Machinists use machine tools, such as lathes, milling machines, and grinders, to produce precision metal parts. Although they may produce large quantities of one part, precision machinists often produce small batches or one-of-a-kind items. The parts that machinists make range from simple bolts of steel or brass to titanium bone screws for orthopedic implants. Hydraulic parts, anti-lock brakes and automobile pistons are other widely known products that machinists make.

Course No.	Course Title	Credits
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 201	TECHNICAL WRITING I*	3
MATH 100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	3
<b>Total</b>		<b>12</b>
<b>Technical Requirements</b>		
MACH 110	MACHINE SHOP OPERATIONS	3
MACH 115	TURNING THEORY AND OPERATIONS I	3
MACH 120	MILLING THEORY AND OPERATIONS I	3
MACH 125	MECHANICAL BLUEPRINT READING	3
MACH 130	MATERIALS APPLICATIONS	3
MACH 135	TURNING THEORY AND OPERATIONS II	3
MACH 140	MILLING THEORY AND OPERATIONS II	3
MACH 145	APPLIED COMPUTER AIDED DRAFTING FUNDAMENTALS	3
<b>Total</b>		<b>24</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

### Semester Breakdown

First Semester			Second Semester		
		CR			CR
MACH 110	Machine Shop Operations	3	MACH 130	Materials Applications	3
MACH 115	Turning Theory and Operations I	3	MACH 135	Turning Theory and Operations II	3
MACH 120	Milling Theory and Operations I	3	MACH 140	Milling Theory and Operations II	3
MACH 125	Mechanical Blueprint Reading	3	MACH 145	Applied Computer Aided Drafting Fundamentals	3
CIS 105	Microcomputer Software Applications I	3	ENGL 201	Technical Writing I	3
MATH 100	Elementary Algebra <i>or higher</i>	3	PSYC 103	Human Relations in the Workplace	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>

## **SURGICAL TECHNOLOGY**

### **Associate of Applied Science, 60 Credit Hours, 18-Month Program\*\*\***

The mission of the Surgical Technology program is to provide students with the knowledge, skills, and dedication necessary to become successful, valuable, and effective surgical technologists in the communities they serve.

Graduates of accredited surgical technology programs complete a comprehensive education in which they receive in-depth knowledge related to the operating room. This includes completion of a surgical rotation during a clinical experience. Throughout the educational experience, the surgical technology student learns the principles of asepsis and application of sterile technique. It is the position of The Association of Surgical Technologists (AST) that surgical technologists are subject matter experts in these principles. Other healthcare providers are recommended to draw upon the expertise of the surgical technologist to share their knowledge and skills in order to prevent the patient from acquiring an infection.

During the clinical portion of the program, students will complete a minimum of 120 cases of various specialties in the first or second scrub role. At the completion of all clinical requirements, students will sit for the Professional Certification of Surgical Technologist, (CST) Exam. Surgical technologists stand at the leading edge of advancements in surgical techniques and interventions using their professionalism, expertise, and abilities to make a difference.

<b>Course No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 101	COMPOSITION* <i>or</i>	3
ENGL 201	TECHNICAL WRITING I*	
MATH 100	ELEMENTARY ALGEBRA** <i>or higher</i>	3
PSYC 101	GENERAL PSYCHOLOGY <i>or</i>	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	
SOC 100	INTRODUCTION TO SOCIOLOGY	3
	<b>Total</b>	<b>15</b>
<b>Technical Requirements</b>		
HC 114	ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS	3
HC 135	MEDICAL LAW AND ETHICS	2
HC 213	MEDICAL TERMINOLOGY I	3
HC 225	PATHOPHYSIOLOGY	3
ST 102	INTRODUCTION TO SURGICAL TECHNOLOGY	3
ST 111	INTRODUCTION TO SURGICAL TECHNOLOGY LAB	3
ST 128	SURGICAL PHARMACOLOGY	2
ST 130	SURGICAL PROCEDURES I	3
ST 131	PRINCIPLES AND PRACTICES OF SURGICAL TECHNOLOGY I	3
ST 230	SURGICAL PROCEDURES II	3
ST 231	PRINCIPLES AND PRACTICES OF SURGICAL TECHNOLOGY II	3
ST 250	SURGICAL TECHNOLOGY CLINICALS	13
ST 251	SURGICAL TECHNOLOGY CERTIFICATION REVIEW <i>online</i>	1
	<b>Total</b>	<b>45</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

\*\*\*Graduation Requirement: Students must sit for the national certification exam conducted by the National Board of Surgical Technology and Surgical Assisting (NBSTSA).

Clinicals, practicums, and internships may include, but are not limited to, differential shifts (evenings, nights, weekends, and holidays) to meet industry expectations. Clinicals may occur during summer semester depending on program enrollments. This may require travel outside the Rapid City area.

**Semester breakdown on next page**

## Semester Breakdown

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
HC 114	Anatomy & Physiology for the Health Professions	3	HC 225	Pathophysiology	3
HC 135	Medical Law and Ethics	2	ST 128	Surgical Pharmacology	2
HC 213	Medical Terminology I	3	ST 130	Surgical Procedures I	3
ST 102	Introduction to Surgical Technology	3	ST 131	Principles and Practices of Surgical Technology I	3
ST 111	Introduction to Surgical Technology Lab	3	MATH 100	Elementary Algebra <i>or higher</i>	3
CIS 105	Microcomputer Software Applications I	3			
<b>Total Credit Hours</b>		<b>17</b>	<b>Total Credit Hours</b>		<b>14</b>
<b>Third Semester</b>			<b>Fourth Semester</b>		
		<b>CR</b>			<b>CR</b>
ST 230	Surgical Procedures II	3	ST 250	Surgical Technology Clinicals	13
ST 231	Principles and Practices of Surgical Technology II	3	ST 251	Surgical Technology Certification Review <i>online</i>	1
ENGL 101	Composition <i>or</i>	3			
ENGL 201	Technical Writing I	3			
PSYC 101	General Psychology <i>or</i>	3			
PSYC 103	Human Relations in the Workplace	3			
SOC 100	Introduction to Sociology	3			
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>14</b>

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

## **TECHNICAL STUDIES**

### **Associate of Applied Science, 60 Credit Hours, 18-Month Program**

The Technical Studies curriculum will differ for each student. Individualized plans of study will be developed to meet the students' career goals and be approved by the Registrar at WDT. The exact mix of courses will vary from student to student, as long as the minimum credit hour requirements are met and the courses counted toward the degree assist the student in meeting his or her career goal.

#### **Technical Courses**

**30 credit hours minimum**

Technical credits, as part of a required, earned certificate or diploma from an accredited institution, may be earned by a combination of technical courses and/or work experience demonstrated through documented and demonstrated assessments.

#### **General Education Courses**

**15 – 18 credit hours**

Students must meet the general education requirements for AAS degrees at the technical institute where they enroll in the Technical Studies program. Each Technical Institute may have different course requirements, depending on the students' individualized plan of study.

Communications	3 credits
Mathematics	3 credits
Social sciences	3 credits
Behavioral sciences	3 credits
Computer literacy	3 credits

#### **Elective Courses**

**12 - 15 credit hours**

The degree requires a minimum of 60 credits. Individualized plans of study will include the required 30 technical credits and 15-18 general education credits, and at least 12-15 additional credits – technical or general electives – to meet the students' career objectives.

## **TRANSPORTATION TECHNOLOGY – LIGHT DUTY**

### **Associate of Applied Science, 66-69 Credit Hours, 18-Month Program**

The Transportation Technology program will provide education in most types of land transportation, vehicles, and construction equipment to include cars, trucks, tractors, construction equipment, and mining equipment. Students will have the option of selecting light vehicle or heavy equipment tracks. This program will provide a broader preparation for the mechanical occupations with separate focuses on light and heavy duty vehicles.

<b>Course No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL 201	TECHNICAL WRITING I*	3
MATH 100	ELEMENTARY ALGEBRA**	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	3
SOC 100	INTRODUCTION TO SOCIOLOGY	3
	<b>Total</b>	<b>15</b>
<b>Technical Requirements for Light Duty</b>		
TTT 110	VEHICLE ELECTRICITY AND ELECTRONICS	4
TTT 112	VEHICLE ELECTRICITY AND ELECTRONICS LAB	6
TTT 115	ENGINE CONSTRUCTION AND OPERATION	3
TTT 120	SHOP AND PARTS MANAGEMENT	1
TTT 121	INTRODUCTION TO HYBRIDS	1
TTT 122	CHASSIS WIRING	1
TTT 125	ENGINE PERFORMANCE	4
TTT 126	ENGINE PERFORMANCE LAB	6
TTT 200	TRANSPORTATION HVAC	3
TTT 201	UNDER-CAR DIAGNOSIS	3
TTT 204	ENGINE OVERHAUL	4
TTT 205	UNDER-CAR DIAGNOSIS LAB	5
TTT 222	LIGHT DUTY DRIVETRAINS	4
TTT 223	LIGHT DUTY DRIVETRAINS LAB	6
TTT 299	INTERNSHIP (OPTIONAL)	3
	<b>Total</b>	<b>51-54</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

**Semester breakdown on next page**

## Semester Breakdown Light Duty

First Semester			Second Semester		
		CR			CR
TTT 110	Vehicle Electricity and Electronics	4	TTT 115	Engine Construction and Operation	3
TTT 112	Vehicle Electricity and Electronics Lab	6	TTT 125	Engine Performance	4
TTT 120	Shop and Parts Management	1	TTT 126	Engine Performance Lab	6
TTT 121	Introduction to Hybrids	1	MATH 100	Elementary Algebra	3
CIS 105	Microcomputer Software Applications I	3			
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>16</b>
Third Semester			Fourth Semester		
		CR			CR
TTT 201	Under-Car Diagnosis	3	TTT 122	Chassis Wiring	1
TTT 204	Engine Overhaul	4	TTT 200	Transportation HVAC	3
TTT 205	Under-Car Diagnosis Lab	5	TTT 222	Light Duty Drivetrains	4
ENGL 201	Technical Writing I	3	TTT 223	Light Duty Drivetrains Lab	6
SOC 100	Introduction to Sociology	3	TTT 299	Internship <i>optional</i>	3
			PSYC 103	Human Relations in the Workplace	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>17-20</b>

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

## **TRANSPORTATION TECHNOLOGY – HEAVY DUTY**

### **Associate of Applied Science, 66-69 Credit Hours, 18-Month Program**

The Transportation Technology program will provide education in most types of land transportation, vehicles, and construction equipment to include cars, trucks, tractors, construction equipment, and mining equipment. Students will have the option of selecting light vehicle or heavy equipment tracks. This program will provide a broader preparation for the mechanical occupations with separate focuses on light and heavy duty vehicles.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	201	TECHNICAL WRITING I*	3
MATH	100	ELEMENTARY ALGEBRA**	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
SOC	100	INTRODUCTION TO SOCIOLOGY	3
		<b>Total</b>	<b>15</b>
<b>Technical Requirements for Heavy Duty</b>			
TTT	110	VEHICLE ELECTRICITY AND ELECTRONICS	4
TTT	112	VEHICLE ELECTRICITY AND ELECTRONICS LAB	6
TTT	115	ENGINE CONSTRUCTION AND OPERATION	3
TTT	125	ENGINE PERFORMANCE	4
TTT	126	ENGINE PERFORMANCE LAB	6
TTT	129	WELDING AND EQUIPMENT	2
TTT	130	PREVENTATIVE MAINTENANCE	3
TTT	200	TRANSPORTATION HVAC	3
TTT	210	UNDER-TRUCK DIAGNOSIS	3
TTT	211	HEAVY DUTY DRIVETRAINS	4
TTT	212	DIESEL ENGINES	5
TTT	215	HYDRAULICS	3
TTT	240	UNDER-TRUCK DIAGNOSIS LAB	5
TTT	299	INTERNSHIP (OPTIONAL)	3
		<b>Total</b>	<b>51-54</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

**Semester breakdown on next page**

### Semester Breakdown Heavy Duty

First Semester			Second Semester		
		CR			CR
TTT 110	Vehicle Electricity and Electronics	4	TTT 115	Engine Construction and Operation	3
TTT 112	Vehicle Electricity and Electronics Lab	6	TTT 125	Engine Performance	4
TTT 130	Preventative Maintenance	3	TTT 126	Engine Performance Lab	6
CIS 105	Microcomputer Software Applications I	3	MATH 100	Elementary Algebra	3
<b>Total Credit Hours</b>		<b>16</b>	<b>Total Credit Hours</b>		<b>16</b>
Third Semester			Fourth Semester		
		CR			CR
TTT 210	Under-Truck Diagnosis	3	TTT 129	Welding and Equipment	2
TTT 211	Heavy Duty Drivetrains	4	TTT 200	Transportation HVAC	3
TTT 240	Under-Truck Diagnosis Lab	5	TTT 212	Diesel Engines	5
ENGL 201	Technical Writing I	3	TTT 215	Hydraulics	3
SOC 100	Introduction to Sociology	3	TTT 299	Internship <i>optional</i>	3
			PSYC 103	Human Relations in the Workplace	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>16-19</b>

If you are or have been convicted, pleaded guilty or no contest to, or received a suspended imposition of sentence for a felony or certain misdemeanors, you are advised that you may not be able to complete all course requirements for your chosen program, you may be prevented from taking required certification/licensure examinations in your chosen program field, and you may be prevented from gaining employment in your program field.

## **WELDING AND FABRICATION**

### **Associate of Applied Science, 66 Credit Hours, 18-Month Program**

The Welding and Fabrication program prepares students for the growing number of career opportunities in the welding field. The combination of classroom theory, hands-on welding skills training, and practical application in labs allows students to attain skills for entry-level employment.

The Welding and Fabrication program is designed to prepare students as entry-level technicians in many areas including the construction and repair of ships, automobiles, and thousands of other manufactured products. Students will study multiple welding and fabrication techniques with various types of welding equipment. Welders require a wide variety of skills that will continue to increase due to the increase of sophisticated fabrication and repair work demanded by industry. This program advances the student's welding skills and increases their employment opportunities.

