



Manufacturing Engineering Technology A.A.S.

Curriculum Code: 1359

Effective: Fall 2020 – Summer 2025

Description

This program prepares individuals to apply technical skills and advanced computer software to the manufacturing of machined components relating to a broad range of industries. Students receive instruction in manual machine tools, computer numerical control (CNC) machine programming and operation, computer-aided manufacturing (CAM) design/programming, manufacturing processes, metrology, metallurgy, geometric dimensioning and tolerancing, three-dimensional engineering design graphics, and parametric modeling. Employment possibilities include engineering firms and manufacturing companies in the automotive, defense, special machinery, and medical components industries to name a few. Students completing this pathway would also qualify for the CNC Machine Technology Certificate of Achievement.

Additional Information

Students who have already completed DCTM 102, ELTE 102, HVAC 102 or WELD 102 with a grade of 2.0 or higher may substitute one of these courses for METS 102.

Contact Information

Contact the Trades Technology Program, West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

General Education - Applied Degree, Recommended Choices

(For the full list of options, see [General Education](#))

- English Composition – *Select one*
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (Second Course)/Communications or Applied Communications – *Select one*
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours
- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*
MATH 115, Technical Math II, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*
METM 190, Metallurgy and Heat Treatment, 4 credits / 6 billing hours

Program of Study Required Courses

Course Code	Course Title	Credit / Billing Hours
METD 100	Basic Mechanical Drafting	3 / 4
METD 110	Mechanical CAD Drafting I	4 / 6
METD 130	Geometric Dimension/Tolerance	4 / 6
METD 220	Basic Unigraphics/NX	4 / 6
METM 108	Machine Tool Operations	4 / 6
METM 112	Introduction to CNC Machining	4 / 6
METM 150	Advanced CNC Machining	4 / 6
METM 195	Quality/Metrology/Inspection	2 / 3
METM 220	Basic Mastercam	4 / 6
METM 221	Advanced Mastercam	4 / 6
METS 102	Industrial/Construction Safety	2 / 3
METS 115	Intro to Mechanical Systems	4 / 6

Total Credit Hours

60 credits / 83 billing hours

Recommended Course Sequence

Semester I	Semester II
Gen Ed – Mathematics or Applied Mathematics	METD 110
METD 100	METD 130
METM 108	METM 112
METS 102	METM 220

Semester III	Semester IV
Gen Ed – English Composition	Gen Ed – English Composition (Second Course)/
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab	Communications or Applied Communications
METM 150	Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
METM 195	METD 220
METM 221	METS 115