

WESTERN DAKOTA TECH

DRAFTING AND MACHINING TECHNOLOGY

Associate of Applied Science, 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.

Course	No.	Course Title	Credits
General Education Requirements			
CSC	105	MICROCOMPUTER SOFTWARE APPLICATIONS I	3
ENGL	106	WORKPLACE COMMUNICATIONS 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
Total			18
Technical Requirements			
AE	101	DRAFTING FUNDAMENTALS	3
AE	139	2D CAD	3
AE	142	MECHANICAL 3D CAD	3
AE	232	MECHANICAL PRINCIPLES	3
AE	234	MECHANICAL PRINT READING	2
AE	244	3D ENGINEERING DESIGN	3
AE	247	COMPUTER AUTOMATED MANUFACTURING	3
MACH	110	MACHINE SHOP OPERATIONS	3
MACH	113	TURNING THEORY AND OPERATIONS	3
MACH	123	MILLING THEORY AND OPERATIONS	3
MACH	125	MECHANICAL BLUEPRINT READING	3
MACH	130	MATERIALS APPLICATIONS	3
MACH	136	TURNING THEORY AND CNC OPERATIONS	3
MACH	141	MILLING THEORY AND CNC OPERATIONS	3
MACH	146	APPLIED COMPUTER AIDED DRAFTING FUNDAMENTALS	3
MACH	199	INTERNSHIP	6
Total			50

*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

**Prerequisite: Acceptable ACCUPLACER score or Basic Math.

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

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

Semester breakdown on next page

2023-2024 Academic Catalog – 4/2023

Apply online today at wdt.edu or call Admissions Department at (605)718-2565 or email admissions@wdt.edu

Learn. Do. Now.

WESTERN DAKOTA TECH

Semester Breakdown AAS

First Semester			Second Semester		
		CR			CR
CSC 105	Microcomputer Software Applications I	3	ENGL 106	Workplace Communications I	3
MACH 110	Machine Shop Operations	3	MACH 130	Materials Applications	3
MACH 113	Turning Theory & Operations	3	MACH 136	Turning Theory & CNC Operations	3
MACH 123	Milling Theory & Operations	3	MACH 141	Milling Theory & CNC Operations	3
MACH 125	Mechanical Blueprint Reading	3	MACH 146	Applied Computer Aided Drafting Fundamentals	3
MATH 100	Elementary Algebra <i>or higher</i>	3	PSYC 103	Human Relations in the Workplace	3
Total Credit Hours		18	Total Credit Hours		18
Third Semester (summer)					
MACH 199	Internship	6			
Fourth Semester			Fifth Semester		
		CR			CR
AE 101	Drafting Fundamentals	3	AE 232	Mechanical Principles	3
AE 139	2D CAD	3	AE 234	Mechanical Print Reading	2
AE 142	Mechanical 3D CAD	3	AE 244	3D Engineering Design	3
MATH 101	Intermediate Algebra <i>or higher</i>	3	AE 247	Computer Automated Manufacturing	3
			MATH 120	Trigonometry	3
Total Credit Hours		12	Total Credit Hours		14

Apply online today at wdt.edu or call Admissions Department at (605)718-2565 or email admissions@wdt.edu

Learn. Do. Now.