<b>Course</b>	<b>No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	201	TECHNICAL WRITING I*	3
MATH	100	ELEMENTARY ALGEBRA**	3
MATH	101	INTERMEDIATE ALGEBRA***	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
SOC	100	INTRODUCTION TO SOCIOLOGY	3
		<b>Total</b>	<b>18</b>
<b>Technical Requirements</b>			
WDM	102	SHIELDED METAL ARC WELDING I	3
WDM	103	GAS METAL ARC WELDING I	3
WDM	104	FABRICATION I	3
WDM	105	OXY FUEL WELDING/CUTTING	3
WDM	150	SHIELDED METAL ARC WELDING II	3
WDM	151	GAS METAL ARC WELDING II	3
WDM	152	FABRICATION II	3
WDM	153	GAS TUNGSTEN ARC WELDING I	3
WDM	201	GAS TUNGSTEN ARC WELDING II	3
WDM	202	FABRICATION III	3
WDM	203	GAS METAL ARC WELDING III	3
WDM	204	SHIELDED METAL ARC WELDING III	3
WDM	252	FABRICATION IV	3
WDM	253	GAS METAL ARC WELDING IV	3
WDM	254	SHIELDED METAL ARC WELDING IV	3
WDM	255	WELDING CAPSTONE	3
		<b>Total</b>	<b>48</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

\*\*\*Prerequisite: Acceptable ACCUPLACER score or Elementary Algebra.

**Semester breakdown on next page**

## Semester Breakdown AAS

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
WDM 102	Shielded Metal Arc Welding I	3	WDM 150	Shielded Metal Arc Welding II	3
WDM 103	Gas Metal Arc Welding I	3	WDM 151	Gas Metal Arc Welding II	3
WDM 104	Fabrication I	3	WDM 152	Fabrication II	3
WDM 105	Oxy Fuel Welding/Cutting	3	WDM 153	Gas Tungsten Arc Welding I	3
CIS 105	Microcomputer Software Applications I	3	ENGL 201	Technical Writing I	3
MATH 100	Elementary Algebra	3	PSYC 103	Human Relations in the Workplace	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>
<b>Third Semester</b>			<b>Fourth Semester</b>		
		<b>CR</b>			<b>CR</b>
WDM 201	Gas Tungsten Arc Welding II	3	WDM 252	Fabrication IV	3
WDM 202	Fabrication III	3	WDM 253	Gas Metal Arc Welding IV	3
WDM 203	Gas Metal Arc Welding III	3	WDM 254	Shielded Metal Arc Welding IV	3
WDM 204	Shielded Metal Arc Welding III	3	WDM 255	Welding Capstone	3
MATH 101	Intermediate Algebra	3	SOC 100	Introduction to Sociology	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

## WELDING AND FABRICATION

### Diploma, 36 Credit Hours, 9-Month Program

The Welding and Fabrication program prepares students for the growing number of career opportunities in the welding field. The combination of classroom theory, hands-on welding skills training, and practical application in labs allows students to attain skills for entry-level employment.

The Welding and Fabrication program is designed to prepare students as entry-level technicians in many areas including the construction and repair of ships, automobiles, and thousands of other manufactured products. Students will study multiple welding and fabrication techniques with various types of welding equipment. Welders require a wide variety of skills that will continue to increase due to the increase of sophisticated fabrication and repair work demanded by industry. This program advances the student's welding skills and increases their employment opportunities.

Course	No.	Course Title	Credits
<b>General Education Requirements</b>			
CIS	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	201	TECHNICAL WRITING I*	3
MATH	100	ELEMENTARY ALGEBRA**	3
PSYC	103	HUMAN RELATIONS IN THE WORKPLACE	3
<b>Total</b>			<b>12</b>
<b>Technical Requirements</b>			
WDM	102	SHIELDED METAL ARC WELDING I	3
WDM	103	GAS METAL ARC WELDING I	3
WDM	104	FABRICATION I	3
WDM	105	OXY FUEL WELDING/CUTTING	3
WDM	150	SHIELDED METAL ARC WELDING II	3
WDM	151	GAS METAL ARC WELDING II	3
WDM	152	FABRICATION II	3
WDM	153	GAS TUNGSTEN ARC WELDING I	3
<b>Total</b>			<b>24</b>

\*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

\*\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

### Semester Breakdown Diploma

First Semester			Second Semester		
		CR			CR
WDM 102	Shielded Metal Arc Welding I	3	WDM 150	Shielded Metal Arc Welding II	3
WDM 103	Gas Metal Arc Welding I	3	WDM 151	Gas Metal Arc Welding II	3
WDM 104	Fabrication I	3	WDM 152	Fabrication II	3
WDM 105	Oxy Fuel Welding/Cutting	3	WDM 153	Gas Tungsten Arc Welding I	3
CIS 105	Microcomputer Software Applications I	3	ENGL 201	Technical Writing I	3
MATH 100	Elementary Algebra	3	PSYC 103	Human Relations in the Workplace	3
<b>Total Credit Hours</b>		<b>18</b>	<b>Total Credit Hours</b>		<b>18</b>

## **APPENDIX A**

### **PLUMBING TECHNOLOGY**

#### **Certificate, 30 Credit Hours, 9-Month Program**

The Plumbing Technology program prepares students to begin a career in plumbing. Coursework provides technical understanding and skills development and integrates theory with practical experience. Through the program, students develop skills in piping techniques and procedures, plumbing and piping systems, residential and commercial system installations, blueprint reading, and isometric interpretation. The successful graduate is eligible for one year's credit on his or her apprenticeship card and employment at an advanced apprenticeship level in a variety of businesses.

There are many career opportunities for graduates of the plumbing program. The plumbing trade offers challenging and interesting work in commercial and residential settings for those with the desire to work as designers, installers, and troubleshooters. Graduates may also choose to advance to master plumber status or start their own business.

The primary objective of the Plumbing Technology program is to prepare students to be successful in the plumbing field. Students will take coursework in plumbing theory, plumbing practices, plan and print reading, and other technical skills. Additionally, students will receive training in soft skills such as communication and math. The Plumbing program delivers a solid foundation in plumbing technology.

<b>Course No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>		
MATH 104	TECHNICAL MATHEMATICS*	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	3
	<b>Total</b>	<b>6</b>
<b>Technical Requirements</b>		
PLU 150	PLUMBING THEORY I	3
PLU 155	PLUMBING THEORY I LAB	4
PLU 160	PLUMBING CODE	3
PLU 165	PLUMBING PRINT READING & DRAFTING	2
PLU 170	PLUMBING THEORY II	3
PLU 175	PLUMBING THEORY II LAB	4
PLU 180	PLUMBING FIXTURES & REPAIR	2
PLU 185	PLUMBING FIXTURES & REPAIR LAB	3
	<b>Total</b>	<b>24</b>

**All remedial coursework must be completed in the first semester.**

\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

#### **Semester Breakdown**

<b>First Semester</b>			<b>Second Semester</b>		
		<b>CR</b>			<b>CR</b>
MATH 104	Technical Mathematics	3	PSYC 103	Human Relations in the Workplace	3
PLU 150	Plumbing Theory I	3	PLU 170	Plumbing Theory II	3
PLU 155	Plumbing Theory I Lab	4	PLU 175	Plumbing Theory II Lab	4
PLU 160	Plumbing Code	3	PLU 180	Plumbing Fixtures & Repair	2
PLU 165	Plumbing Print Reading & Drafting	2	PLU 185	Plumbing Fixtures & Repair Lab	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

## **PLUMBING TECHNOLOGY**

### **Diploma, 36 Credit Hours, 12-Month Program**

The Plumbing Technology program prepares students to begin a career in plumbing. Coursework provides technical understanding and skills development and integrates theory with practical experience. Through the program, students develop skills in piping techniques and procedures, plumbing and piping systems, residential and commercial system installations, blueprint reading, and isometric interpretation. The successful graduate is eligible for one year's credit on his or her apprenticeship card and employment at an advanced apprenticeship level in a variety of businesses.

There are many career opportunities for graduates of the plumbing program. The plumbing trade offers challenging and interesting work in commercial and residential settings for those with the desire to work as designers, installers, and troubleshooters. Graduates may also choose to advance to master plumber status or start their own businesses.

The primary objective of the Plumbing Technology program is to prepare students to be successful in the plumbing field. Students will take coursework in plumbing theory, plumbing practices, plan and print reading, and other technical skills. Additionally, students will receive training in soft skills such as communication and math. The Plumbing program delivers a solid foundation in plumbing technology.

The Plumbing Technology diploma enhances the skills students obtain in the Plumbing Technology certificate. In addition to plumbing skills, students will expand their knowledge in English and Computer Information Systems. These additional courses promote and advance essential knowledge, skills, and values students need in the workforce.

<b>Course No.</b>	<b>Course Title</b>	<b>Credits</b>
<b>General Education Requirements</b>		
CIS 105	MICROCOMPUTER SOFTWARE APPLICATIONS	3
ENGL 201	TECHNICAL WRITING I	3
MATH 104	TECHNICAL MATHEMATICS*	3
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	3
	<b>Total</b>	<b>12</b>
<b>Technical Requirements</b>		
PLU 150	PLUMBING THEORY I	3
PLU 155	PLUMBING THEORY I LAB	4
PLU 160	PLUMBING CODE	3
PLU 165	PLUMBING PRINT READING & DRAFTING	2
PLU 170	PLUMBING THEORY II	3
PLU 175	PLUMBING THEORY II LAB	4
PLU 180	PLUMBING FIXTURES & REPAIR	2
PLU 185	PLUMBING FIXTURES & REPAIR LAB	3
	<b>Total</b>	<b>24</b>

**Remedial coursework must be completed in the first semester.**

\*Prerequisite: Acceptable ACCUPLACER score or Basic Math.

**Semester breakdown on next page.**

## Semester Breakdown

First Semester			Second Semester		
		CR			CR
MATH 104	Technical Mathematics	3	PSYC 103	Human Relations in the Workplace	3
PLU 150	Plumbing Theory I	3	PLU 170	Plumbing Theory II	3
PLU 155	Plumbing Theory I Lab	4	PLU 175	Plumbing Theory II Lab	4
PLU 160	Plumbing Code	3	PLU 180	Plumbing Fixtures & Repair	2
PLU 165	Plumbing Print Reading & Drafting	2	PLU 185	Plumbing Fixtures & Repair Lab	3
<b>Total Credit Hours</b>		<b>15</b>	<b>Total Credit Hours</b>		<b>15</b>

Summer Semester		
		CR
ENGL 201	Technical Writing I	3
CIS 105	Microcomputer Software Applications I	3
<b>Total Credit Hours</b>		<b>6</b>

# COURSE DESCRIPTIONS

Courses are listed in alphabetical order by course prefix.

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

**CREDITS: 3**

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

## **ACCT 121 PRINCIPLES OF ACCOUNTING II**

**CREDITS: 3**

This course continues the study of fundamental accounting concepts; however, it involves the students in the world of accounting as opposed to the recordkeeping function. The course includes the study of Generally Accepted Accounting Principles (GAAP) and the Conceptual Framework, the corporate form as the business entity, preparation of the Statement of Cash Flows, financial statement analysis, introduction to cost accounting, responsibility accounting, cost volume profit analysis, and budgeting. **PREREQUISITE:** ACCT 120.

## **ACCT 212 INTERMEDIATE ACCOUNTING I**

**CREDITS: 4**

This course is intended to develop each student's understanding of accounting by focusing on GAAP and the conceptual framework that provides the support for accounting information. It includes a review of the accounting cycle with advanced work in cash flow, inventory valuation methods, current and non-current assets and liabilities, their specific valuation, and balance sheet presentation. **PREREQUISITE:** ACCT 121.

## **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:** ACCT 212.

## **ACCT 215 PAYROLL ACCOUNTING**

**CREDITS: 3**

The students will study payroll accounting, including the reporting formats for the various governments. Manual payroll applications are covered in the course to enhance the student's job skills. The governmental reporting will include monthly, quarterly, semi-annual, and year-end reports. **PREREQUISITE:** ACCT 120.

## **ACCT 218 TAX ACCOUNTING I**

**CREDITS: 3**

This course is the study of federal income tax including the principles of income recognition, the principles of business and non-business expense deductions, and the concept of capital gains and losses. Emphasis is placed on the individual non-business taxpayer. Case problems involve the preparation of individual tax returns and the various supporting schedules. **PREREQUISITE:** ACCT 120.

## **ACCT 223 MANAGERIAL ACCOUNTING**

**CREDITS: 3**

This course focuses on using accounting information by management as a competitive advantage in real-world situations. The student will be prepared to help management develop the internal financial reports needed for these situations. The use of basic cost accounting skills and basic communication skills to provide management with useful internal information will be stressed. **PREREQUISITE:** ACCT 121.

## **ACCT 227 EXCEL FOR ACCOUNTING**

**CREDITS: 3**

This course develops the use of electronic spreadsheets using Excel in accounting applications. It encourages students to develop spreadsheet formulas for problem solving. Students will create graphs and macros. This encourages the students to develop effective accounting formats in the presentation of financial information. **PREREQUISITES:** ACCT 120 and CIS105.

## **ACCT 228 QUICKBOOKS ACCOUNTING**

**CREDITS: 3**

This course focuses on the integration of computerized information into the basic accounting process. It provides the link between accounting in a traditional sense and its application in an automated environment. It is designed to develop a working knowledge of Windows-based software packages using QuickBooks or QuickBooks Pro commonly used by business. **PREREQUISITE:** ACCT 120 or APPROVAL OF INSTRUCTOR.

## **ACCT 230 TOPICS AND ISSUES IN ACCOUNTING**

**CREDITS: 3**

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

## **ACCT 281 ETHICS IN ACCOUNTING AND BUSINESS**

**CREDITS: 2**

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

- ACCT 285 OPTIONAL INTERNSHIP** **CREDITS: 1**  
 The internship offers students the opportunity to gain experience in an accounting environment and apply what they have learned in the first three semesters of the accounting program. **PREREQUISITES: MUST HAVE SATISFACTORILY COMPLETED ALL THE REQUIRED TECHNICAL COURSES IN THE FIRST TWO SEMESTERS and HAVE A GPA OF 3.0.**
- ACCT 290 INTERNSHIP** **CREDITS: 2-3**  
 The internship offers students the opportunity to gain experience in an accounting environment and apply what they have learned in the first three semesters of the accounting program. **PREREQUISITE: ADVISOR APPROVAL.**
- BUS 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 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: MINIMUM ACCUPLACER SCORE OF 71 IN SENTENCE SKILLS; SCORES BELOW THE MINIMUM REQUIREMENT WILL NEED TO TAKE ENGL091.**
- BUS 158 WEB DESIGN FOR BUSINESS** **CREDITS: 3**  
 This intermediate-level computer course is designed to give students the skills in website development.
- BUS 162 PROJECT MANAGEMENT** **CREDITS: 3**  
 Students will learn how to manage a project from start to finish.
- 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.
- 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 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.
- BUS 224 PERSONAL FINANCE** **CREDITS: 3**  
 This course provides the student with the basics of financial planning: budgeting, cash flow, use of credit, and risk management. The course focuses on the information graduates will need to provide themselves with a secure personal financial environment. Many of the skills and much of the information will transfer to the business environment.
- BUS 227 WRITING FOR SOCIAL MEDIA MARKETING** **CREDITS: 3**  
 Effective social media marketing efforts require a unique copywriting approach. Discover why social media writing needs to be different and how effective writing changes how customers interact with businesses. Learn about appropriate writing tone and how to achieve a writing style that increases engagement and return traffic. Use case studies, examples, and hands-on writing projects to understand and apply effective social media writing techniques.

