ASSOCIATE OF APPLIED SCIENCE IN MECHANICAL ENGINEERING TECHNOLOGY

The Mechanical Engineering Technology (MET) program is designed as a "two-plus-two" program. Students may earn an Associate of Applied Science degree after two years of full-time study. With this degree, they may begin a career in industry. The associate degree graduate can continue for two more years of full-time study to earn the bachelor's degree.

The associate degree program introduces the student to the principles and practices of machine design, manufacturing processes, testing, and energy conversion. Students are also given a firm foundation in communications, mathematics, and science. Upon completion of the associate degree, graduates may find employment as engineering technicians in a wide variety of industries. They assist engineers in the design, drafting, testing, and support of mechanical products or of the industrial equipment and processes used to manufacture consumer products.

Program Educational Objectives

Educational objectives for the MET programs have been developed by faculty and the program industrial advisory committee to support the university, the college, and the School of Engineering Technology missions. Graduates of the MET associate degree program function as assistants in the design, drafting, and testing of mechanical products, equipment and processes. Bachelor's degree graduates assume greater responsibility in the design and testing of mechanical products, processes, and equipment.

During their first few years after completion of the mechanical engineering technology program at YSU, graduates will have demonstrated the ability to:

- Work competently in technical and professional careers related to the field of mechanical engineering technology.
- Communicate effectively in a professional environment.
- Continue growth in professional knowledge and skills.
- Achieve recognition and/or compensation consistent with their educational achievements.

Accreditation

The Associate of Applied Science in Mechanical Engineering Technology is accredited by the Engineering Technology Accreditation Commission of ABET, https://www.abet.org (https://www.abet.org/), under the General Criteria and the Program Criteria for Mechanical Engineering Technology.

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Date of last campus visit:   October 2024
Accredited through:   2030
Next campus visit:     October 2029
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COURSE	TITLE	S.H.
FIRST YEAR REQUIREMENT -STUDENT SUCCESS		
YSU 1500	Success Seminar	1-2
or YSU 1500S	Youngstown State University Success Seminar	
or HONR 1500	Intro to Honors	
General Education Courses:		
ENGL 1550	Writing 1	3-4
or ENGL 1549	Writing 1 with Support	
ENGL 1551	Writing 2	3
MATH 1513	Algebra and Transcendental Function	5-10
or MATH 1510 & MATH 1511	College Algebra and Trigonometry	
or MATH 1510C & MATH 1511C	College Algebra with Co-requisite Support and Trigonometry with Co-requisite Support	
PHYS 1501	Fundamentals of Physics 1	4
or PHYS 2610	General Physics 1	
Select 1 course from AH domain		3
Courses in Major:		
CCET 2604	Properties and Strength of Materials	3
CCET 2614L	Materials Laboratory 1	2
EET 3712 & 3712L	Programmable Logic Controllers and PLC Laboratory	4
EET 3725 & 3725L	Electromechanical Systems and Electromechanical Systems Lab	4
ENTC 1505	Engineering Technology Concepts	4
or ENGR 1550 and 1560		
MATH 1570	Applied Calculus 1	4
or MATH 1571	Calculus 1	
MET 1515	Mechanics 1	3
MET 2606	Solid Modeling	4
MET 2607	Geometric Dimensioning and Tolerancing	3
MET 2630 & 2630L	Manufacturing Techniques and Manufacturing Techniques Laboratory	4
MET 3706	Machine Design 1	4
MET 3713	Fluid Power Systems	3
MET 4812 & 4812L	Numerical Control and Numerical Control Lab	3
MET 4860 & 4860L	Robotics Technology and Robotics Technology Laboratory	3
Total Semester Hours		**67-74**

Year 1

Fall		S.H.
YSU 1500	Success Seminar	1-2
or YSU 1500S	or Youngstown State University Success Seminar	
or HONR 1500	or Intro to Honors	
ENGL 1550	Writing 1	3-4
or ENGL 1549	or Writing 1 with Support	
ENTC 1505	Engineering Technology Concepts	4
or ENGR 1550 ***and*** ENGR 1560	or Engineering Concepts ***and*** Engineering Computing	
MATH 1513	Algebra and Transcendental Function	5-10
or MATH 1510 ***and*** MATH 1511	or College Algebra ***and*** Trigonometry	
or MATH 1510C ***and*** MATH 1511C	or College Algebra with Co-requisite Support ***and*** Trigonometry with Co-requisite Support	
MET 2606	Solid Modeling	4
	Semester Hours	**17-24**

Spring		
Gen Ed AH		3
MATH 1570	Applied Calculus 1	4
or MATH 1571	or Calculus 1	
MET 1515	Mechanics 1	3
MET 2607	Geometric Dimensioning and Tolerancing	3
PHYS 1501	Fundamentals of Physics 1	4
or PHYS 2610	or General Physics 1	
	Semester Hours	**17**

Year 2		
Fall		
CCET 2604	Properties and Strength of Materials	3
CCET 2614L	Materials Laboratory 1	2
EET 3725	Electromechanical Systems	3
EET 3725L	Electromechanical Systems Lab	1
MET 2630	Manufacturing Techniques	3
MET 2630L	Manufacturing Techniques Laboratory	1
MET 4860	Robotics Technology	2
MET 4860L	Robotics Technology Laboratory	1
	Semester Hours	**16**
Spring		
EET 3712L	PLC Laboratory	1
EET 3712	Programmable Logic Controllers	3
ENGL 1551	Writing 2	3
MET 3706	Machine Design 1	4
MET 3713	Fluid Power Systems	3
MET 4812	Numerical Control	2
MET 4812L	Numerical Control Lab	1
	Semester Hours	**17**
	Total Semester Hours	**67-74**

PROGRAM OUTCOMES

ASSOCIATE OF APPLIED SCIENCE IN mechanical enginEERING TECHNOLOGY

Graduates of the Associate Degree in Mechanical Engineering Technology will possess the following competencies upon graduation:

(1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline;

2) an ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline;

(3) an ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;

(4) an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results; and

(5) an ability to function effectively as a member of a technical team.