

# PRECISION MACHINE TECHNOLOGY

WHITEWATER CAREER CENTER

## PROGRAM OVERVIEW

### EARLY COLLEGE CAREER PROGRAM

Precision Machine Technology is a hands-on program. If you want to use your mechanical aptitude and have a high interest in precision work, then you should consider this program. *Participate in the Early College option and earn the Ivy Tech Certificate in Machine Tool Technology while at WCC.\**

#### YOU WILL LEARN

- How to machine complex projects using tight tolerances
- How to use lathes, mills, drill presses, & surface grinders
- How to read part prints
- How to measure & check quality
- CNC set-up, programming, & operation

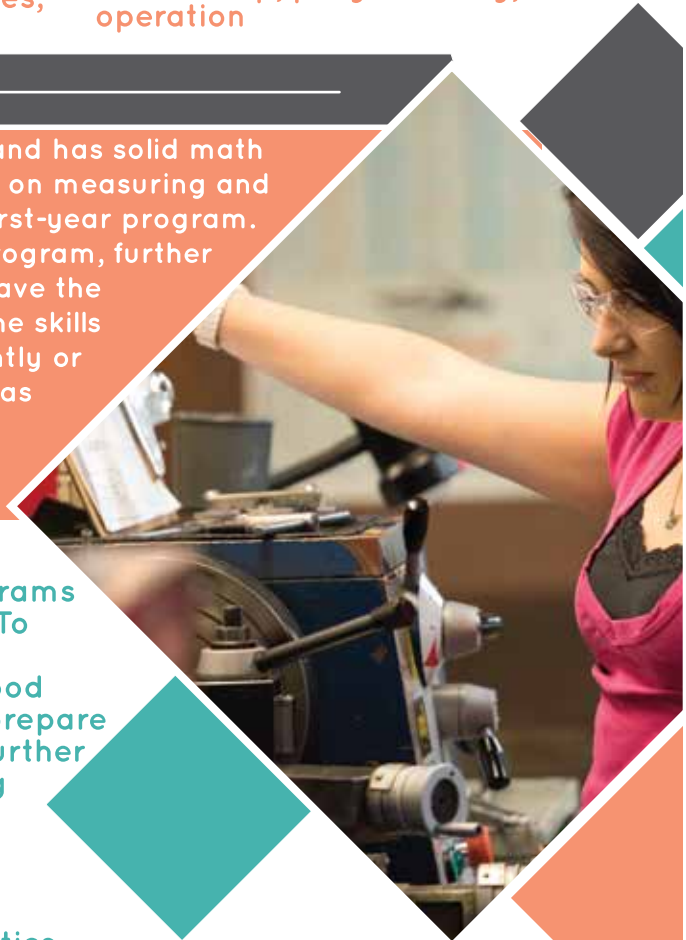
### A TYPICAL STUDENT

The typical student is one that enjoys hands-on learning and has solid math skills to be successful. There will be a significant emphasis on measuring and meeting tolerance requirements at the beginning of the first-year program. These skills will be necessary for the second year of the program, further training, and a career in machining. Successful students have the patience and attention to detail to solve problems using the skills they have learned. They can work on projects independently or with other students. They take initiative, check their work as needed, and stay on task without constant supervision. Safety is a primary focus, and students must follow the guidelines to keep themselves and others safe.

### GET YOURSELF READY

Employment and admission into apprenticeship programs and specialty training programs can be competitive. To increase your chances, do your best in all high school courses, be on track for graduation, and develop a good work ethic. The following pathway courses will help prepare you for the Precision Machine Technology program, further education and training, and a career in the machining industry:

- Preparing for College & Careers
- Introduction to Manufacturing
- Introduction Advanced Manufacturing & Logistics
- Computer Integrated Manufacturing (PLTW-CIM)



# WHITEWATER CAREER CENTER

Where opportunities flow

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[www.WhitewaterCareerCenter.org](http://www.WhitewaterCareerCenter.org)



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## CERTIFICATIONS & DUAL CREDITS

### INDUSTRY CERTIFICATIONS

**NIMS (National Institute for Metalworking Skills)**

Industry certifications are earned in year two. Dual credits are earned during year one and two.

### IVY TECH DUAL COLLEGE CREDITS

MTTC 101	Introduction to Machining	3 credits
MTTC 102	Turning Processes I	3 credits
MTTC 103	Milling Processes I	3 credits
MTTC 110	Turning & Milling Processes	3 credits
MTTC 105	Abrasive Processes I	3 credits
MTTC 106	Print Interpretation	3 credits
MTTC 107	CNC Setup & Operations I	3 credits

Earn the Ivy Tech Certificate in Machine Tool Technology at WCC.\* Take dual credit classes at your high school, to work towards the next steps of a Technical Certificate and/or Associate in Applied Science in Machine Tool Technology at Ivy Tech:

- Dual Credit Speech
- Dual Credit Math
- Dual Credit English
- Dual Credit Science

\*Will require students to take additional certifications.

## YEAR ONE

Precision Machining I is designed to provide students with a basic understanding of the precision machining processes used in industry, manufacturing, maintenance, and repair. The program provides instruction and lab experience in industrial safety, terminology, hand and machine tools, measurement, and layout. Students will become familiar with print reading and with the setup and operation of power saws, drill presses, lathes, milling machines, and grinders. Students will also be exposed to an introduction to CNC (computer numerical control) machines.

## YEAR TWO

Precision Machine Technology II is a more in-depth study of skills learned in Precision Machine Technology I, with a stronger focus in CNC setup, programming, and operation. Projects concentrate on precision set-up and inspection work as well as machine shop calculations. Students develop skills in advanced machining and measuring parts involving tighter tolerances and more complex geometry. The lab operates as a machine shop with client projects, and successful students may participate in internships at local companies.

## WHEN YOU FINISH

Students completing this program generally continue employment at the company where they completed their internships. They may also participate in apprenticeship programs through their employers to complete degree programs. Others continue their education at the postsecondary level in 2 and 4-year degree programs, begin their careers in local machining businesses, or join the military.

## POTENTIAL CAREERS

	NATIONAL MEAN WAGE
• Machinist	\$44,160
• Tool & Die Maker	\$53,260
• Industrial Engineering Technician	\$57,810
• General Maintenance & Repair Worker	\$40,280
• Computer-Controlled Machine Tool Operator	\$41,010
• CNC Machine Tool Programmer	\$55,770
• Industrial Machinery Mechanic	\$53,110
• Industrial Production Manager	\$110,580
• Mechanical Engineer	\$91,500

All career and salary information is cited from the U.S. Department of Labor Bureau of Labor Statistics, May 2017 National Occupation Employment & Wage Estimates.



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