- BUS 228 PERSONAL INVESTMENTS CREDITS: 3**  
 This course is an introductory course designed to help students gain a better understanding of the basic theories, instruments, environments, and practical techniques associated with personal investment decisions. Upon completion of this course, students will be better prepared to make sound personal investment decisions.
- BUS 233 SMALL BUSINESS ENTREPRENEURSHIP CREDITS: 3**  
 This course familiarizes students with the concept of entrepreneurial spirit while providing them with an understanding of the skills necessary to manage a small business. Students develop a business plan and oral presentation for a new business.
- BUS 241 ADVANCED COMPUTER APPLICATIONS FOR BUSINESS CREDITS: 3**  
 The primary focus of the class will be on expert proficiencies in word processing and spreadsheet software. The class is designed to meet all the required skills needed to take the Microsoft Office User Specialist Expert exams in word processing and spreadsheet software. The curriculum will also cover additional Windows-based programs and computer operations.  
 PREREQUISITE: CIS 105.
- BUS 250 SOCIAL MEDIA MARKETING CAMPAIGN CREDITS: 3**  
 In this capstone course, create and implement a social media marketing campaign for an actual business or organization. Use business, marketing, and social media principles and tactics to select a client, assess the client's needs, evaluate the market, and construct a sound social media campaign. During the campaign, use available metrics and data to evaluate the effectiveness of the campaign.
- BUS 291 INTERNSHIP CREDITS: 3**  
 This course is designed to provide the student an opportunity to apply the skills and knowledge acquired in the classroom through active participation in a local business. This is a volunteer or paid supervised internship. PREREQUISITE: ADVISOR APPROVAL.
- CAD 101 DRAFTING FUNDAMENTALS CREDITS: 3**  
 The student is introduced to the fundamentals of drafting for the architectural, civil, and mechanical fields. The course covers the principles of board drafting, use of equipment, orthographic drawings, shape description, isometric drawings, and basic design concepts. The course strives to develop good drafting habits, technical abilities, and communication and teamwork skills.
- CAD 111 ARCHITECTURAL DRAFTING I CREDITS: 3**  
 This course is an introduction to architectural drafting and design. Students will build on their knowledge of residential construction and learn to apply that knowledge toward the development of residential construction documents which conform to code requirements, industry standards, and proper drafting techniques. PREREQUISITES: CAD 135 and CAD 139.
- CAD 135 ARCHITECTURAL CONSTRUCTION THEORY I CREDITS: 3**  
 This course is an introduction to the concepts of architectural construction theory. The student is introduced to the fundamentals of construction practices and materials used in building foundations, floors, walls, roofs, and associated components.
- CAD 139 2D CAD CREDITS: 3**  
 This course introduces the concept of 2D CAD using the latest release of AutoCAD, and covers skills ranging from basic to advanced. Basic Draw and Modify commands will be studied, as well as advanced concepts such as Layers, Blocks, Annotations, X-Referencing, and Document Creation. Students will also learn proper computer care, file manipulation, and storage.
- CAD 141 ARCHITECTURAL 3D CAD CREDITS: 3**  
 This course introduces the industry standard 3D CAD application in the architectural field. The course covers the basics of parametric 3D modeling with BIM (Building Information Modeling) software.
- CAD 142 MECHANICAL 3D CAD CREDITS: 3**  
 This course introduces industry standard 3D CAD applications for the mechanical field. The course covers the basics of parametric 3D modeling including the concepts of parts, assemblies, and drawings.
- CAD 150 ARCHITECTURAL PRINT READING CREDITS: 1**  
 This course addresses the need to accurately read and interpret technical drawings. Students will become familiar with the various symbols, abbreviations and terms associated with a standard set of construction documents and learn to navigate these drawings to accurately determine design intent.
- CAD 202 MECHANICAL DRAFTING CREDITS: 3**  
 This course covers mechanical drafting practices used to create engineering drawings with a focus on drawing accuracy, drafting conventions, dimensioning, and readability. PREREQUISITES: CAD 232 and CAD 234.
- CAD 203 PRINCIPLES OF COMMERCIAL THEORY I CREDITS: 3**  
 This course is an introduction to the concepts of commercial construction theory. Emphasis is placed on methods, materials, and terms that are used in the commercial construction industry including advanced concepts of foundation, wall, floor, and roof construction.

- CAD 214 INTRODUCTION TO CIVIL DRAFTING** **CREDITS: 3**  
 This course introduces students to practical concepts and drafting principles associated with civil engineering and design. Students learn to interpret maps and symbols, calculate surveying data, and develop drawings for common civil drafting functions. PREREQUISITE: CAD 139.
- CAD 215 LIGHT COMMERCIAL CONSTRUCTION WITH MECHANICAL AND ELECTRICAL** **CREDITS: 3**  
 This course is designed to introduce the student to the concepts, techniques, and safety practices of mechanical and electrical systems as they apply to the drafting environment. Course emphasis includes reading and drawing prints to show mechanical and electrical requirements, safe practices, introduction to the National Electrical Code (NEC), mechanical and electrical symbols, and basic concepts. PREREQUISITE: CAD 139.
- CAD 232 MECHANICAL PRINCIPLES** **CREDITS: 3**  
 This course equips the student with basic principles of mechanical operations, component interaction, and assembly procedure. PREREQUISITE: CAD 139 and PREREQUISITE or CO-REQUISITE CAD 142.
- CAD 234 MECHANICAL PRINT READING** **CREDITS: 2**  
 Students will learn to read a variety of prints from different industries and to extract important construction and design information from each drawing.
- CAD 237 ARCHITECTURAL DRAFTING II** **CREDITS: 3**  
 This course continues exploration into the concepts of architectural drafting and design. Students will become more proficient in designing and completing architectural drawings with increased independence from the instructor. Advanced techniques are introduced which make use of the student's growing skill with CAD software. PREREQUISITE: CAD 111.
- CAD 240 3D ARCHITECTURAL DESIGN** **CREDITS: 3**  
 This course continues the application of architectural design concepts and adapts them to the use of 3D Building Information Modeling (BIM). Students will apply their acquired skills and knowledge toward the development of functional designs and construction documents using the latest version of the appropriate 3D applications. PREREQUISITES: CAD 111 and CAD 141.
- CAD 244 3D ENGINEERING DESIGN** **CREDITS: 3**  
 This course covers advanced features of parametric solid modeling including the concepts of parts, assemblies, drawings, sheet metal design, and animation. PREREQUISITE: CAD 142.
- CAD 247 COMPUTER AUTOMATED MANUFACTURING** **CREDITS: 3**  
 This course covers a working knowledge and application of computer automated manufacturing. PREREQUISITE: CAD 142.
- CAD 250 INTRODUCTION TO MAPPING/GPS** **CREDITS: 2**  
 This course covers principles of reading and using maps with industry standard technologies including Global Positioning Systems (GPS). Proper techniques of gathering usable mapping coordinates for Geographical Information Systems (GIS) will be emphasized.
- CAD 251 INTRODUCTION TO GIS** **CREDITS: 3**  
 This course introduces principles and applications of Geographic Information Systems (GIS) using ArcGIS software. Students will develop skills in manipulating geographic data and representing this data through various informational mapping techniques. PREREQUISITE: CAD 250.
- CAD 252 INTRODUCTION TO SURVEYING** **CREDITS: 3**  
 This course exposes students to basic field surveying techniques and related office procedures. PREREQUISITES: CAD 250 and MATH 102 or MATH 120.
- CAD 297 INTERNSHIP** **CREDITS: 3**  
 Work in a professional office for a minimum of 120 hours to gain computer aided drafting experience. The internship will be directly related to the drafting field and approved by the instructor. PREREQUISITE: CAD 139.
- CHEM 106 CHEMISTRY SURVEY** **CREDITS: 3**  
 A one-semester survey of chemistry. Not intended for those needing an extensive chemistry background. Introduction to the properties of matter, atomic structure, bonding, stoichiometry, kinetics, equilibrium, states of matter, solutions, and acid-base concepts. PREREQUISITE: MATH 101 or HIGHER.
- CHEM 106L CHEMISTRY SURVEY LAB** **CREDITS: 1**  
 Laboratory designed to accompany CHEM 106.
- CIS 105 MICROCOMPUTER SOFTWARE APPLICATIONS I** **CREDITS: 3**  
 This course is an introductory course in software applications, which includes basic technical concepts, as well as hands-on experience. The utility of the computer is demonstrated by introducing Windows, word processing, spreadsheet, database and presentation software to the student.

- CIS 122 INFORMATION TECHNOLOGY HARDWARE/SOFTWARE CREDITS: 6**  
Information Technology 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 become a computer service technician and pursue a future career in IT technology or simply be equipped with the knowledge of how a computer works.
- CIS 129 WINDOWS OPERATING SYSTEMS CREDITS: 3**  
This course covers the Windows operating system. Subject areas include installation, configuration, administration, and network setup.
- CIS 131 NETWORKING TECHNOLOGIES I CREDITS: 3**  
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 132 NETWORKING TECHNOLOGIES II CREDITS: 3**  
Students will develop skills on initial router configuration, software management, routing protocol configuration, TCP/IP, and security and disaster recovery. PREREQUISITE: CIS 131.
- CIS 133 NETWORKING TECHNOLOGIES III CREDITS: 3**  
In this course the student will assemble switching devices while using switching technology on the LAN side of a network. Students will also produce a wireless network using wireless technology points. PREREQUISITE: CIS 132.
- CIS 134 NETWORKING TECHNOLOGIES IV CREDITS: 3**  
In this course the student will evaluate current WAN technologies and network services that are required by enterprise networks. PREREQUISITE: CIS 133.
- CIS 201 LINUX TECHNOLOGIES CREDITS: 3**  
In this course, the student will learn about the Linux file system and use a Linux operating system as a standalone system and standalone server or as a domain server within an MS Windows-based network.
- CIS 213 NETWORKING USING WINDOWS SERVER CREDITS: 3**  
This course features Windows Server as the local area network operating system and provides hands-on tutorials for the student to plan and implement Windows Server. The study includes an introduction to configuring protocols such as TCP/IP and continues with how to configure name resolution and vital services such as DNS, WINS, DHCP, and IPsec. The course also emphasizes Active Directory configuration. PREREQUISITE: CIS 129.
- CIS 215 NETWORK DESIGN AND VIRTUALIZATION CREDITS: 3**  
Students will design a virtualized computer network to be integrated into a networked environment. PREREQUISITES: CIS 132, CIS 201, and CIS 213.
- CIS 216 INTRODUCTION TO PROGRAMMING CREDITS: 3**  
This course is intended to give students with no previous programming experience the tools needed to create real-world procedural applications.
- CIS 219 ADVANCED SERVER TECHNOLOGIES CREDITS: 3**  
This course features Windows and Linux servers as the local area network operating system. Students will complete hand-on tutorials to plan and implement Windows and Linux servers. The course includes an introduction to configuring protocols such as TCP/IP. The course also includes how to configure DNS, vital services such as PowerShell, email collaborations, remote install, WSUS, WDS, and many other advanced tools. PREREQUISITE: CIS 213.
- CIS 220 NETWORK SECURITY I CREDITS: 3**  
In this course, the student will analyze the security risks of a network and be able to design options to mitigate those vulnerabilities. PREREQUISITES: CIS 201 and CIS 213 or APPROVAL OF INSTRUCTOR.
- CIS 225 DATABASES CREDITS: 3**  
This course introduces students to database creation, manipulation, and the Structured Query Language (SQL). PREREQUISITE or CO-REQUISITE: CIS 213.
- CIS 230 COMPUTER FORENSICS CREDITS: 3**  
Students will inspect digital evidence, analyze the data, and validate the analysis. PREREQUISITES: CIS 133, CIS 201, and CIS 213.
- CIS 235 NETWORK SECURITY II CREDITS: 3**  
Students will assemble switching devices while using switching technology on the LAN side of a network. Students will also produce a wireless network using wireless technology points. PREREQUISITE: CIS 220.

**CJUS 115 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.

**CJUS 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.

**CJUS 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.

**CJUS 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.

**CJUS 200 COMMUNITY CORRECTIONS CREDITS: 3**  
This course will focus on alternative methodologies of corrections as opposed to traditional correctional institutions such as prisons and jails. The student will learn the philosophies and structures of alternative correctional programs in the criminal justice system and how they impact victims, offenders, and society.

**CJUS 201 INTRODUCTION TO CRIMINAL JUSTICE CREDITS: 3**  
The history and social significance of the law enforcement profession will be studied along with the role, responsibilities, and demands upon law enforcement officers in our society. The role of a law enforcement officer as it relates to the philosophy of community policing as well as the history of community policing will be explored. Topics concerning motivation, civil liability, job stress, and sociological concepts which are applicable in the practice of law enforcement will be covered. The student will learn about culture, socialization, social deviance, social stratification, gender and minority inequalities, marriage and family relationships, education, and social change in collective behavior.

**CJUS 205 CRIMINAL JUSTICE FORENSICS CREDITS: 3**  
This course explores how specific technologies are used by professionals in the criminal justice system to apprehend offenders, secure convictions on the guilty, exonerate the innocent, and make the criminal justice system more efficient. Views from the past and into the future will give student perspective on the ever-changing forensics in the criminal justice system and the demands for modernization and the cost impact to society.

**CJUS 210 CONTEMPORARY SECURITY PRACTICES CREDITS: 3**  
This course explores the practices of security professionals. Students will explore topics and tactics of security organizations and the personnel they employ. Specific tasks covered in this course include patrol, investigations, risk assessment, and emergency management. Also explored will be the technology and equipment used in the field to safeguard resources.

**CJUS 215 ETHICS IN CRIMINAL JUSTICE CREDITS: 3**  
The focus of this course is on the ethical decisions made in the criminal justice system and ethical predicaments placed on criminal justice professionals. Ethical theory from ancient Greece to contemporary western culture will be explored and applied in confronting ethical issues. Critical analysis regarding justice, duty, freedom, punishment, happiness, and other topics will give students an understanding of ethical issues, considerations and approaches in the field.

