

Advanced Manufacturing Engineering Technology

Associate of Applied Science Degree (288006AAS)

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.

The following information has official approval of The University of Akron's College of Applied Science and Technology but is intended only as a guide. Official degree requirements are established at the time of transfer and admission to the degree-granting college. 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, and prerequisites, among others. The transfer process is completed through an appointment with your Academic Advisor.

Italicized courses fulfill General Education requirements. If a course is not specified, refer to the General Education webpage at <http://www.uakron.edu/cast/gened>. The College of Applied Science and Technology recommends that students take the General Education courses listed in this curriculum guide. Transfer students should consult their Advisor to identify courses that are equivalent.

Year 1 Fall	Prerequisite
2020:121 <i>English (3)</i>	<i>Appropriate placement by Advisor</i>
2030:152 <i>Technical Mathematics II (2) (Note c)</i>	<i>Appropriate placement by Advisor</i>
2030:153 <i>Technical Mathematics III (2) (Note c)</i>	<i>2030:152 or equivalent with a grade of C- or better, or appropriate placement by Advisor</i>
2920:130 Introduction to Hydraulics and Pneumatics (3) (Notes a & c)	
2880:101 Introduction to Advanced Manufacturing (2) (Notes a & c)	
2880:110 Manufacturing Processes (3) (Notes a & c) -OR- 2920:142 Introduction to Material Technology	
Total Credits = 15	

Year 1 Spring	Prerequisite
2040:256 <i>Diversity in American Society (3)</i>	<i>2020:121, or 3300:112 or equivalent</i>
2880:151 Industrial Safety and Environmental Protection (2) (Note c)	
2030:154 <i>Technical Mathematics IV (3)</i>	<i>2030:153 or equivalent with a grade of C- or better, or placement by Advisor</i>
2880:248 Introduction to CNC and Additive Manufacturing (3)	2030:153 and [2880:140 or 2920:121] or permission
2880:140 Computer Aided Drawing (3)	
Total Credits = 14	

Year 1 Summer	Prerequisite
2000:201 Cooperative Education (0)	

Year 2 Fall	Prerequisite
2020:222 <i>Technical Report Writing (3)</i>	<i>2020:121 or 3300:111 or equivalent</i>
2420:263 <i>Professional Communications and Presentations (3)</i>	<i>Prerequisite or corequisite: 2020:121 or 3300:111</i>
2820:160 <i>Technical Physics: Mechanics I (4) (Sch. Lab) -OR- 2820:150 Manufacturing Physics (4) (Sch. Lab)</i>	<i>2030:154 or permission</i>
2880:130 Work Measurement and Cost Estimating (3)	2880:101
2880:211 Manufacturing Operations (3) (Note a)	
Total Credits = 16	

Year 2 Spring	Prerequisite
2040:243 <i>Contemporary Global Issues (3)</i>	
2880:241 Introduction to Quality Assurance (3) (Sch. Lab)	2880:101, 2030:152
<ul style="list-style-type: none"> o Technical Elective Option #1 (On-campus Students) <ul style="list-style-type: none"> o 2880:201 Robotics and Automated Manufacturing (3) (Sch. Lab) (Note b) o -AND- 2860:210 Industrial Control Panel Fab (2) o Technical Elective Option #2 (Off-campus and Online Students) Choose 5 credits from Technical Elective list (5) (Note d) 	2880:100 or permission for 2880:201 2030:152 for 2860:210
Open Elective (1)	
2880:225 Computer Aided Tool Design (3)	2880:140 or 2920:121
Total Credits = 15	

Total Credits for Degree = 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.

Notes:

- a) Traditionally Fall only (See Program Director)
- b) Traditionally Spring only (See Program Director)
- c) 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.
- d) Technical Electives are listed below. 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.

2420:211 Basic Accounting I (3)	
2420:212 Basic Accounting II (3)	2420:211
2420:280 Essentials of Business Law (3)	
2520:101 Essentials of Marketing Technology (3)	
2820:164 Technical Physics: Heat and Light (2)	2820:161 and 2030:153
2820:163 Technical Physics: Electricity and Magnetism (2) (Sch. Lab)	2820:160 prerequisite; 2030:153 corequisite
2870:480 Automated Production (3)	2880:211 or senior status
2870:332 Management of Technology Based Operations (3)	
2920:101 Introduction to Mechanical Design (3)	2940:121; corequisite: 2030:154

Program Contact

Program Director, Mr. Daniel E. Kandray, Schrank Hall (South) 221E, 330/972-7073, or kandray@uakron.edu

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 back-ground 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 integrated systems of people, 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 Assurance

For additional information visit the Bureau of Labor Statistics at www.bls.gov or the Career Center at the Student Union, room 211 <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.

Transfer to the College of Applied Science and Technology

To be admitted to the College of Applied Science and Technology, a student must have a GPA of 2.0. A student can complete the transfer process through an appointment with an Academic Advisor in the college in which they reside.