

# 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 and Registration

The mechanical engineering technology associate program is accredited by the ETAC Accreditation Commission of ABET, <http://www.abet.org>.

Date of last campus visit: October, 2017

Accredited through: 2024

Next campus visit: 2023

Link to accreditation body: ABET (<http://www.abet.org>)

COURSE	TITLE	S.H.
<b>General Education Courses:</b>		
MATH 1513	Algebra and Transcendental Function	5
MATH 1570	Applied Calculus 1	4
ENGL 1550	Writing 1	3
ENGL 1551	Writing 2	3
GER AH		3
GER SS		3
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
PHYS 1501	Fundamentals of Physics 1	4
<b>Total General Education Credit Hours: 29 s.h.</b>		

### Courses in Major:

ENTC 1501	Introduction to Engineering Technology	2
ENTC 1505	Engineering Technology Concepts	4
CCET 1503	CAD Technology	2
CCET 1504	Drafting and Plan Reading	2
MET 1515	Mechanics 1	3
CCET 2604	Properties and Strength of Materials	3
CCET 2614L	Materials Laboratory 1	2
MET 2606	Solid Modeling	4
MET 2616	Mechanics 2	3
MET 3714	Fluid Mechanics	4
MET 3714L	Fluid Mechanics Laboratory	1
MET 2630	Manufacturing Techniques	3
MET 2630L	Manufacturing Techniques Laboratory	1
MET 3706	Machine Design 1	4
<b>Total Major Credit Hours: 38 s.h.</b>		

### Year 1

Fall		S.H.
ENTC 1501	Introduction to Engineering Technology	2
ENTC 1505	Engineering Technology Concepts	4
MATH 1513	Algebra and Transcendental Function	5
CCET 1503	CAD Technology	2
CCET 1504	Drafting and Plan Reading	2
ENGL 1550	Writing 1	3
Semester Hours		18

### Spring

MET 1515	Mechanics 1	3
CCET 2604	Properties and Strength of Materials	3
CCET 2614L	Materials Laboratory 1	2
MATH 1570	Applied Calculus 1	4
MET 2606	Solid Modeling	4
Semester Hours		16

### Year 2

Fall		S.H.
MET 2616	Mechanics 2	3
MET 3714 & 3714L	Fluid Mechanics and Fluid Mechanics Laboratory	5
PHYS 1501	Fundamentals of Physics 1	4
Arts & Humanities GER <sup>1</sup>		3
Semester Hours		15

### Spring

MET 2630 & 2630L	Manufacturing Techniques and Manufacturing Techniques Laboratory	4
MET 3706	Machine Design 1	4
CHEM 1515 & 1515L	General Chemistry 1 and General Chemistry 1 Laboratory	4
ENGL 1551	Writing 2	3
Social Science GER <sup>1</sup>		3
Semester Hours		18
Total Semester Hours		67

<sup>1</sup> General Education Requirement: see "Schedule of Classes" for details.  
SPA = Social & Personal Awareness (2 required for BSAS)  
SS = Social Sciences (2 required for BSAS)  
AH = Arts & Humanities (2 required for BSAS)

## **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:

- mastery of knowledge, skills, and tools of the discipline
- ability to apply knowledge to solve engineering problems
- ability to conduct, analyze, and interpret experiments
- ability to work effectively in teams
- ability to identify, analyze, and solve technical problems
- ability to communicate effectively
- recognition of the need to engage in lifelong learning
- ability to understand professional, ethical, social, and diversity responsibilities and diversity
- commitment to quality, timeliness, and continuous improvement