Pine Technical & Community College

Precision Machining

• Associate of Applied Science • Diploma • Certificate

This sequence of programs is designed to provide students with the skills necessary to gain employment at increasing levels within the manufacturing industry. The program will focus on skills used in a modern machine shop. Machinist math, blueprint reading, conventional machine tool theory and lab, an introduction to Computer Numerical Control (CNC) and Computer-Aided Design (CAD) are covered in the first year. The second year offers specialized training in Computer-Aided Manufacturing (CAM) systems, quality concepts and CNC theory and procedures.

This two-year AAS degree has been designed to transfer credits seamlessly to our University partner Bemidji State University (BSU) if you wish to continue your education beyond PTCC.

Recommended Course Sequence for Completion in 2 Years • 2022-2024

ASSOCIATE IN APPLIED SCIENCE

Fall Semester 2022

ENGL 1277 Technical Communications or ENGL 1276 College Composition	4
MTTP 1208 Measuring Tools	1
MTTP 1220 Blueprint Reading I	2
MTTP 1245 Machining Fundamentals I	4
MTTP 1256 Applied Machining Theory	3
COCP 1201 Computer Concepts & Applications	2
Total Credits	**16**

Spring Semester 2023

MTTP 1241 Intro to Computer Aided Drawing (CAD)	3
MTTP 1265 Machining Fundamentals II	4
MTTP 1262 Blueprint Reading II	2
MTTP 1279 CNC Set-up & Operate	4
MTTP 2263 Quality in Manufacturing	2
WELD 1570 Metallurgy & Mech. Prop. of Materials	1
Total Credits	**16**

Precision Machining Certificate Earned!

Fall Semester 2023

MTTP 1261 Intro to Computer Aided Machining (CAM)	2
MTTP 1277 Machining Processes	2
MTTP 2255 CNC Programming	5
MTTP 2260 Cutting Tool Technology	1
Technical Elective	3
Total Credits	**13**

Precision Machining Diploma Earned!

Spring Semester 2024

MTTP 2290 Manufacturing Capstone or MTTP 2268 Machining Internship	3
MATH 1260 College Algebra or MATH 1256 Mathematical Thinking	3
MN Transfer Goal Area 1 Elective	3
MN Transfer Goal Area 2-3 or Goal Area 6-10	6
Total Credits	**15**
TOTAL AAS CREDITS	**60**

Precision Machining AAS Earned!

Career Outlook

The number of openings for machinists in Minnesota is projected to grow 10% by 2024, accounting for more than 12,000 jobs statewide, with a median salary of $45,800. CNC Machinists produce precision parts using computer-controlled lathes and milling centers. They set up and operate a variety of machine tools using their knowledge of the working properties of metals. Most CNC Machinists work in small machining shops or in manufacturing firms that produce durable goods such as metalworking and industrial machinery or parts and components for manufactured products. CNC Machinist positions are some of the most highly skilled and highly paid jobs in manufacturing.

www.pine.edu/apply

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