MECHANICAL ENGINEERING TECHNOLOGY, AAS

Associate of Applied Science in Mechanical Engineering Technology (292001AAS)

More on the Mechanical Engineering Technology programs (https://www.uakron.edu/engineering/ME/)

Program Information

Mechanical Engineering Technology is concerned with the design of products and the machines required to manufacture them. Mechanical technicians are needed in all industries, from steelmaking to consumer products such as tires, cars, and home appliances. Mechanical technicians work along with engineers in design, testing, manufacturing, and servicing of the mechanical components and systems found everywhere in industry. The associate degree holder is well qualified to begin working in the various areas of mechanical technology.

Career Information

The demand by industry for mechanical technicians is now and will continue to be great. It is estimated that thousands of new mechanical technicians will be required each year. Mechanical technicians find employment in many areas of the mechanical field; some of the specific career opportunities include:

- Junior or Assistant Designer – Designs machine elements and/or systems.
- Engineering Aid - Assists the mechanical engineer, a good beginning for the inexperienced graduate.
- Laboratory Technician – Primarily responsible for evaluation of product or process diagnosis. May do field testing (tires, cars, etc.). Specifying materials from the design and processing standpoints.
- Customer Service Technician – Installs and maintains equipment on site. May also serve as sales representative in recommending a machine for a particular application.
- Plant Engineer – Establishes maintenance schedules and applies tool and machine design production process.

Cooperative Education

Co-op work experiences are available on an optional basis in this academic program.

Bachelor Degree Programs

Upon completion of the Associate of Applied Science in Mechanical Engineering Technology, a student may proceed to the Bachelor of Science in Mechanical Engineering Technology (https://bulletin.uakron.edu/undergraduate/colleges-programs/engineering-polymer-science/mechanical-engineering/mechanical-engineering-technology-bs/) (292104BS).

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 (Stellic) 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
General Education Requirements (https://bulletin.uakron.edu/undergraduate/general-education/) *		9
Program-Specific General Education Courses		7
Required General Education Beyond the Applied Associate Degree Requirement		3
Mathematics and Natural Science Courses		7
Required Mechanical Engineering Technology Courses		28
Discipline Specific Engineering Technology Courses		9
Total Hours		**63**

* Several courses required for the major also satisfy General Education requirements. The University minimum of 15 credits are required for General Education for applied associate degree programs, and credit for these courses will apply to both. The A.A.S. in Mechanical Engineering Technology requires one additional Social Science course (3 credits) beyond the university minimum, for a total of six credits of Social Science.
Students are encouraged to choose General Education courses that are part of Ohio Transfer 36.

General Education for Applied Associate Degree Programs

Students in applied associate degree programs must complete the following 15 credit-hour set of General Education coursework. Some courses are covered by program-specific general education requirements further below.

Code	Title	Hours
Academic Foundations		**9**
	Mathematics, Statistics and Logic: 3 credit hours	
	Speaking: 3 credit hours	
	Writing: 3 credit hours	
Breadth of Knowledge		**6**
	Natural Science: 3 credit hours	
	Social Science: 3 credit hours [1]	
Review the General Education Requirements page for detailed course listings.		
Total Hours		**15**

[1] Students are encouraged to choose General Education courses that are part of Ohio Transfer 36. They are also encouraged to choose a Social

Science course that also meets a Global Diversity or Domestic Diversity General Education requirement for bachelor's degrees.

Program-Specific General Education

Code	Title	Hours
MATH 154	Technical Algebra and Trigonometry 2 [1]	3
PHYS 261	College Physics I [2]	4
Total Hours		**7**

[1] Meets General Education Mathematics, Statistics and Logic requirement. MATH 149 Precalculus Mathematics is an acceptable substitute. Students who place higher in mathematics may meet this requirement with the class they are placed into.

[2] Meets General Education Natural Science requirement. PHYS 291 Elementary Classical Physics I is an acceptable substitute.

General Education Beyond the AAS

Code	Title	Hours
	Arts or Humanities Requirement [1]	3
Total Hours		**3**

[1] Students intending to continue their studies after earning the AAS should select a course that also meets a General Education Diversity requirement for bachelor's degrees.

Mathematics and Natural Science Courses

Code	Title	Hours
MATH 255	Technical Calculus I [1]	3
PHYS 262	College Physics II [2]	4
Total Hours		**7**

[1] Students who place initially into this MATH 255 Technical Calculus I and use it to meet their General Education Mathematics requirement will need an additional three credits for their degree. They are encouraged to take MATH 356 Technical Calculus II, which is required for the BS in Mechanical Engineering Technology. MATH 221 Analytic Geometry-Calculus I Analytic Geometry-Calculus I is an acceptable substitute for MATH 255 Technical Calculus I.

[2] PHYS 292 Elementary Classical Physics II is an acceptable substitute.

Required Mechanical Engineering Technology Courses

Code	Title	Hours
MCET 101	Introduction to Mechanical Design (Sch. lab) [1]	3
MCET 103	Tools for Mechanical Engineering Technology	3
MCET 121	Fundamentals of Engineering Drawing (Sch. lab)	3
MCET 142	Introduction to Material Technology (Sch. lab) [2]	3
MCET 243	Kinematics (Sch. lab) [1]	3
MCET 245	Mechanical Design II (Sch. lab) [2]	4
MCET 249	Applied Thermal Energy I (Sch. lab) [2]	3
MCET 253	Fluid Mechanics	3
MCET 261	Manufacturing Processes	3
Total Hours		**28**

[1] Typically offered in Fall only.

[2] Typically offered in Spring only.

Discipline Specific Engineering Technology Courses

Code	Title	Hours
AMET 248	Introduction to CNC and Additive Manufacturing	3
COET 125	Statics	3
COET 225	Strength of Materials	3
Total Hours		**9**

Recommended Sequence

1st Year		
Fall Semester		**Hours**
MATH 154	Technical Algebra and Trigonometry 2	3
MCET 103	Tools for Mechanical Engineering Technology	3
MCET 121	Fundamentals of Engineering Drawing (Sch. lab)	3
PHYS 261	College Physics I	4
	Writing First Course	3
	Hours	**16**
Spring Semester		
COET 125	Statics	3
PHYS 262	College Physics II	4
AMET 248	Introduction to CNC and Additive Manufacturing	3
MCET 142	Introduction to Material Technology	3
	Speaking Requirement	3
	Hours	**16**
2nd Year		
Fall Semester		
MATH 255	Technical Calculus I	3
MCET 101	Introduction to Mechanical Design (Sch. lab) [1]	3
MCET 253	Fluid Mechanics	3
MCET 243	Kinematics [1]	3
COET 225	Strength of Materials	3
	Hours	**15**
Spring Semester		
MCET 245	Mechanical Design II (Sch. lab) [2]	4
MCET 249	Applied Thermal Energy I (Sch. lab) [2]	3
MCET 261	Manufacturing Processes	3
	Social Science Requirement [3]	3
	Arts or Humanities Requirement [3,4]	3
	Hours	**16**
	Total Hours	**63**

[1] Typically offered in Fall only.

[2] Typically offered in Spring only.
[3] Students are encouraged to choose courses in the OT36 Ohio Transfer Module.
[4] Students intending to continue their studies after earning the AAS should select a course that also meets a General Education Diversity requirement for bachelor's degrees.

Policy Alert: By the end of your first 48 credit hours attempted, you must have completed your required General Education English, Mathematics, Statistics, and Logic, and Speaking requirements.