**CJUS 220 TERRORISM AND COUNTERTERRORISM CREDITS: 3**  
This course provides a global perspective of terrorism and the impact on societies. It will explore various analytical approaches to the study of terrorism: identifying terrorist groups, reviewing terrorist tactics, and examining police and governmental responses to reduce or control the incidence of terrorism.

**CJUS 225 DOMESTIC VIOLENCE CREDITS: 3**  
This course explores domestic and family violence. Students will examine relative perspectives such as feminist, psychological, sociological, historical, and legal. Specific course topics include patriarchy, marital rape, domestic assault, and child sexual abuse. Theories of violence, alternatives to violent interactions and the criminal justice system's response will give students an understanding of the impact of domestic violence crimes on society.

- CJUS 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.
- CJUS 230 AGENCY ORGANIZATION AND MANAGEMENT** **CREDITS: 3**  
 This course explores administrative practices of a multitude of law enforcement agencies. It will study types of agencies and command and control structure. Organizational theory and management will also be covered to include personnel management, policy and procedure, and operational methodologies.
- CJUS 235 CRIMINOLOGY** **CREDITS: 3**  
 The focus of this course is on factors related to crime in America, including basic issues, scope, and economic impact. Students will examine the causes of criminal behavior, policy implications, and research. Explanations and measurements of crime, criminal law, characteristics of criminals and victims, white-collar, organized, and sexual crimes will also be studied.
- CJUS 240 COURT SYSTEMS AND PRACTICES** **CREDITS: 3**  
 The focus of this course is the judicial system which makes up one third of the entire criminal justice system. Court Systems and Practices is an overview of the American judicial system. The course identifies the roles of judicial officers and other professionals responsible for judicial operations.
- CJUS 245 LAW ENFORCEMENT OPERATIONS AND PROCEDURES** **CREDITS: 3**  
 This course introduces daily law enforcement activities and procedures. It examines law enforcement response to routine and emergency calls for service and various types of situations common to law enforcement officers. The course explores use of force, arrest procedures, field interviews, police reporting, and ethics. The class will identify gang activity, signs and indicators of drug abuse, and handling of civil disobedience. There will be an emphasis on courtroom testimony, occupational hazards, and communications.
- CJUS 275 LAW ENFORCEMENT ACADEMY** **CREDITS: 14**  
 The WDT Law Enforcement Academy is 560 hours of training designed to prepare students for 21<sup>st</sup> century law enforcement. Course work is physically demanding, cogitatively challenging, and conducted under the instruction and supervision of credentialed professionals with industry experience. The academy will meet or exceed all standards established by the State of South Dakota Law Enforcement Training Commission to ready students for entry level law enforcement careers upon graduation. **PREREQUISITES: STUDENTS ENTERING THE WDT ACADEMY MUST HAVE SUCCESSFULLY COMPLETED MATH 100 OR HIGHER AND ENGL 101 OR HIGHER; OR ACQUIRE PROGRAM DIRECTOR APPROVAL. IN ADDITION, STUDENTS MUST BE AWARE OF AND ADHERE TO THE INDUSTRY AGE REQUIREMENTS AS OUTLINED IN THE COURSE CATALOG.**
- DEN 110 DENTAL SCIENCES** **CREDITS: 2**  
 In this course, instruction will include information on the prevention of oral disease and treatment of periodontal disease as well as infection control standards. Students will be able to identify the signs, symptoms and actions recommended for medical emergencies through the use of role play. Sterilization/disinfection techniques will be taught along with proper patient charting and record keeping. **CO-REQUISITE: DEN 150.**
- DEN 115 DENTAL SCIENCES LAB** **CREDITS: 1**  
 This course will provide students with the opportunity to begin developing clinical skills by assisting in a variety of clinical assignments.
- DEN 120 DENTAL RADIOGRAPHY** **CREDITS: 2**  
 Students learn the history and background of radiology and radiation physics. They are instructed in the components of dental x-ray machine, types of radiation, visual characteristics of the radiographic beam, radiation effects and measurement. They learn the purposes of x-rays as a diagnostic tool, with their risks and benefits. Detailed description of the effect of radiation exposure to the human body and the protocols for patient and dental assistant safety are stressed. They will learn common production errors, processing techniques, mounting procedures, identification of radiographic landmarks, the procedures and state policies required for dental offices to ensure quality radiographs, radiation safety, and the use of imaging systems for dental purposes.
- DEN 125 ORAL EMBRYOLOGY AND HISTOLOGY** **CREDITS: 2**  
 This course focuses on the study of tissue morphology, embryonic development, and histologic features of the structure of the oral cavity. This course emphasizes the importance of general anatomy and dental anatomy. The student will learn about the body system and how this relates to the dental patient.
- DEN 130 DENTAL MATERIALS AND INSTRUMENTATION** **CREDITS: 2**  
 This course is the study of characteristics, physical properties, selection, manipulation, uses, and care of dental materials commonly used in dental practices. Safety precautions relating to each material and procedure are incorporated. Upon completion, students will be able to demonstrate proficiency in the laboratory and clinical application of routinely used dental materials. Instruction will also address dental hand instruments and hand pieces along with their use and function.

- DEN 135 DENTAL RADIOGRAPHY LAB CREDITS: 2**  
 In this course, students will be provided the opportunity to begin developing clinical skills by obtaining dental radiographs in a variety of clinical assignments. Students will expose and process diagnostically acceptable intraoral and extraoral dental films, using both the paralleling and bisecting techniques while applying knowledge of safety protocols and state policies to ensure the highest quality radiographs. PREREQUISITE: DEN 120.
- DEN 150 PRECLINICAL DENTAL SCIENCES CREDITS: 2**  
 This course is an introduction to the general dental practice as well as information regarding dental specialties. Its focus is on dental team dynamics and the meaning of a dental professional. It also teaches good patient communication concerning counseling patients on good hygiene and nutrition, the legal and ethical issues involved in dental care and basic terminology. CO-REQUISITE: DEN 110.
- DEN 152 DENTAL SCIENCES EXPANDED FUNCTIONS LAB CREDITS: 1**  
 This course is a continuation of DEN 115 with the addition of expanded functions applications. PREREQUISITES: DEN 110 and DEN 150.
- DEN 154 DENTAL CLINICAL PRACTICE I CREDITS: 2**  
 Students will have the opportunity to apply their skills and knowledge in select dental offices of varying specialties. Students will assist dentists in accomplishing necessary dental procedures for patients while rotating through the clinical areas of obtain maximum clinical exposures and experiences. All clinical procedures are performed with supervision of participating dentists and dental assistants while periodically evaluated by the preceptor. CO-REQUISITES: DEN 135 and DEN 152.
- DEN 156 DENTAL CLINICAL PRACTICE II CREDITS: 6**  
 This course is a continuation of DEN 154 where students will have the opportunity to gain additional time rotating through clinical areas to fulfill the required 320 clinical hours. All clinical procedures are performed with supervision of participating dentists and dental assistants while periodically evaluated by the preceptor. PREREQUISITE: DEN 154.
- ECON 202 PRINCIPLES OF MACROECONOMICS CREDITS: 3**  
 The course is designed to provide students with a better understanding of macroeconomic issues that affect their daily lives. Economics is about making choices, i.e., how we use our limited "means" to satisfy our unlimited wants. Macroeconomics considers how the economy as a whole makes those decisions, both domestically and on the global scene.
- ED 105 MENTORSHIP CREDITS: 1**  
 Mentorship is intended for Western Dakota Technical Institute faculty who are working toward their first post-secondary credential with the State of South Dakota through the Office of Career and Technical Education. The course will include various topics such as advising, exam writing, managing difficult students, assessment, et cetera to help the faculty member to be a successful instructor.
- ED 106 SUCCESSFUL TEACHING APPROACHES FOR DISTANCE LEARNING CREDITS: 1**  
 This class will explore learning theory and the application of adult learning practices as used in e-learning environments.
- ED 107 ONLINE LEARNING PLATFORM CREDITS: 1**  
 Students will design an online course using WDT's current online learning platform.
- ED 108 ONLINE TEACHING BASICS CREDITS: 1**  
 This class will cover online teaching basics for instructors who wish to teach online courses at WDT but who do not want to create the course.
- EET 102 INTRODUCTION TO ENVIRONMENTAL SCIENCES CREDITS: 4**  
 This course is a study of environmental interactions, including population and cultural problems, resource utilization, and impacts upon biotic systems. Material is presented to enable students to better understand and evaluate contemporary environmental problems and the application of science to their solutions.
- EET 103 ENVIRONMENTAL INSTRUMENTATION CREDITS: 4**  
 This course exposes the student to a variety of analytical techniques and instruments utilized in environmental chemical analysis. It is designed to couple theory of equipment operation with a basic understanding of the chemical principles involved. The laboratory time is divided between practical hands-on bench work and field experiences.
- EET 106 INTRODUCTORY FIELD METHODS CREDITS: 3**  
 This course introduces the field techniques used in environmental site assessment, groundwater monitoring, and groundwater testing and includes soil and surface water sampling, groundwater sampling, water quality testing, and water level monitoring. Students will explore topics of geophysical surveying, water well installation, piezometer installation, and techniques to determine the direction of groundwater flow.
- EET 202 WATER QUALITY CREDITS: 3**  
 Chemical and physical factors involved in evaluating water quality are examined with emphasis on water quality deterioration from landfills, underground storage tanks, and hazardous waste. Sampling techniques of groundwater, soil, surface water, quality assurance, quality control, and data processing techniques are included. Field exercises to acquire water quality data and to service data gathering equipment will be conducted. Safety procedures are stressed. PREREQUISITES: EET 102 or EET 106, CHEM 106 and CHEM 106L, and MATH 101 or HIGHER.

- EET 203 ENVIRONMENTAL HAZMAT AWARENESS CREDITS: 2**  
Hazardous materials recognition, operations at incidents involving the release of hazardous materials and the role of environmental engineering technicians will be covered. This course will meet the EPA/OSHA requirements for awareness level certification.
- EET 204 ENVIRONMENTAL REGULATIONS CREDITS: 2**  
This course presents an overview of the regulations that are related to environmental protection, including OSHA regulations, Clean Air Act, SARA, RCRA, and similar regulations. This course also provides an awareness of why the regulations exist, how they are enforced, penalties for noncompliance, and practical experience in interpretation of the regulations.
- EET 222 INTRODUCTION TO WASTEWATER TECHNOLOGIES CREDITS: 3**  
This course provides an introduction to the causes of water pollution, the reasons for treating polluted waters, and the fundamentals of wastewater treatment. Students will study the basic principles of treatment plant operation and the processes commonly used in pollution control facilities. Investigation of terms, mathematics, and problem-solving techniques commonly used by wastewater treatment personnel will be included.
- EET 225 AIR QUALITY CREDITS: 2**  
This course will introduce the student to the concepts and terms essential to understanding the major issues surrounding air pollution. Basic atmospheric processes will be presented as they affect delivery and dispersion of pollutants. Sampling and analysis methods will be discussed. The health effects of various pollutants and air toxics will be presented in order to understand the purpose of air pollution regulations. The increasing concerns regarding indoor air quality will be presented along with approaches to investigation and control. PREREQUISITES: EET 102 and EET 106.
- EET 235 CONSTRUCTION MATERIALS SAMPLING & TESTING CREDITS: 3**  
This course will cover the materials, proportioning, mixing, placing, finishing, curing, sampling, and laboratory/field testing techniques commonly used for Portland Cement Concrete. It will cover the testing and properties of asphalt cement and asphalt concrete. The course also will cover gradation, moisture control, and density of gravels. Students will evaluate the capacity of cement and concrete to withstand stress and strain. This course will prepare students for the certification exam from the American Concrete Institute.
- EET 250 SOILS TESTING CREDITS: 3**  
This course covers the actual hands-on performance of laboratory and field tests on soils used for the construction of civil engineering projects. Most of the course is devoted to the lab and field procedures along with the necessary measurements, calculations, and reports required for an accurate soil analysis. PREREQUISITE: EET 102.
- EET 251 ENVIRONMENTAL GEOLOGY CREDITS: 3**  
This course introduces geology as it relates to human activities and is designed for both non-science majors and students interested in environmental careers. The course emphasizes geologic hazards including earthquakes, volcanic eruptions, flooding, mass movements, and pollution of water and soil resources. It also examines waste disposal along with related topics in medical geology and environmental law.
- EET 253 PRINCIPLES OF WATER RESOURCES CREDITS: 3**  
This course will provide students a basic knowledge of the underlying principles of hydrology. In addition to an introduction to surface water hydrology, this course also introduces students to the basic concepts of groundwater hydrology. Other topics explored in some detail include the hydrologic cycle, dams, federal water agencies and their responsibilities, an introduction to drinking water and waste water treatment, water use conflicts, and emerging water issues. PREREQUISITES: EET 102, EET 103, and MATH 101 or HIGHER.
- EET 255 INTRODUCTION TO GEOMORPHOLOGY CREDITS: 3**  
In this introductory geomorphology course, students will study how stream processes shape landforms. Emphasis is placed on a basic understanding of geomorphic processes. Relationships between properties of earth materials and the forces applied to them by gravity, wind, ice, water, waves, and humans also will be explored. Lectures will address the conceptual basis of geomorphology, while the laboratory exercises will combine interpretation of aerial photographs and experiments on the water table with other hands-on activities that are both practical and empirical. PREREQUISITES: EET 103, EET 106, and EET 253.
- EET 298 TECHNICAL COOPERATIVE WORK EXPERIENCE CREDITS: 3**  
The cooperative work experience involves an individually developed, contracted work experience under the guidance of an approved employer, combined with a structured series of on-campus meetings with a program coordinator. Students have an opportunity to develop and pursue challenging work experiences which relate directly to their individual career plan.
- EET 299 FIELD INTERNSHIP CREDITS: 2**  
Environmental or geotechnical work experience in business, industry, or government. PREREQUISITE: ADVISOR APPROVAL.
- ELT 217 COMPUTER HARDWARE INSTALLATION & TROUBLESHOOTING CREDITS: 4**  
This course will provide a basic understanding of how personal computers work and provide an opportunity for students to obtain the knowledge and skills necessary to service PC hardware and supported peripherals. Upon conclusion of this course, students will be able to understand basic components of computer hardware systems, as well as upgrading and troubleshooting computers. PREREQUISITES: IEL 132 and IEL 133.

