

ADVANCED MANUFACTURING ENGINEERING TECHNOLOGY, AAS

Associate of Applied Science in Advanced Manufacturing Engineering Technology (288006AAS)

More on the Advanced and Automated Manufacturing Engineering Technology programs (<https://www.uakron.edu/engineering/me/undergraduate/manufacturing-tech/>)

Program Information

Advanced Manufacturing Engineering Technology is concerned with the analysis, design, and management of all the resources, facilities, and people involved in manufacturing processes. Advanced Manufacturing Engineering Technology requires a background in basic technical subjects, management techniques, work measurement, safety procedures, plant layout, quality control, maintenance, production control, economics, and computer applications such as CAD, CNC, and CAM.

Career Information

A graduate of this program finds employment in manufacturing supervision and control. Duties involve the design, modification, installation, and operation of advanced manufacturing systems, materials, machines, and methods used to produce a product at a profit. Specific career opportunities may be found in the following functional areas:

- Manufacturing Engineering Technician
- Manufacturing Supervision
- Methods – production, planning, methods and engineering
- Work Measurements – time study, motion study, and standards
- Wage Payment – wage incentives, job evaluation
- Controls – production control, quality control, inventory control
- Plant Facilities and Design – plant layout, material handling, product design, storage facilities, and maintenance of plant equipment
- Industrial Relations – management-union relations, workers' compensation
- Purchasing
- Safety and Industrial Hygiene
- Estimating
- Profit and Cost Analysis
- Quality Control and Assurance

Cooperative Education

Cooperative education work experiences are available on an optional basis in this academic program.

Bachelor Degree Programs

Upon completion of the Advanced Manufacturing Engineering Technology Associate of Applied Science Degree, a student may proceed to the Automated Manufacturing Engineering Technology Bachelor of Science Degree ([https://bulletin.uakron.edu/undergraduate/colleges-](https://bulletin.uakron.edu/undergraduate/colleges-arts-sciences/communication/organizational-supervision-bs/)

[arts-sciences/communication/organizational-supervision-bs/](https://bulletin.uakron.edu/undergraduate/colleges-arts-sciences/communication/organizational-supervision-bs/)). Please refer to the Automated Manufacturing Engineering Technology Bachelor of Science Degree Curriculum Guide for further information. An additional degree option is to proceed to the Bachelor of Organizational Supervision Degree (<https://bulletin.uakron.edu/undergraduate/colleges-programs-arts-sciences/communication/organizational-supervision-bs/>).

The following information has official approval of **The Department of Mechanical Engineering** and **The College of Engineering and Polymer Science**, but is intended only as a supplemental guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. Students should refer to the Degree Progress Report (DPR) which is definitive for graduation requirements. *Completion of this degree within the identified time frame below is contingent upon many factors, including but not limited to: class availability, total number of required credits, work schedule, finances, family, course drops/withdrawals, successfully passing courses, prerequisites, among others.* The transfer process is completed through an appointment with your academic advisor.

Transfer students should consult their Advisor to identify courses that are equivalent.

Requirements Summary

Code	Title	Hours
Major Courses for General Education		15
Other Discipline Specific Courses		11
Math and Physical/Natural Science Courses		11
Required Courses		25
Total Hours		62

Major Courses for General Education

Code	Title	Hours
ENGL:111	English Composition I	3
ENGL:222	Technical Report Writing	3
COMM:263	Professional Communications and Presentations	3
Social Science Requirement		6
Total Hours		15

Other Discipline Specific Courses

Code	Title	Hours
MCET:130	Introduction to Hydraulics and Pneumatics ^{1,2}	3
MCET:142	Introduction to Material Technology	3
MCET:121	Fundamentals of Engineering Drawing	3
EEET:210	Industrial Control Panel Fabrication	2
Total Hours		11

Math and Physical/Natural Science Courses

Code	Title	Hours
MATH:152	Technical Mathematics II	2
MATH:153	Technical Mathematics III	2
MATH:154	Technical Mathematics IV	3

PHYS:261	Physics for Life Sciences I	4
Total Hours		11

Required Courses

Code	Title	Hours
AMET:101	Introduction to Advanced Manufacturing ^{1,3}	2
AMET:110	Manufacturing Processes ^{1,3}	3
AMET:151	Industrial Safety & Environmental Protection ³	2
AMET:248	Introduction to CNC and Additive Manufacturing	3
AMET:130	Work Measurement & Cost Estimating	3
AMET:211	Manufacturing Operations ¹	3
AMET:241	Introduction to Quality Assurance	3
AMET:201	Robotics & Automated Manufacturing	3
AMET:225	Computer Aided Tool Design	3
Total Hours		25

¹ Traditionally Fall only (See Program Director).

² Traditionally Spring only (See Program Director).

³ Students completing NTMA Journeyman's Machinist Program receive block credit for these courses. Students who have not completed the entire program or who have completed the program prior to 1/1/96, see an advisor.

Recommended Sequence

1st Year

Fall Semester		Hours
ENGL:111	English Composition I	3
MATH:152	Technical Mathematics II ³	2
MATH:153	Technical Mathematics III ³	2
MCET:130	Introduction to Hydraulics and Pneumatics ^{1,3}	3
AMET:101	Introduction to Advanced Manufacturing ^{1,3}	2
AMET:110	Manufacturing Processes ^{1,3}	3
Hours		15

Spring Semester

AMET:151	Industrial Safety & Environmental Protection ^{2,3}	2
AMET:248	Introduction to CNC and Additive Manufacturing	3
MATH:154	Technical Mathematics IV	3
MCET:121	Fundamentals of Engineering Drawing	3
	Social Science Requirement	3
Hours		14

Summer Semester

	Cooperative Education	
Hours		0

2nd Year

Fall Semester		Hours
COMM:263	Professional Communications and Presentations	3
AMET:130	Work Measurement & Cost Estimating ¹	3
AMET:211	Manufacturing Operations ¹	3
PHYS:261	Physics for Life Sciences I	4

ENGL:222	Technical Report Writing	3
Hours		16

Spring Semester

AMET:241	Introduction to Quality Assurance (Sch. Lab)	3
AMET:201	Robotics & Automated Manufacturing (Sch. Lab) ²	3
EEET:210	Industrial Control Panel Fabrication	2
AMET:225	Computer Aided Tool Design	3
MCET:142	Introduction to Material Technology	3
	Social Science Requirement	3
Hours		17
Total Hours		62

¹ Traditionally Fall only (See Program Director).

² Traditionally Spring only (See Program Director).

³ Students completing NTMA Journeyman's Machinist Program receive block credit for these courses. Students who have not completed the entire program or who have completed the program prior to 1/1/96, see an advisor.