COURSE SYLLABUS

PRECISION MACHINE TECHNOLOGY I

Fall 2021

PROGRAM TITLE: Precision Machine Technology I
DOE CODE: 7109 (1 credit per semester), 7105 (1 credit per semester), 7107 (1 credit per semester)
RECOMMENDED GRADE LEVELS: 11, 12
PREREQUISITES: None
HIGH SCHOOL CREDITS: 3 per semester (6 total per school year)
QR: This program qualifies as a quantitative reasoning course.
ELECTIVE INFORMATION: Counts as a Directed Elective or Elective for all diplomas
HOW WCC CAN HELP MEET GRADUATION PATHWAYS:

Pathway 1 High School Diploma = Directed Electives
Pathway 2 Employability Skills = Work-Based Learning
Pathway 3 Postsecondary Ready = Dual Credit

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PROGRAM DESCRIPTION: 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 laboratory experience in industrial safety, terminology, tools 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, grinders. Students will also be exposed to an introduction to CNC (computer controlled) machines.

MAJOR LEARNING OBJECTIVES:

1. Develop skills for project and job planning to ensure quality parts creation.
2. Apply and adapt basic hand and machine tool processes to create machined parts per industry specifications.
3. Analyze processes and finished products to ensure compliance with job specifications.
4. Integrate preventative maintenance schedules and tasks to ensure safe and accurate equipment upkeep.
5. Apply concepts of industrial safety and recycling to meet industry and governmental environmental protection regulations and standards.
6. Communicate using appropriate subject terminology and definitions both in writing and speaking to ensure the accurate reflection of ideas.
7. Select appropriate mathematical functions to perform various machining processes.
8. Draw sketches and interpret engineering drawings to determine product dimensions and specifications.
9. Validate the proper use of precision measuring and layout instruments to ensure the quality of the finished product.
10. Examine material properties and tooling processes to create finished products.
11. Establish a personal and professional career development plan.

REQUIRED TEXT/CURRICULUM MATERIALS:

- Tooling U Online Learning; Tooling University LLC

EARLY COLLEGE PROGRAM:
Whitewater Career Center is an Early College Career Center. Precision Machine Technology students may earn the Ivy Tech Machine Tool Technology Certificate by completing all dual credit courses available in Precision Machine Technology I and II.

DUAL CREDITS AVAILABLE:

MTTC 101 Introduction to Machining
Ivy Tech Community College 3 credits
Qualifies for THD and Pathway Dual Credits.

MTTC 102 Turning Processes I
Ivy Tech Community College 3 credits
Co-requisite applies. Qualifies for THD and Pathway Dual Credits.

MTTC 103 Milling Processes I
Ivy Tech Community College 3 credits
Co-requisite applies. Qualifies for THD and Pathway Dual Credits.

MTTC 105 Abrasive Processes I
Ivy Tech Community College 3 credits
Co-requisite applies. Qualifies for THD and Pathway Dual Credits.

MTTC 106 Print Interpretation
Ivy Tech Community College 3 credits
Qualifies for THD and Pathways Dual Credits.

MTTC 110 Turning & Milling Processes
Ivy Tech Community College 3 credits
Qualifies for THD and Pathway Dual Credits.

METHODS OF INSTRUCTIONAL DELIVERY:

This course will be delivered using a variety of delivery methods. Lecture, class discussion, lab work, and individual and group exercises and activities will be used to deliver the class material.

EVALUATION METHODS:

- Classroom work
- Lab work
- Dual credit course projects and exams
- Participation and attendance

GRADING SCALE:

A+	99-100%	C+	78-79%
A	92-98%	C	72-77%
A-	90-91%	C-	70-71%
B+	88-89%	D+	68-69%
B	82-87%	D	62-67%
B-	80-81%	D-	60-61%
		F	59% and below

REQUIRED CONSUMABLE MATERIALS AND EQUIPMENT:

- Student kit

CLASS POLICIES:

1. Attend each day.
2. Communicate with your teacher when needed.
3. Put forth a good effort each day.
4. Stay on task.
5. Work well in assigned teams.
6. Do the work assigned in a timely manner.