**EMS 101 EMERGENCY MEDICAL TECHNICIAN****CREDITS: 6**

This course consists of all aspects of emergency medical care at the Emergency Medical Technician level in accordance with the National Registry and the Department of Transportation guidelines. You must be at least 18 years of age to be eligible to certify as an EMT. If you are not yet 18 years old, you may enroll in the course with the understanding that your certificate will be held until the age requirement is met.

**EMS 210 PARAMEDIC CARDIOLOGY****CREDITS: 4**

This course consists of therapeutic communications, documentation, medical terminology, medication administration, airway management, ventilation, anatomy and physiology, geriatrics, patients with special challenges, acute interventions in chronic care, abuse, neurology, toxicology, hematology, cardiology, 12-lead EKG, advanced cardiac life support, and pediatric life support. PREREQUISITES: Current CPR Card, current EMT Certification, HC 114, and HC 213. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. CO-REQUISITES: EMS 215 and EMS 220.

**EMS 215 PARAMEDIC PREPARATORY I****CREDITS: 4**

This course consists of introduction to pre-hospital care, EMS systems, role and responsibilities of the paramedic, illness and injury prevention, ethics in pre-hospital care, general principles of pharmacology, life span development, endocrinology, allergies and anaphylaxis, and behavioral/psychiatric emergencies. PREREQUISITES: CURRENT CPR CARD, CURRENT EMT CERTIFICATION, HC 114, and HC 213. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. CO-REQUISITES: EMS 210 and EMS 220.

**EMS 220 PARAMEDIC MEDICAL****CREDITS: 4**

This course consists of well-being of the paramedic, research in EMS, general pathophysiology, IV administration, history taking, techniques of physical exam, patient assessment, pulmonology, gastroenterology, urology, infectious and communicable diseases, toxicology, gynecology, obstetrics, neonatology, and neonatal resuscitation. PREREQUISITES: CURRENT CPR CARD, CURRENT EMT CERTIFICATION, HC 114, and HC 213. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. CO-REQUISITES: EMS 210 and EMS 215.

**EMS 225 PARAMEDIC PREPARATORY II****CREDITS: 4**

This course consists of emergency vehicle operations, ambulance operations, trauma assessment, assault assessment, assessment-based management, advanced medical life support, and pre-hospital trauma life support. PREREQUISITES: CURRENT CPR CARD, CURRENT EMT CERTIFICATION, EMS 210, EMS 215, AND EMS 220. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. CO-REQUISITE: EMS 230.

**EMS 230 PARAMEDIC SPECIAL OPERATIONS****CREDITS: 2**

This course consists of environmental emergency management, clinical decision making, and NREMT skill practice. PREREQUISITES: CURRENT CPR CARD, CURRENT EMT CERTIFICATION, CURRENT ACLS, EMS 210, EMS 215, and EMS 220. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. CO-REQUISITE: EMS 225.

**EMS 250 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 EMT CERTIFICATION, CURRENT ACLS, EMS 210, EMS 215, AND EMS 220. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. PROGRESSION: PROGRESSION TO EMS 250 LIVE CLINICAL SITES REQUIRES THE STUDENT TO HAVE SUCCESSFULLY PASSED ACLS, AND DEMONSTRATE COMPETENCY AS INDICATED BY THE NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS PARAMEDIC PRACTICAL SKILL SHEETS IN THE AREAS OF PRACTICE TO BE PERFORMED DURING THE CLINICAL ROTATION.

**EMS 255 PARAMEDIC CLINICAL II****CREDITS: 4**

The student's clinical rotation will be in the emergency room. PREREQUISITES: CURRENT CPR CARD, CURRENT EMT CERTIFICATION, CURRENT ACLS, EMS 210, EMS 215, AND EMS 220. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE. PROGRESSION: PROGRESSION TO EMS 255 LIVE CLINICAL SITES REQUIRES THE STUDENT TO HAVE SUCCESSFULLY PASSED PHTLS AND AMLS, AND DEMONSTRATE COMPETENCY AS INDICATED BY THE NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS PARAMEDIC PRACTICAL SKILL SHEETS IN THE AREAS OF PRACTICE TO BE PERFORMED DURING THE CLINICAL ROTATION.

- EMS 275 PARAMEDIC INTERNSHIP** **CREDITS: 10**  
 The student's clinical rotations will include ambulance field training. **PREREQUISITES:** CURRENT CPR CARD, CURRENT EMT CERTIFICATION, CURRENT PALS, CURRENT ACLS, CURRENT PHTLS, CURRENT AMLS, EMS 225, EMS 230, EMS 250 AND EMS 255. **GRADE REQUIREMENT:** A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM. **PROGRESSION:** PROGRESSION TO EMS 275 LIVE CLINICAL SITES REQUIRES THE STUDENT TO DEMONSTRATE COMPETENCY AS INDICATED BY THE NATIONAL REGISTRY OF EMERGENCY MEDICAL TECHNICIANS PARAMEDIC PRACTICAL SKILL SHEETS IN THE AREAS OF PRACTICE TO BE PERFORMED DURING THE CLINICAL ROTATION.
- EMS 280 NREMT PREP** **CREDITS: 2**  
 This course serves as a comprehensive review for the NREMT Paramedic exam. Students will assess their knowledge in required content areas of Paramedicine including medical emergencies, trauma emergencies, cardiac emergencies, airway, and operations. **GRADE REQUIREMENT:** A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PARAMEDIC PROGRAM.
- ENGL 091 BASIC WRITING** **CREDITS: 2**  
 This course will provide the basic elements of grammar and the writing process. Students will learn to communicate effectively by clarifying messages, analyzing a reader's needs, and identifying different writing types.
- ENGL 101 COMPOSITION** **CREDITS: 3**  
 This course instructs students in reading critically and writing clearly, correctly, and persuasively. Students will study principles of grammar, rhetoric, and logic in order to analyze and compose text effectively. This includes work on personal, expository, and research essays. **PREREQUISITE:** ACHIEVED REQUIRED SCORE ON A NATIONAL or A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN ENGL 091 or ENGL 201.
- ENGL 102 CAREER COMMUNICATIONS** **CREDITS: 2**  
 This course covers the communication skills required for success during the job hunt and on the job.
- ENGL 201 TECHNICAL WRITING I** **CREDITS: 3**  
 This course presents the basic principles and forms of written communication in the workplace. Instruction leads students through the planning tasks, identifying audiences, and gathering information. More emphasis is on reports. **PREREQUISITE:** ACHIEVED REQUIRED SCORE ON A NATIONAL or A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN ENGL 091.
- ENGL 202 TECHNICAL COMMUNICATIONS** **CREDITS: 3**  
 Students will prepare and deliver professional oral and written communications required in the workplace. **PREREQUISITE:** ENGL 101 or ENGL 201.
- FFT 110 BUILDING CONSTRUCTION** **CREDITS: 3**  
 The student will study various construction methods, as well as building materials and systems. The effect fire will have on given structures will be emphasized. **PREREQUISITE:** FFT 121.
- FFT 116 HAZARDOUS MATERIALS OPERATIONS** **CREDITS: 3**  
 Hazardous materials recognition, operations at incidents involving the release of hazardous materials, and the role of emergency response agencies will be covered. This course will meet the EPA/OSHA and NFPA requirements for operations level certification. **PREREQUISITE:** FFT 121 or FFT 123.
- FFT 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, L-180, 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 apparatus and the ability to perform fire ground hydraulic calculations will be emphasized.
- FFT 151 WILDLAND PUMPS AND SAWS CREDITS: 2**  
 Instruction continues from Wildland Firefighter I with the presentation of NWCG courses S-211 (Portable Pumps) and S-212 (Saws). PREREQUISITE: FFT 123.
- FFT 190 PHYSICAL FITNESS II CREDITS: 1**  
 This course is the second course in a series of four courses preparing students for the Red Card Pack Test, the Firefighter Combat Challenge Test, and the CPAT test to meet the hiring requirements of municipal and wildland fire departments. Health, physical conditioning, and nutrition will be covered as they relate to general fitness for meeting the physical requirements and demands for the job of firefighter. Strength, stamina, and agility will be emphasized.
- FFT 215 WILDLAND/URBAN INTERFACE FIRE SUPPRESSION & PREVENTION CREDITS: 3**  
 Presentation of NWCG course S-215 will develop an understanding of the complexities associated with operations in a wildland urban interface. Students will study the concepts of situational awareness and the challenges of dealing with human factors. Structure triage and preplanning tools will be addressed along with specific strategies and tactics unique to the wildland urban interface environment. PREREQUISITE: FFT 123.
- FFT 218 STRATEGY & TACTICS CREDITS: 3**  
 This course covers basic fire suppression attack strategies and tactics and incident management systems. Emphasis will be on firefighter safety and risk reduction. PREREQUISITE: FFT 121 or FFT 123.
- FFT 232 STRUCTURAL FIREFIGHTER II CREDITS: 3**  
 The course is designed to expand on the knowledge and skills learned in FFT 121/FFT 122. It will prepare students in developing knowledge and skill proficiency identified in NFPA 1001, Standard for Fire Fighter Professional Qualifications, and the Job Performance Requirements (JPR's) at the operations level of NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. PREREQUISITES: FFT 121, FFT 122, and FFT 123.
- FFT 233 FIRE CAUSES & INVESTIGATIONS CREDITS: 3**  
 This course will assist the firefighter in determining the origin and cause of a fire, identifying and preserving evidence, and determining when the assistance of a more highly trained investigator is needed.
- FFT 234 RESCUE PRACTICES FOR THE FIRE SERVICE CREDITS: 4**  
 In addition to a basic working knowledge of ropes and knots, the student will attain knowledge in and learn techniques for accomplishing high angle rescue, motor vehicle extrication, trench rescue, and confined space rescue.
- FFT 240 PHYSICAL FITNESS III CREDITS: 1**  
 This course is the third course in a series of four courses preparing students for the Red Card Pack Test, the Firefighter Combat Challenge Test, and the CPAT test to meet the hiring requirements of municipal and wildland fire departments. Health, physical conditioning, and nutrition will be covered as they relate to general fitness for meeting the physical requirements and demands for the job of firefighter. Strength, stamina, and agility will be emphasized.
- FFT 290 PHYSICAL FITNESS IV CREDITS: 1**  
 This course is the final course in a series of four courses preparing students for the Red Card Pack Test, the Firefighter Combat Challenge Test, and the CPAT test to meet the hiring requirements of municipal and wildland fire departments. Health, physical conditioning, and nutrition will be covered as they relate to general fitness for meeting the physical requirements and demands for the job of firefighter. Strength, stamina, and agility will be emphasized.
- FFT 298 INTERNSHIP CREDITS: 3**  
 This course is designed to give students the opportunity to apply their skills while working with trained professional firefighters assigned to shift work at a staffed fire station and to apply their skills while working in structure, wildland, and fire prevention settings. Students will learn the daily duties and responsibilities of working at a professional fire station. Students will be expected to perform the daily duties of a firefighter. Students may respond to emergencies and incidents as a crew member assigned to an apparatus. PREREQUISITES: FFT 121 and FFT 123.
- HC 114 ANATOMY & PHYSIOLOGY FOR THE HEALTH PROFESSIONS CREDITS: 3**  
 Students will gain an introductory understanding of the structure and function of the human body. This course emphasizes concepts essential for student success in health program curriculum as well as in practical, work-related environments.
- HC 124 INTRODUCTION TO PATIENT CARE CREDITS: 1**  
 This course is designed to provide the student with the knowledge necessary to provide safe patient care at an introductory level. CLINICAL PROGRESSION: STUDENTS MUST BE MAINTAINING A "C" OR BETTER IN HC 124, HAVE COMPLETED HC 124 WITH A "C" OR BETTER WITHIN THE LAST 6 MONTHS, or HAVE NURSING DIRECTOR APPROVAL TO PARTICIPATE IN HC 126 CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM A WDT PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

- HC 126 INTRODUCTION TO PATIENT CARE LAB AND CLINICAL CREDITS: 2**  
 This course is designed to provide the student with the skills and clinical experience necessary to provide safe patient care at an introductory level. CO-REQUISITE: MUST BE CURRENTLY ENROLLED IN HC 124, PASSED HC 124 WITH A MINIMUM GRADE OF "C" IN THE PAST 6 MONTHS, or OBTAIN NURSING DIRECTOR APPROVAL. CLINICAL PROGRESSION: STUDENTS MUST MAINTAIN A "C" OR BETTER IN HC 124 and HC 126 TO PARTICIPATE IN HC 126 CLINICALS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM A WDT PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.
- HC 130 MEDICAL COMPUTERIZED OFFICE APPLICATIONS CREDITS: 2**  
 This course is designed to teach the student how to manage the medical office in a computerized setting. The student will learn to build databases and use them in many different ways. Once the databases are set up, the student will learn other office management skills such as entering patient data, arranging appointments, keeping track of charges and payments, filing insurance electronically, etc.
- HC 135 MEDICAL LAW AND ETHICS CREDITS: 2**  
 This course introduces the student to the legal principles and ethical issues affecting all healthcare professionals today.
- HC 145 ELECTRONIC HEALTH RECORDS CREDITS: 2**  
 This course will give students the foundation of knowledge and skill to utilize electronic health records in various healthcare settings.
- HC 200 PHARMACOLOGY FOR HEALTHCARE CREDITS: 3**  
 This course will cover the knowledge of common medications, usage, and safety associated with them.
- HC 205 PROFESSIONALISM IN HEALTHCARE CREDITS: 1**  
 Although hands-on technical skills remain a high priority in the healthcare field, good character, a strong work ethic, and personal/professional traits and behaviors are increasingly important. This course covers the professional standards that apply to all healthcare workers and the shared responsibility to provide the highest quality of healthcare services. Emphasis is placed on professionalism, communication, attitude, behaviors, expectations, and appearance.
- HC 213 MEDICAL TERMINOLOGY I CREDITS: 3**  
 Students will be taught the basic techniques of medical word building. These techniques will be applied to acquire an extensive medical vocabulary. The course introduces students to medical terms relating to the anatomy and physiology of body systems, pathology, diagnosis, medical treatments, and procedures.
- HC 225 PATHOPHYSIOLOGY CREDITS: 3**  
 This course includes the study of various diseases and disorders of each of the body systems. PREREQUISITES: HC 114 and HC 213.
- HVAC 121 ELECTRICAL APPLICATIONS FOR HVAC I CREDITS: 4**  
 This course covers general knowledge of basic electrical applications used by industry. Use of basic electrical equipment including multimeters is stressed. Topics include current, voltage, resistance, symbols, and basic AC and DC circuits. Introduction to automatic component controls and motors in their typical applications are also included.
- HVAC 125 HVAC INSTALLATION I CREDITS: 3**  
 This course provides a comprehensive introduction to designing and installing heating, ventilating, and air-conditioning systems. Students learn basic principles of heat transfer and the basic refrigeration cycle applied to air conditioning.
- HVAC 126 HVAC INSTALLATION I LAB CREDITS: 4**  
 Laboratory designed to accompany HVAC 125.
- HVAC 135 ELECTRICAL APPLICATIONS FOR HVAC II CREDITS: 3**  
 This course continues the coverage of electrical applications used by heating, ventilating, air-conditioning installers. Students learn a more thorough explanation of voltage and current, including basic measuring techniques and safety concerns. PREREQUISITE: HVAC 121.
- HVAC 145 HVAC INSTALLATION II CREDITS: 3**  
 This course provides advanced instruction on designing and installing heating, ventilating, air-conditioning systems. Students also will go into more depth on topics such as refrigerant handling procedures, gas piping and sizing, chimney and vent calculations, and the uniform mechanical code. This course also includes preparation for and completion of the universal heating, ventilating, air-conditioning certification exam. The examination requires an additional fee. PREREQUISITE: HVAC 125.
- HVAC 146 HVAC INSTALLATION II LAB CREDITS: 4**  
 Laboratory designed to accompany HVAC 145. PREREQUISITE: HVAC 126.
- HVAC 220 HVAC/R I CREDITS: 3**  
 This course is designed to introduce the fundamentals of low, medium, and high temperature commercial refrigeration. This includes the study of commercial freezers, walk-in boxes, and commercial refrigeration equipment. PREREQUISITES: ALL FIRST AND SECOND SEMESTER HVAC COURSES. CO-REQUISITE: HVAC 221.

