

WESTERN DAKOTA TECHNICAL COLLEGE

PRECISION MACHINING TECHNOLOGY

Diploma, 42 Credit Hours, 12-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
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
PSYC 103	HUMAN RELATIONS IN THE WORKPLACE	3
Total		12
Technical Requirements		
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		30

*Prerequisite: Acceptable ACCUPLACER score or Basic Writing.

Semester Breakdown Diploma

First Semester (Fall Only)			Second Semester (Spring Only)		
CR			CR		
3	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 and Operations	3	MACH 136	Turning Theory and CNC Operations
3	MACH 123	Milling Theory and Operations	3	MACH 141	Milling Theory and 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
18	Total Credit Hours		18	Total Credit Hours	
Third Semester (Summer Only)					
CR					
6	MACH 199	Internship			
6	Total Credit Hours				

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