BACHELOR OF SCIENCE IN APPLIED SCIENCE IN MECHANICAL ENGINEERING TECHNOLOGY

Students who have earned the associate degree may elect to complete the bachelor's degree on either a full- or part-time basis. Courses in the bachelor's degree program further develop technical, communication, and managerial skills. Upon successful completion of the coursework, graduates are awarded the Bachelor of Science in Applied Science degree and are prepared for greater levels of responsibility and greater career advancement.

Graduates of the BSAS degree program obtain employment as engineering technologists or engineering designers for government agencies, consulting engineers and architects, industry and manufacturing, and contractors. Because their education is more extensive, they are prepared for more responsibility and more-rapid advancement. BSAS engineering technologists and designers plan, design, inspect, and direct construction, production, and maintenance activities.

Based on an evaluation of their work, transfer students who have a related associate degree from a regionally accredited institution may be admitted to the bachelor's degree program at the junior level.

program Educational Objectives

Educational objectives for the mechanical engineering technology 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.

Program Outcomes

Graduates in mechanical engineering technology will achieve the following learning outcomes by the time they graduate:

- 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 design systems, components, and processes
- ability to work effectively in teams
- ability to identify, analyze, and solve technical problems
- ability to communicate effectively
- recognition of the need for professional development
- ability to understand professional, ethical, social, and diversity responsibilities
- knowledge of engineering solutions in a societal and global context
- commitment to quality, timeliness, and continuous improvement

Accreditation and Registration

The mechanical engineering technology bachelor program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org . Graduates are qualified to apply to the National Institute for Certification in Engineering Technologies (NICET) for certification procedures in various specialty areas, depending on academic major and employment area. In many states, including Ohio, West Virginia and Pennsylvania, bachelor's degree graduates are qualified to take the Fundamentals of Engineering (FE) exam, and, with sufficient work experience, the Professional Engineers (PE) exam.

Date of last campus visit: October, 2011

Accredited through: 2018

Next campus visit: October, 2017

Link to accrediting body: ABET (http://www.abet.org)

Course	Title	S.H.
Year 1		
Fall		
ENTC 1501	Introduction to Engineering Technology	2
ENTC 1505	Engineering Technology Concepts	4
MATH 1513	Algebra and Transcendental Function	5
DDT 1503	AutoCAD 1	2
DDT 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
DDT 2606	CAD Solid Modeling	4
	Semester Hours	**16**
Year 2		
Fall		
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 [3]		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 [3]		3
	Semester Hours	**18**
Year 3		
Fall		
MET 3720	Mechanisms	3
MET 3707	Machine Design 2	3
EET 3725 & 3725L	Electromechanical Systems and Electromechanical Systems Lab	4

MATH 2670	Applied Calculus 2	5
	Semester Hours	**15**
Spring		
MET 3705	Thermodynamics	4
CCET 3705	Computing for Technologists	3
MET 4860 & 4860L	Robotics Technology and Robotics Technology Laboratory	3
CMST 1545	Communication Foundations	3
MET Elective [1]		3
	Semester Hours	**16**
Year 4		
Fall		
MET 3711	Heat and Power Cycles	4
MET 4810	Manufacturing Systems Analysis	3
MET Elective [1]		3
Social Science GER [3]		3
Arts and Humanities GER [3]		3
	Semester Hours	**16**
Spring		
MET 4820	Machine Systems (Capstone)	3
MET 4870	Applied Finite Element Method	3
Social & Personal Awareness GER [3]		3
Social & Personal Awareness GER [3]		3
ISEN/MGT Eelctive [2]		3
	Semester Hours	**15**
	Total Semester Hours	**129**

1 Choose two of MET 3710 Tool Design, MET 4812 Numerical Control/MET 4812L Numerical Control Lab, MET 4890 Special Topics in Mechanical Engineering Technology, EET 4880 Electrical and Mechanical Facilities Design, ENTC 4895 Independent Engineering Technology Project

2 Choose one ISEN 3720 Statistical Quality Control, ISEN 3724 Engineering Economy, MGT 3725 Fundamentals of Management, or MGT 2604 Legal Environment of Business 1

3 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)

Electives

COURSE	TITLE	S.H.
MET Electives		
Select two of the following:		2-8
MET 3710	Tool Design	
MET 4812 & 4812L	Numerical Control and Numerical Control Lab	
MET 4890	Special Topics in Mechanical Engineering Technology	
EET 4880	Electrical and Mechanical Facilities Design	
ENTC 4895	Independent Engineering Technology Project	
ISEN/MGT Electives		
Select one of the following:		3
ISEN 3720	Statistical Quality Control	
ISEN 3724	Engineering Economy	
MGT 3725	Fundamentals of Management	
MGT 2604	Legal Environment of Business 1	
Total Semester Hours		**5-11**