- HVAC 221 HVAC/R I LAB** **CREDITS: 4**  
 This course is designed to accompany HVAC/R I. PREREQUISITES: ALL FIRST AND SECOND SEMESTER HVAC COURSES. CO-REQUISITE: HVAC 220.
- HVAC 225 ELECTRICAL APPLICATIONS FOR HVAC/R III** **CREDITS: 3**  
 This course provides a more in-depth knowledge on diagnosing problems in electrical components and electrical circuits that make up refrigeration, heating, and air-conditioning systems. Students will apply learned knowledge to troubleshoot HVAC systems. PREREQUISITES: ALL FIRST AND SECOND SEMESTER HVAC COURSES.
- HVAC 230 HVAC/R II** **CREDITS: 3**  
 This course is a continuation of HVAC/R I. Commercial air conditioning, chilled-water, hydronic heating, and geothermal heat pump systems will be introduced. Students will study indoor air quality, psychometrics, air distribution, and balancing. PREREQUISITES: HVAC 220 and HVAC 221. CO-REQUISITE: HVAC 231.
- HVAC 231 HVAC/R II LAB** **CREDITS: 4**  
 This course is designed to accompany HVAC/R II. PREREQUISITES: HVAC 220 and HVAC 221. CO-REQUISITE: HVAC 230.
- HVAC 235 ELECTRICAL APPLICATIONS FOR HVAC/R IV** **CREDITS: 3**  
 This course is a continuation of previous HVAC electrical applications with emphasis on commercial and special refrigeration electrical equipment and components. Students will be introduced to basic direct digital controls, pneumatics, and electronic control circuits used in HVAC/R systems. PREREQUISITE: HVAC 225.
- HVAC 240 SPECIALIZED HVAC/R EQUIPMENT** **CREDITS: 2**  
 This course studies various types of commercial ice machines, water coolers, and common domestic HVAC/R appliances. Students will also be introduced to extra-low-temperature refrigeration, cascade systems, and mobile refrigeration equipment. PREREQUISITES: ALL FIRST THROUGH THIRD SEMESTER HVAC COURSES.
- IEL 122 ELECTRICAL CODE STUDY I** **CREDITS: 3**  
 This course deals with commercial and industrial wiring standards with heavy emphasis on the National Electrical Code. Electrical services are studied in more depth, grounding and bonding are emphasized, and wiring methods for several types of locations are studied. PREREQUISITE: IEL 130.
- IEL 123 INDUSTRIAL DATA COMMUNICATION** **CREDITS: 2**  
 This course will cover the operation and installation of data communication cabling systems. Students will be introduced to telephone and video system operation and cable installation. In addition, an introduction to networking is given with special emphasis on cabling and fiber optics. This course is designed to prepare the industrial electrician for the ever-increasing demand for installation of cabling systems in residential, commercial, and industrial projects. PREREQUISITES: IEL 132 and IEL 133.
- IEL 129 INTRODUCTION TO ELECTRICAL WIRING LAB** **CREDITS: 1**  
 This is a lab course intended to accompany the IEL 130 – Introduction to Electrical Wiring course. Through actual hands-on experiments on developed trainers in the lab, the student will be able to reinforce the concepts learned in IEL 130. PREREQUISITES: IEL 132 and IEL 133.
- IEL 130 INTRODUCTION TO ELECTRICAL WIRING** **CREDITS: 2**  
 This course is designed to emphasize the importance of safety and to provide a foundation for practical electrical wiring. Information included begins with a general introduction of the National Electrical Code and laws pertaining to electrical licensing and installation. Theory and lab experience are used in the study of residential wiring principles and common residential circuit hookups. PREREQUISITES: IEL 132 and IEL 133.
- IEL 132 ELECTRICAL FUNDAMENTALS** **CREDITS: 5**  
 This course introduces the fundamental concepts of basic electricity-AC, DC, and solid state. It includes basic circuit analysis of series circuits, parallel circuits, series-parallel circuits, and OHMS law. A study of electrical quantities and measuring basic quantities using a VOM and the oscilloscope are included. This course covers the physical make up and characteristics of electrical components and how to analyze and troubleshoot circuits.
- IEL 133 ELECTRICAL FUNDAMENTALS LAB** **CREDITS: 7**  
 This course addresses the lab study of AC, DC, solid state, series, parallel, series-parallel, inductance, and capacitance. Measuring basic quantities using a VOM and the oscilloscope and analyzing and troubleshooting circuits are included. Voltages and currents are measured to demonstrate circuit characteristics.
- IEL 135 BASIC ELECTRICAL MATERIALS AND DEVICES** **CREDITS: 1**  
 This course is designed to cover essential electrical materials, identify the industry's commonly used materials, and understand its terminology. PREREQUISITES: IEL 132 and IEL 133.
- IEL 140 WELDING & FABRICATION FOR LIGHT COMMERCIAL APPLICATIONS** **CREDITS: 2**  
 This course is designed to teach students skills to cut, fabricate, and weld brackets, hangers for conduits and panels, stands, and hanging platforms for transformers using oxyacetylene cutting and wire feed (GMAC) welding procedures.

- IEL 211 ELECTRICAL MOTOR CONTROL CREDITS: 3**  
 This course is intended to familiarize the student with motor control theory from very basic concepts to much more complicated circuits. This course is intended to be taken concurrently with IEL 216 – Motor Control Lab. PREREQUISITES: IEL 223 and IEL 226.
- IEL 213 ELECTRICAL HEATING AND APPLIANCES CREDITS: 2**  
 This course will provide the student with an understanding of electrical heat and electrical heating control circuits. Installation, maintenance, and troubleshooting of electrical heating systems are an important component of an industrial electrician's career. This course will also introduce the student to air conditioning and heat pump operation as well as the essentials needed to understand control systems on gas and oil heating systems. PREREQUISITES: IEL 132 and IEL 133.
- IEL 214 ELECTRICAL CODE STUDY II CREDITS: 2**  
 This course deals with commercial and industrial wiring standards with heavy emphasis on the National Electrical Code. Electrical services are studied in more depth, grounding and bonding are emphasized, and wiring methods for several types of specific locations are studied. PREREQUISITE: IEL 122.
- IEL 216 ELECTRICAL MOTOR CONTROL LAB CREDITS: 2**  
 This course utilizes a hands-on approach to learning motor control circuit wiring. The student will complete the control wiring of sample circuits using the developed trainers in the lab. This hands-on experience greatly helps the student in retaining the information that is presented in the IEL211-Electrical Motor Control course. PREREQUISITES: IEL 130, IEL 223, and IEL 226. CO-REQUISITE: IEL 211.
- IEL 218 WIRING LAB I CREDITS: 3**  
 The purpose of this course is to provide the student with the basic skills and technical knowledge required to enter the electrical construction field as an inside wire person. The course activities provide varied applications of practical job and shop practices and experience in the use of an electrician's tools and equipment. Actual on-the-job training is obtained through the rough-in wiring of WDT projects. PREREQUISITES: IEL 129 and IEL 130.
- IEL 220 WIRING LAB II CREDITS: 3**  
 This course is a study of the National Electrical Code in relation to commercial and industrial electrical installations. Actual electrical installations, compiling pertinent facts for bidding purposes, and on-the-job training through the wiring of WDT projects are included in this course. PREREQUISITE: IEL 218.
- IEL 221 PROGRAMMABLE LOGIC CONTROLLERS CREDITS: 2**  
 This course introduces programmable logic controllers and the concepts and structure of programmable controllers and provides beginning programming skills. The student will have the basic knowledge to be able to do limited maintenance, programming, and installation of programmable controller systems in the industrial environment. The student will also have the background for more advanced training in programmable control. PREREQUISITES: IEL 211 and IEL 216.
- IEL 222 PROGRAMMABLE LOGIC CONTROLLERS LAB CREDITS: 3**  
 This course will give the student hands-on experience in programming programmable controllers. The theory learned in previous coursework will be put into practice in a laboratory environment that includes simulated industrial applications. Programmable control is an area of ever-increasing industrial importance today. PREREQUISITES: IEL 211 and IEL 216. CO-REQUISITE: IEL 221.
- IEL 223 ELECTRICAL MOTOR LAB CREDITS: 1**  
 This is a laboratory course intended to accompany the motor study course. Through actual hands-on experiments on developed trainers in the lab, the student will be able to reinforce the concepts learned in motor study. This course should be taken concurrently with IEL 226 Electric Motor Fundamentals and Maintenance. PREREQUISITES: IEL 132 and IEL 133.
- IEL 224 POWER DISTRIBUTION CREDITS: 2**  
 Transformers are considered the most important type of equipment in the process of distribution of electrical power. Included in this course are transformer theory, code, and actual transformer connections. PREREQUISITES: IEL 132 and IEL 133.
- IEL 226 ELECTRICAL MOTOR FUNDAMENTALS AND MAINTENANCE CREDITS: 2**  
 This course involves a study of the operational theory and construction of AC and DC motors. It is important for the electrician to have an understanding of motor principles and motor construction in order to facilitate proper motor installation and troubleshooting. This course should be taken concurrently with IEL 223 Electric Motor Lab. PREREQUISITES: IEL 132 and IEL 133.
- IEL 230 BLUEPRINT READING, ELECTRICAL PLANNING, AND ESTIMATING CREDITS: 4**  
 This course will teach the basics of blueprint reading, planning, and estimating. A part of the course is devoted to construction topics other than that of the electrical trade. The students will plan and draw the actual electrical diagram on a blueprint and estimate the cost of the job. PREREQUISITES: IEL 129 and IEL 130.
- IEL 299 ELECTRICIAN INTERNSHIP/CO-OP CREDITS: 6**  
 The Electrician Internship/CO-OP course is a hands-on course where students gain experience with an employer through on-the-job electrical related work at an approved job site. PREREQUISITE: ADVISOR APPROVAL REQUIRED.

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

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

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

This course is an introduction to the history of libraries and the library technician's role in all different types of libraries. Emphasis is on the tools and terminology used, the library's relationship to the community, and the examination and implementation of new service trends.

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

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

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

This course is an introduction to public catalogs, bibliographic instruction, reference interviews, inter-library loan practices, services to diverse populations, and development of library behavior policies.

**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 125 LIBRARY OUTREACH FOR DIVERSE POPULATIONS****CREDITS: 3**

This course is an introduction to planning and implementing library outreach for diverse populations. Emphasis is on developing services using current library trends, needs based assessment, evaluations and surveys, community collaborations, and basic marketing skills.

