

ADVANCED MANUFACTURING ENGINEERING TECHNOLOGY, AAS

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

More on the Advanced Manufacturing Engineering Technology major (<https://uakron.edu/est/automated-manufacturing-technology/>)

Program Contact

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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

For additional information visit the Bureau of Labor Statistics at www.bls.gov (<http://www.bls.gov>) or the Career Center at the Student

Union, room 211 <http://www.uakron.edu/career> (<http://www.uakron.edu/career/>).

Cooperative Education is available on an optional basis in this academic program. To obtain additional information on program benefits, eligibility requirements, or to apply for the program, contact the Career Center at 330-972-7747 or at <http://www.uakron.edu/career/> no later than the beginning of the second semester.

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. 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.

Technical Electives

Code	Title	Hours
2420:211	Essentials of Financial Accounting	3
2420:212	Basic Accounting II	3
2420:280	Essentials of Business Law	3
2520:101	Essentials of Marketing Technology	3
2870:332	Management of Technology Based Operations	3
2870:480	Automated Production	3
2920:101	Introduction to Mechanical Design	3
3650:163	Technical Physics: Electricity & Magnetism	2
3650:164	Technical Physics: Heat & Light	2

The following information has official approval of **The Department of Engineering and Science Technology** 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.

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. Please refer to the Automated Manufacturing Engineering Technology Bachelor of Science Degree Curriculum Guide for further information.

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

1st Year		Hours
Fall Semester		
2020:121	English	3
2030:152	Technical Mathematics II ¹	2
2030:153	Technical Mathematics III ¹	2

2920:130	Introduction to Hydraulics and Pneumatics ^{1,2}	3
2880:101	Introduction to Advanced Manufacturing ^{1,2}	2
2880:110 or 2920:142	Manufacturing Processes ^{1,2} or Introduction to Material Technology	3
	Hours	15

Spring Semester

2880:151	Industrial Safety & Environmental Protection ¹	2
2030:154	Technical Mathematics IV	3
2880:248	Introduction to CNC and Additive Manufacturing	3
2880:140	Computer Aided Drawing	3
3002:256	Diversity in American Society	3
	Hours	14

Summer Semester

2000:201	Cooperative Education	0
	Hours	0

2nd Year**Fall Semester**

2020:222	Technical Report Writing	3
2420:263	Professional Communications and Presentations	3
2880:130	Work Measurement & Cost Estimating	3
2880:211	Manufacturing Operations ²	3
3650:150 or 3650:160	Manufacturing Physics (Sch. Lab) or Technical Physics: Mechanics	4
	Hours	16

Spring Semester

2040:243	Contemporary Global Issues	3
2880:241	Introduction to Quality Assurance (Sch. Lab)	3
2880:225	Computer Aided Tool Design	3
	Open Elective ⁴	1
Select one Technical Elective Option:		5
Option #1 (On-Campus Students)		
2880:201	Robotics & Automated Manufacturing (Sch. Lab) ³	
2860:210	Industrial Control Panel Fabrication	
Option #2 (Off-Campus and Online Students)		
Select five credits from Technical Elective list ⁴		
	Hours	15
	Total Hours	60

Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, and Communications (Speech) requirements.

You must have a minimum cumulative GPA of a 2.0 to graduate with this degree.

¹ 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.

² Traditionally Fall only (See Program Director).

³ Traditionally Spring only (See Program Director).

⁴ Please note that for Option #2, you may take a second 3-credit course by combining the 2-credit technical elective with the 1-credit open elective.