

# MANUFACTURING ENGINEERING TECHNOLOGY (ASSOCIATE OF APPLIED SCIENCE, A.A.S.)

## Overview

The Department also offers a two-year A.A.S. in Manufacturing Engineering Technology.

Career opportunities for two-year associate degree graduates of Manufacturing Engineering Technology include entry-level positions with industries engaged in plant design, machine and tool design, robotics and industrial automation, and computer-integrated manufacturing.

Students can choose three paths in the two-year A.A.S. degree: General, Instrumentation & Automation, and Precision Machining.

The General concentration provides students with the building blocks needed to achieve an associate's degree in Manufacturing Engineering Technology.

The Instrumentation and Automation concentration focuses on hands-on learning in electricity, electronics and computer applications in industry and is designed to meet the workforce needs in the expanding electronics and automation applications field. Career opportunities for two-year associate degree graduates with the Instrumentation and Automation option include entry-level positions with industries engaged in industrial automation, automated production line operation, plant electricity and computer-integrated manufacturing operation and maintenance.

The Precision Machining concentration centers on hands-on learning in Missouri Western's expanded professional machine tool and CNC labs and prepares workforce ready graduates. Career opportunities for two-year associate degree graduates with the Precision Machining option include entry-level positions with industries engaged in machine and tool design, manufacturing machine operation, CNC operation and troubleshooting/maintenance.

## Requirements

Students who choose this associate degree program will have no more than 6 years from admission or subsequent declaration to meet the requirements listed below. If certification, accreditation or statutory requirements change and additional requirements become effective during this time, the new requirements take precedence.

Code	Title	Credit Hours
<b>General Studies</b>		<b>15-19</b>
Students must complete General Studies courses ( <a href="https://catalog.missouriwestern.edu/undergraduate/university-information/academic-standards-regulations/associate-degree-certificate/#associate-general-studies">https://catalog.missouriwestern.edu/undergraduate/university-information/academic-standards-regulations/associate-degree-certificate/#associate-general-studies</a> )		
<b>Core Requirements</b>		<b>17</b>
ACT 201	Microcomputer Applications	3
EGT 205	Computer-Aided Drafting I	3
EGT 215	Computer-Aided Drafting II	3
MET 100	Electrical Circuits for Manufacturing	3

MET 111	Manufacturing Processes	2
MET 132	Manufacturing Methods	3
Select one of the following concentrations:		
General		19
Instrumentation and Automation		16
Precise Machining		14

Concentrations:  
 General (p. )  
 Instrumentation and Automation (p. 1)  
 Precision Machining (p. )

## General Concentration

Code	Title	Credit Hours
<b>Concentration Requirements</b>		
EGT 220	Engineering Materials	3
EGT 260	Statics	3
MET 101	Electronic Instrumentation for Manufacturing	3
MET 232	Computer Integrated Manufacturing	2
MET 242	CNC Machining Processes	2
MET 315	Mechanical Systems	3
MET 325	Machine Parts and Mechanical Design	3
<b>Total Credit Hours</b>		<b>19</b>

## Instrumentation and Automation

Career opportunities for two-year associate degree graduates of manufacturing engineering technology in instrumentation and automation option include entry-level positions with industries engaged in robotics and industrial automation, computer-integrated manufacturing, and automated production.

Code	Title	Credit Hours
<b>Concentration Requirements</b>		
MET 101	Electronic Instrumentation for Manufacturing	3
MET 232	Computer Integrated Manufacturing	2
MET 322	Advanced Electrical Circuits for Manufacturing	4
MET 324	Industrial Controls	3
MET 372	Programmable Logic Controllers	4
<b>Total Credit Hours</b>		<b>16</b>

## Precision Machining

The Precision Machining option centers on "hands on" learning in Machine Tool and CNC Labs and will prepare workforce ready graduates. Career opportunities for two-year associate degree graduates of this option include entry-level positions in machine and tool design, machine operation, and CNC machine operation and maintenance.

Code	Title	Credit Hours
<b>Concentration Requirements</b>		
EGT 220	Engineering Materials	3
MET 132	Manufacturing Methods	3
MET 223	Machines and Tooling	3

MET 241	CNC Machining	3
MET 242	CNC Machining Processes	2
<b>Total Credit Hours</b>		<b>14</b>

## Program Graduation Requirements

1. Earn a grade of C or higher in all EGT and MET prefix major coursework.
2. Earn an overall GPA of at least 2.0 and a major GPA of at least 2.0.

## University Graduation Requirements

1. Earn a minimum of 62 credit hours (100 level and above, maximum of 6 continuing education credit hours applicable).
2. Earn 20 of the last 30 credit hours at MWSU in institutional course work (exclusive of credit by examination).
3. Participate in required departmental and campus wide assessments.
4. Fulfill the Missouri Constitution requirement.
5. Successfully pass the Missouri Higher Education Civics Achievement exam.