**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. **CO-REQUISITE: MA 214.**

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

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

- MA 215 PHLEBOTOMY AND LAB TECHNIQUES FOR THE MEDICAL ASSISTANT CREDITS: 4**  
 This course introduces students to the phlebotomy skills and lab techniques necessary for entry-level medical assistants. The course includes theory, active learning experiences, and hands-on training. Students will become familiar with phlebotomy and lab equipment, blood collection procedures, laboratory safety, basic laboratory mathematics, regulations and standards, quality assurance practices, recordkeeping and billing, specimen processing, and CLIA waived and point-of-care laboratory testing. The importance of professionalism, communication skills, attention to detail, personal and patient safety, and accurate technical skill development will be emphasized.
- MA 250 MEDICAL ASSISTING II CREDITS: 3**  
 This course will teach students the clinical knowledge needed for an entry-level medical assistant. CO-REQUISITE: MA 253.
- MA 253 MEDICAL ASSISTING II LAB AND CLINICAL CREDITS: 5**  
 This course provides the medical assisting students the opportunity to apply their clinical skills and knowledge in the clinical setting after completion of lab hours. Students are placed in medical facilities of Rapid City and surrounding areas to gain hands-on experience in the clinical skills required of an entry-level medical assistant. Students are under the supervision of the facility and are periodically evaluated by the preceptor. PREREQUISITES: CURRENT CPR CARD and ADVISOR APPROVAL. CO-REQUISITE: MA 250.
- MACH 110 MACHINE SHOP OPERATIONS CREDITS: 3**  
 This course will cover the topics of machine shop safety, semi-precision and precision measurement, layout, inspection, bench work, band saw and drill press work, job planning, order of operations, tooling options, tool grinding, work holding devices and fixtures, and maintenance.
- MACH 115 TURNING THEORY AND OPERATIONS I CREDITS: 3**  
 This course introduces the metal cutting lathe, its care, setup, and use as applied to current industry practices. Topics addressed will include lathe safety, machine setup, and carrying out the basic lathe operations of turning, drilling, boring, facing, and thread cutting.
- MACH 120 MILLING THEORY AND OPERATIONS I CREDITS: 3**  
 The vertical milling machine and its set-up and operation are introduced in this course. Students will learn milling machine safety, tramming of the mill, and the use of edge finders and dial indicators to locate part features and align work. Use of the Cartesian coordinate system, drilling, surfacing, slotting, pocketing and contour milling procedures will be covered.
- MACH 125 MECHANICAL BLUEPRINT READING CREDITS: 3**  
 This course addresses the interpretation of blueprints commonly encountered in the machine shop. Drawing layout, sectional views, auxiliary views, assembly drawings, conventional, baseline, and GT&D dimensioning conventions, bill of materials, and symbols used in the metal working industry are among the topics covered.
- MACH 130 MATERIALS APPLICATIONS CREDITS: 3**  
 Training in this course includes metals composition and characteristics, material selection, heat treatment, hardness testing, machinability, and use of the surface grinder and other precision grinding equipment. PREREQUISITES: MACH 110, MACH 115, MACH 120, and MACH 125.
- MACH 135 TURNING THEORY AND OPERATIONS II CREDITS: 3**  
 Expands on basic lathe skills by implementing the use of four-jaw chucks, collets, steady rests, follower rests, and face plate work. Taper turning, knurling, parting and machining between centers will be explored. Work will progress to include multi-part assemblies where fit, finish, and attention to detail need to be employed. Basics on operation of the CNC TRAK lathe will also be introduced. PREREQUISITES: MACH 110, MACH 115, and MACH 125.
- MACH 140 MILLING THEORY AND OPERATIONS II CREDITS: 3**  
 Expands on basic milling machine skills. Additional work holding methods such as rotary tables, strap clamps, angle plates, and a variety of fixtures will be implemented. The use of sine bars, gauge blocks, boring heads, indexing heads, and special purpose cutters will be explored. Work will progress to include multi-part assemblies where fit, finish, and attention to detail need to be employed. Basics on operation of the two axis ProtoTrak mill will also be introduced. PREREQUISITES: MACH 110, MACH 120, and MACH 125.
- MACH 145 APPLIED COMPUTER AIDED DRAFTING FUNDAMENTALS CREDITS: 3**  
 This course provides training in the use of SolidWorks to generate part geometry, shop drawings, and bills of materials for mechanical parts and assemblies. Design intent and strategies for using software to streamline work planning, fixturing, and finding set-up solutions in the machine shop are some of the topics covered. PREREQUISITE: MACH 125.
- MATH 090 BASIC MATHEMATICS CREDITS: 2**  
 This course provides a mathematically sound and comprehensive coverage of basic computational skills and their applications. Certain topics from algebra are also included. The content and level of rigor of the text form the basis of a course that would properly serve as preparation for a traditional algebra course. The text has been developed to meet the needs of the traditional post-secondary student and the needs of the mature student whose mathematical proficiency may have declined during years away from formal schooling.

**MATH 100 ELEMENTARY ALGEBRA****CREDITS: 3**

This course prepares students for college-level mathematics. Topics generally include: basic properties of real numbers, exponents and radicals, rectangular coordinate geometry, solutions to linear and quadratic equations, inequalities, polynomials and factoring. Students may also be introduced to functions and systems of equations. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 090.

**MATH 101 INTERMEDIATE ALGEBRA****CREDITS: 3**

This course includes real numbers and variable expressions, first-degree equations, polynomials, factoring, rational expressions, rational exponents and radicals, and quadratic equations. Other areas covered will be linear equations; systems of linear equations; linear, exponential and logarithmic functions; and an introduction to conic sections. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 100.

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

This course involves equations and inequalities; polynomial functions and graphs; exponents, radicals, binomial theorem, and zeros of polynomials; systems of equations; exponential, logarithmic, inverse functions, and applications and graphs. Other topics selected from sequences, series, and complex numbers will be covered. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 101.

**MATH 104 TECHNICAL MATHEMATICS****CREDITS: 3**

This course includes real numbers and variable expressions, first-degree equations, polynomials, factoring, rational expressions, rational exponents and radicals, geometry, quadratic equations, and trigonometry. This course is designed for students who are preparing for technical careers. It stresses a working knowledge of applied mathematical concepts. The practice problems are applications from various technical fields but do not require prior knowledge of the technical applications. Problems are selected to help develop an understanding of where and how mathematics is used in the various fields of employment. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 090.

**MATH 112 BUSINESS MATHEMATICS****CREDITS: 3**

A practical, working knowledge of relevant mathematical ideas and computations is developed for preparation in many careers, as well as in daily and consumer life. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 090.

**MATH 120 TRIGONOMETRY****CREDITS: 3**

Topics include: trigonometric functions, equations, and identities; inverse trigonometric functions; exponential and logarithmic functions, and applications of these functions. PREREQUISITE: ACHIEVED REQUIRED SCORE ON A NATIONAL OR A WESTERN DAKOTA TECH QUALIFYING PLACEMENT TEST or A PASSING GRADE IN MATH 101 or MATH 102.

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

This is an introductory course to the statistical classification system of the International Classification of Diseases, Ninth and Tenth Revision, Clinical Modification (ICD-9-CM and ICD-10-CM and PCS), the system in use in hospitals and private medical practices for the classification and reporting of morbidity and mortality in the United States. Many third-party payment systems are based on the ICD-9-CM and/or the ICD-10-CM and PCS classification and coding system. The course also introduces Current Procedural Terminology (CPT). PREREQUISITES: HC 114 and HC 213 or PERMISSION FROM INSTRUCTOR.

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

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

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

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

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

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

**MLT 205 IMMUNOLOGY****CREDITS: 3**

This course covers the basic theory and principles of the immune system including antigens, antibodies, origin, stimulation, and body response and rejection. Immunoglobulins, complement, and classification of immunity will be presented. Serological techniques and procedures will be performed. PREREQUISITE or CO-REQUISITE: HC 114. GRADE REQUIREMENT: A MINIMUM GRADE OF C MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE MEDICAL LABORATORY TECHNICIAN PROGRAM AND TO PROGRESS TO MLT CLINICAL PRACTICUM.

**MLT 210 CLINICAL CHEMISTRY****CREDITS: 4**

This course will cover basic laboratory instrumentation, math, standardization, pipetting, laboratory glassware, methodologies of chemistry testing, safety in the laboratory, and quality control concepts. It will introduce advanced clinical chemistry theory, organ functions, and disease correlations. PREREQUISITE: MATH 101 or HIGHER. PREREQUISITE or CO-REQUISITE: CHEM 106 and CHEM 106L. GRADE REQUIREMENT: A MINIMUM GRADE OF C MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE MEDICAL LABORATORY TECHNICIAN PROGRAM AND TO PROGRESS TO MLT CLINICAL PRACTICUM.

**MLT 215 IMMUNOHEMATOLOGY****CREDITS: 4**

The Immunohematology course is an extension of theory presented in the Immunology Course and will transition into the major concepts and principles of Blood Banking. This course will explore basic genetics, blood group systems, and antibodies, with emphasis on ABO grouping, Rh typing, antibody screening and identification, Coombs, compatibility testing, transfusion of blood components, component therapy, and donor selection. PREREQUISITE: MLT 205. GRADE REQUIREMENT: A MINIMUM GRADE OF C MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE MEDICAL LABORATORY TECHNICIAN PROGRAM AND TO PROGRESS TO MLT CLINICAL PRACTICUM.

**MLT 220 URINALYSIS/BODY FLUIDS****CREDITS: 3**

This course examines the basic principles of urinalysis and kidney function. It will discuss the anatomy, physiology, and pathology of the urinary system. Physical, chemical, and microscopic examination will be performed using urinalysis procedures on both normal and abnormal specimens. Body fluid analysis will also be examined. PREREQUISITE: HC 114. GRADE REQUIREMENT: A MINIMUM GRADE OF C MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE MEDICAL LABORATORY TECHNICIAN PROGRAM AND TO PROGRESS TO MLT CLINICAL PRACTICUM.

**MLT 230 HEMATOLOGY/COAGULATION****CREDITS: 4**

This course will present basic and advanced hematology theory and disease correlations. Differentials, cell morphology, and hematological measurements will be discussed. Hemostasis theory and application of the coagulation pathway including factors will be presented. Microscope work, automated hematological instrumentation, and coagulation testing will be emphasized. PREREQUISITE: HC 114. GRADE REQUIREMENT: A MINIMUM GRADE OF C MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE MEDICAL LABORATORY TECHNICIAN PROGRAM AND TO PROGRESS TO MLT CLINICAL PRACTICUM.

**MLT 240 CLINICAL MICROBIOLOGY/PARASITOLOGY/MYCOLOGY****CREDITS: 4**

This course provides an introduction to the classification, morphology, identification, and sensitivity testing of microorganisms. More technical aspects of clinical microbiology including differential staining and testing for the detection, identification, and disease correlation of bacteria, parasites, and fungus will also be covered. PREREQUISITE: HC 114. GRADE REQUIREMENT: A MINIMUM GRADE OF C MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE MEDICAL LABORATORY TECHNICIAN PROGRAM AND TO PROGRESS TO MLT CLINICAL PRACTICUM.

**MLT 275 MEDICAL LABORATORY TECHNICIAN CLINICAL****CREDITS: 12**

The clinical practicum is designed to give the medical laboratory technician student experience in a clinical setting. Affiliated medical laboratories will provide students with observation, practice, and performance of laboratory tests and procedures. Students will rotate through phlebotomy, hematology, hemostasis, urinalysis and body fluids, chemistry, serology, microbiology, and immunohematology. PREREQUISITE: SUCCESSFUL COMPLETION OF THE FIRST THREE SEMESTERS OF MLT COURSES. CO-REQUISITE: MLT 280. GRADE REQUIREMENT: A MINIMUM GRADE OF C MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE MEDICAL LABORATORY TECHNICIAN PROGRAM.

**MLT 280 MEDICAL LABORATORY TECHNICIAN CERTIFICATION REVIEW****CREDITS: 1**

This course will be taken concurrently with the Medical Laboratory Technician Clinical. It is intended to serve as a comprehensive review in preparation for the Board of Certification (BOC) examination for Medical Laboratory Technicians (MLT) offered by the American Society of Clinical Pathology (ASCP). PREREQUISITE: SUCCESSFUL COMPLETION OF THE FIRST THREE SEMESTERS OF MLT COURSES. CO-REQUISITE: MLT 275. GRADE REQUIREMENT: A MINIMUM GRADE OF C MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE MEDICAL LABORATORY TECHNICIAN PROGRAM.

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

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

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

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

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

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

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

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

**NRS 121 FUNDAMENTAL NURSING CLINICAL I & II****CREDITS: 4**

This course will focus on clinical experiences that include interpretation, medical terminology, nutrition, and pharmacology with an emphasis on how it integrates into the nursing process. This course involves direct care for adults including communication assessment, and professional documentation as well as passing medications, identifying signs and symptoms of different diseases, and learning the importance of diet and nutrition in adults. **PREREQUISITES:** CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126 and COMPLETION OF ALL GENERAL EDUCATION COURSES. **PRE- or CO-REQUISITES:** NRS 100 and NRS 105. **CLINICAL PROGRESSION:** STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 100 AND NRS 105 TO PARTICIPATE IN NRS 121 LIVE CLINICALS. **GRADE REQUIREMENT:** A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

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

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

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

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

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

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

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

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

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

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

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

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

**NRS 221      ADVANCED NURSING CLINICAL I & II****CREDITS:      4**

This course is the clinical component of adult health nursing in which the students provide direct care to patients in a variety of acute, inpatient settings. The students utilize various components of the nursing process to design appropriate care for patients. The student is expected to assess, utilize, and apply the concepts of critical thinking, communication, and promotion of safety to the care of patients in the acute care setting. This course will focus on basic phlebotomy, IV infusion skills, and advanced practical nursing skills. **PREREQUISITES:** CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, NRS 115, NRS 121, and NRS 130. **PRE- or CO-REQUISITES:** NRS 200, NRS 205, and NRS 210. **CLINICAL PROGRESSION:** STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 200, NRS 205, and NRS 210 TO PARTICIPATE IN NRS 221 LIVE CLINICALS. **GRADE REQUIREMENT:** A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

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

This course includes maternal and child health care experiences. The clinical settings will vary but may include hospitals, clinics, and physician offices. Students will be able to utilize their knowledge base regarding growth and development, medications and vaccines, terminology, and nutritional aspects associated with maternal and pediatric clients. **PREREQUISITES:** CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, NRS 115, NRS 121, and NRS 130. **PRE- or CO-REQUISITES:** NRS 200, NRS 205, NRS 210, and NRS 215. **CLINICAL PROGRESSION:** STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 200, NRS 205, NRS 210, and NRS 215 TO PARTICIPATE IN NRS 230 LIVE CLINICALS. **GRADE REQUIREMENT:** A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

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

This course builds on previous course concepts of leadership and management. The student is expected to demonstrate ability to apply the concepts of critical thinking, communication, and promotion of safety with patients in the clinical setting. This course provides the opportunity for students to apply concepts of leadership and management while under the supervision of an RN instructor or RN/LPN preceptor. **PREREQUISITES:** CURRENT CNA CERTIFICATION or A "C" OR BETTER IN HC 124 AND HC 126, COMPLETION OF ALL GENERAL EDUCATION COURSES, and COMPLETION OF NRS 100, NRS 105, NRS 110, NRS 115, NRS 121, and NRS 130. **PRE- or CO-REQUISITES:** NRS 200, NRS 205, NRS 210, NRS 215, NRS 221, and NRS 230. **CLINICAL PROGRESSION:** STUDENTS MUST MAINTAIN A "C" OR BETTER IN NRS 200, NRS 205, NRS 210, NRS 215, NRS 221, and NRS 230 TO PARTICIPATE IN NRS 235 LIVE CLINICALS. **GRADE REQUIREMENT:** A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE NURSING PROGRAM OR PROGRESS INTO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

- PH 103 PHLEBOTOMY PRINCIPLES AND PRACTICES CREDITS: 3**  
 This course introduces students to the practice of phlebotomy and the role of the phlebotomist as part of the healthcare team. Students will become familiar with phlebotomy equipment and learn about basic blood collection procedures. Special blood collection procedures, safety procedures, quality management, and legal issues are discussed. The importance of professionalism and good communication skills in the patient care environment are stressed. CO-REQUISITE: PH 125.
- PH 105 LABORATORY ASSISTANT TECHNIQUES LAB CREDITS: 1**  
 This course provides training for the clinical laboratory assistant including laboratory safety, equipment and instrumentation, basic laboratory mathematics, regulations and standards, quality assurance practices, record keeping and billing, specimen processing, and CLIA waived and point-of-care laboratory testing. The course combines theory and hands-on practice of laboratory procedures with an emphasis on the necessity for accuracy and attention to detail. PREREQUISITES: HC 114, HC 213, and PH 125. CO-REQUISITE: PH 126.
- PH 125 PHLEBOTOMY PRINCIPLES AND PRACTICES LAB CREDITS: 2**  
 This course provides the student with active-learning experiences and hands-on training necessary to develop the skills of an entry-level phlebotomist. The student will learn the procedures performed by a phlebotomist and will become familiar with different types of equipment and techniques applied. Emphasis will be placed on professional behavior, communication skills, personal and patient safety, and technical skill development. CO-REQUISITE: PH 103.
- PH 126 LABORATORY ASSISTANT TECHNIQUES CREDITS: 2**  
 This course provides training for the clinical laboratory assistant including laboratory safety, equipment and instrumentation, basic laboratory mathematics, regulations and standards, quality assurance practices, record keeping and billing, specimen processing, and CLIA waived and point-of-care laboratory testing. PREREQUISITES: HC 114, HC 213, and PH 125. CO-REQUISITE: PH 105.
- PH 160 PHLEBOTOMY/LABORATORY ASSISTANT CLINICALS CREDITS: 3**  
 The clinical section consists of clinical practice in phlebotomy and laboratory assistant training at various healthcare institutions and laboratories. The program director will coordinate clinical schedules and evaluations. PREREQUISITE: SUCCESSFUL COMPLETION OF PROGRAM COURSE REQUIREMENTS.
- PHGY 220 HUMAN ANATOMY & PHYSIOLOGY I W/LAB (Offered through USD) CREDITS: 4**  
 This course is the first part in the study of the physiology and anatomical structure of the human body. We will explore basic concepts of biochemistry, cell structure, tissues, histology, metabolism, and the different systems, integument, skeletal, muscular and nervous. Integration of anatomical structure as it relates to physiology will also be incorporated. The course is designed for students interested in health care careers.
- PHGY 230 HUMAN ANATOMY & PHYSIOLOGY II W/LAB (Offered through USD) CREDITS: 4**  
 This course is the second part in the study of the physiology and anatomical structure of the human body. We will explore basic concepts of multiple body systems/areas to include endocrine, lymphatic, immune, cardiovascular, respiratory, digestive, urinary, and reproductive systems. Other areas of study will include the blood anatomy and physiology, nutrition and metabolism, and fluid and electrolytes. Integration of anatomical structure as it relates to physiology will also be incorporated. The course is designed for students interested in healthcare careers. PREREQUISITE: PHGY 220
- PHR 110 PHARMACOLOGY/PHARMACEUTICAL PRODUCTS I CREDITS: 3**  
 This course is designed to present material to the pharmacy technician as it applies to the preparation and dispensing of pharmacologic agents. Drugs are discussed according to their classification, trade and generic name, drug action (mechanism), side effects, toxicity, and contraindications. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.
- PHR 111 PHARMACY I CREDITS: 3**  
 This course is designed to present material to the pharmacy technician as an introduction to the field of pharmacy. The course will introduce the student to all aspects of the pharmacy from the relationship between the pharmacist and the pharmacy technician to the details necessary to be a successful pharmacy technician. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.
- PHR 113 PHARMACY OPERATIONS LAB CREDITS: 2**  
 This course is designed to provide the pharmacy technician student with hands-on experience in institutional and retail pharmacies. All aspects of institutional and retail pharmacies will be covered to include organization and function of pharmacists and technicians, institutional medication distribution systems, and prescription filling in retail pharmacies. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.

- PHR 121 PHARMACOLOGY/PHARMACEUTICAL PRODUCTS II CREDITS: 3**  
This course is designed to present material to the pharmacy technician as it applies to the preparation and dispensing of pharmacologic agents. Drugs are discussed according to their classification, trade and generic name, drug action (mechanism), side effects, toxicity, and contraindications. Drugs will include review of prescriptions as well as non-prescription (over-the-counter) products. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**
- PHR 122 PHARMACY LAW AND ETHICS CREDITS: 2**  
This course is designed to present material to the pharmacy technician on professional ethics and the philosophy, requirements, administration, and enforcement of local, state, and federal laws related to the practice of the profession of pharmacy. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**
- PHR 127 PHARMACY CALCULATIONS CREDITS: 2**  
This course is designed to present material to the pharmacy technician in the areas of pharmacy math. All aspects of pharmacy math will be covered including metric and household measurements, special calculations for compounding, understanding the apothecary system, pharmacy business math, and preparing injectable medications. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**
- PHR 129 PHARMACY II CREDITS: 2**  
This course is designed to introduce the student to all aspects of pharmacy to include pharmacy manufacturing, pharmacy repackaging, purchasing and inventory control, drug categories, medication errors, and drug interactions. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**
- PHR 130 PHARMACY PRACTICAL LAB CREDITS: 1**  
This course is designed to provide the pharmacy technician with the practical hands-on experience with all aspects of pharmacy preparation and dispensing of sterile and non-sterile pharmaceuticals. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM, TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE, AND TO PARTICIPATE IN PHR 131 CLINICAL ROTATIONS.**
- PHR 131 CLINICAL ROTATIONS CREDITS: 8**  
This course emphasizes the basics of pharmacy practice and exposes the student to the practical aspects of dispensing, compounding, and inventory control at an on-the-job training site in an institutional, retail, or alternative pharmacy setting. **PREREQUISITE: SUCCESSFUL COMPLETION OF ALL TECHNICAL COURSE REQUIREMENTS. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**
- PHR 200 RX ABBREVIATIONS/SIG DECODING CREDITS: 2**  
This course is designed to increase the student's understanding of pharmacy abbreviations and prescription sig decoding. **CO-REQUISITE: MATH 101. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN ASSOCIATE IN APPLIED SCIENCE PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**
- PHR 205 PHARMACOKINETICS/PHARMACODYNAMICS CREDITS: 3**  
This course is designed to increase the student's success as a pharmacy technician by providing a basic understanding of how medications affect the body systems and how those same body systems affect medications. **PREREQUISITES: MATH 101 and PHR 121. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN ASSOCIATE IN APPLIED SCIENCE PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**
- PHR 210 U.S. HEALTHCARE AND MEDICAL INSURANCE CREDITS: 3**  
This course is designed to increase the student's employability in a pharmacy by providing an in-depth understanding of U.S. healthcare systems and the types of medical insurances they will experience every day. **GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE PHARMACY TECHNICIAN ASSOCIATE IN APPLIED SCIENCE PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.**
- PLU 150 PLUMBING THEORY I CREDITS: 3**  
This course is designed to provide a foundation in plumbing materials, tools, methods and construction. Safety is highly emphasized as is the importance and practice of work records and daily reports. **COREQUISITE: PLU 155**

- PLU 155 PLUMBING THEORY I LAB CREDITS: 4**  
This lab course is intended to accompany the PLU 150 Plumbing Theory I course. Hands-on introductions to tool use, materials and joining methods will progress towards individual and group application projects. COREQUISITE: PLU 150
- PLU 160 PLUMBING CODE CREDITS: 3**  
This course will prepare students for the state Journeyman's plumbing exam that is required after their fourth year of apprenticeship. The Journeyman's plumbing exam helps determine a student's ability to acquire a Contractor's license (South Dakota's Master license). Students will read and interpret current local plumbing and fuel gas codes. The ability to understand and apply the code is invaluable for an individual employed in the plumbing industry.
- PLU 165 PLUMBING PRINT READING & DRAFTING CREDITS: 2**  
This course is designed to prepare student to review blue prints, recognize common industry symbols, take scale measurements, and identify locations of plumbing fixtures. Students will complete sketches of scale and isometric drawings to be used for estimating or construction. They will also compare different plan views of multiple trades to identify possible conflicts of location of materials.
- PLU 170 PLUMBING THEORY II CREDITS: 3**  
This course will build upon the foundational concepts and content introduced in Plumbing Theory I. Advanced applications regarding plumbing materials, tools, methods and construction will be explored. In addition testing pressures and procedures will be introduced. PREREQUISITE: PLU 150 COREQUISITE: PLU 175
- PLU 175 PLUMBING THEORY II LAB CREDITS: 4**  
Lab is designed to accompany the Plumbing Theory II course and will include the manual installation of plumbing materials in real world simulations of new construction. PREREQUISITE: PLU 155 COREQUISITE: PLU 170
- PLU 180 PLUMBING FIXTURES & REPAIR CREDITS: 2**  
Students will create and write up work orders keeping track of materials and time and, summarizing what they repair. Students will leave the course able to recognize plumbing fixtures and differentiate residential and commercial applications. Basic service principles and troubleshooting will be discussed. PREREQUISITE: PLU 150 COREQUISITE: PLU 185
- PLU 185 PLUMBING FIXTURES & REPAIR LAB CREDITS: 3**  
This lab course is intended to accompany the PLU 180 Plumbing Fixtures and Repair course. The lab will offer students the opportunity to install several common plumbing fixtures. Students will be able to handle multiple fixtures in varying degrees of disrepair. PREREQUISITE: PLU 155 COREQUISITE: PLU 180
- 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. CO-REQUISITE: ST111. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PRORGAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.
- 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. CO-REQUISITE: ST102. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PRORGAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**ST 128 SURGICAL PHARMACOLOGY****CREDITS: 2**

In this course, students will learn the concepts and practices of pharmacology and anesthesia care in the perioperative environment. PREREQUISITES: HC 114, HC 213, ST 102, and ST 111. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

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

This course is designed to introduce the students to diagnostic procedures and minor and major procedures in all surgical areas. PREREQUISITES: HC 114, HC 213, ST 102, and ST 111. CO-REQUISITE: ST 131. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**ST 131 PRINCIPLES AND PRACTICE OF SURGICAL TECHNOLOGY I****CREDITS: 3**

Student will apply techniques and concepts mastered in the first semester. Students will continue to learn surgical instrumentation, basic instrument setups, patient draping, safe handling/handling of surgical instrumentation, sharps, medications, and the proper performance of surgical counts. Students will also participate and demonstrate competence in a variety of simulated procedure-based scenarios and interventions in the lab performing both the scrub and circulator role. PREREQUISITES: HC 114, HC 213, ST 102, and ST 111. CO-REQUISITE: ST 130. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**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: ST 130 and ST 131. CO-REQUISITE: ST 231. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**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: ST 130 and ST 131. CO-REQUISITE: ST 230. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PROGRAM AND TO PROGRESS TO COURSES THAT REQUIRE THIS COURSE AS A PREREQUISITE.

**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. PREREQUISITE: SUCCESSFUL COMPLETION OF ALL FIRST THROUGH THIRD SEMESTER ST TECHNICAL COURSES. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PROGRAM. CLINICAL PROGRESSION: ALL REQUIRED SURGICAL TECHNOLOGY COURSES, OTHER THAN ST 251, MUST BE SUCCESSFULLY COMPLETED PRIOR TO ENTERING THE CLINICAL PHASE OF THE PROGRAM.

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

This course serves as a comprehensive review for the national certification exam in surgical technology. Students will assess their knowledge in required content areas of surgical technology including perioperative case management and basic sciences of anatomy and physiology, pharmacology, pathophysiology and microbiology. PREREQUISITES: ST 230 and ST 231. GRADE REQUIREMENT: A MINIMUM GRADE OF "C" MUST BE EARNED IN THIS COURSE TO BE ELIGIBLE TO GRADUATE FROM THE SURGICAL TECHNOLOGY PROGRAM.

**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 200 TRANSPORTATION HVAC** **CREDITS: 3**  
 Transportation HVAC is a course designed to enable the students to understand the principles of mobile heating, ventilation, and air conditioning systems. The student will use modern equipment for testing and diagnosing related systems.
- 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 204 ENGINE OVERHAUL** **CREDITS: 4**  
 The construction and repair of automotive engines will be covered.
- TTT 205 UNDER-CAR DIAGNOSIS LAB** **CREDITS: 5**  
 The hands-on construction, operation, and repair of automotive brakes, steering, and suspension systems will be covered in this course. Vehicle alignment procedures will also be taught during this course.
- TTT 210 UNDER-TRUCK DIAGNOSIS** **CREDITS: 3**  
 The theory of construction, operation, and repair of heavy duty vehicle brakes, steering, and suspension systems will be covered in this course. Vehicle alignment theory will also be taught during this course.
- TTT 211 HEAVY DUTY DRIVETRAINS** **CREDITS: 4**  
 This course introduces the basic principles of transmissions, differentials, and drivetrains. Students will understand the operation of all drivetrain components and the procedure for disassembly, repair, and the reassembling of each component. Included are how to perform failure analysis and how to troubleshoot drivetrain problems. Additional areas included are automatic transmissions, agriculture transmissions, and power shift transmissions.
- TTT 212 DIESEL ENGINES** **CREDITS: 5**  
 This course teaches the diagnostic and repair skills necessary for diesel engine work. All of the following areas are covered: diesel engine design, overhaul, tune-up, fuel systems, troubleshooting, and repair.
- TTT 215 HYDRAULICS** **CREDITS: 3**  
 This course teaches fluids and how they are utilized to transmit energy and force. The maintenance and repair of pumps, actuators, valves, accumulators, cylinders, and motors are included. Students will learn how to maintain and service reservoirs, coolers, and filters. In addition to maintaining a hydraulic system, students will learn to read hydraulic schematics and troubleshoot hydraulic problems.
- TTT 222 LIGHT DUTY DRIVETRAINS** **CREDITS: 4**  
 This course will teach the theory of construction, operation, and repair of automatic and standard transmissions/transaxles, clutches, drivelines, and differentials of automobiles. The theories of hydraulics will also be introduced to get a better understanding of how the internals of an automatic transmission and slave cylinders work.
- TTT 223 LIGHT DUTY DRIVETRAINS LAB** **CREDITS: 6**  
 This course will demonstrate the hands-on construction, operation, and repair of automatic and standard transmissions/transaxles, clutches, drivelines, and differentials of automobiles. The hands-on application of hydraulics will also be introduced to get a better understanding of how the internals of an automatic transmission and slave cylinders work.

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

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

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

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

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

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

**WDM 103 GAS METAL ARC WELDING I****CREDITS: 3**

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

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

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

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

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

**WDM 150 SHIELDED METAL ARC WELDING II****CREDITS: 3**

Shielded Metal Arc Welding classroom theory and skills training in the lab enables the student to attain an acceptable level of welding skills. Students will weld on grooved plate with backing and open root, in and out of position. These welds will be completed on 3/8" – 1" thickness metal using E7018 and E6010 electrodes. PREREQUISITE: WDM 102.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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