Bachelor of Science in Mechanical Engineering Technology

The goal of the Mechanical Engineering Technology program is to provide students with the necessary training and education so they can provide high-level technical support to a variety of industrial, commercial, consulting, and governmental organizations. The emphasis of the program is in the application of scientific and engineering principles. Technical communication in oral and written form is also emphasized.

Graduates are expected to appreciate the ethical and societal responsibilities of a technologist, the concepts of Continuous Quality Improvement, and the continuing impact of globalization of design, manufacturing, and marketing of technical goods and services. Graduates are trained to deal with choice of materials and methods that are safe, environmentally and aesthetically acceptable, and economically competitive.

Typical responsibilities that may be assigned to graduates are the development and evaluation of machines and mechanisms; development, organization and supervision of manufacturing processes and procedures; the instrumentation, control and testing of a process; quality control; technical marketing and sales; design of mechanical systems for heating and cooling; and energy management.

Contact

Administrative Support Assistant
Casey McDowell
cmm8969@psu.edu
+1 717-948-6116

Program Chair

Issam Abu-Mahfouz, Ph.D. <u>iaa2@psu.edu</u> +1 717 948 6361

Associate Program Chair Amit

Banerjee, Ph.D. <u>aub25@psu.edu</u> +1 717 948 6661

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777 West Harrisburg Pike Middletown, PA 17057 Phone: 800-438-7941 Fax: 717-948-6401 harrisburg.psu.edu



Curriculum

The strengths of the program include:

- hands-on training
- extensive laboratory experience
- state-of-the-art computer methods
- good job placement

This program is accredited by the Engineering Technology Accreditation Commission of ABET, www.abet.org.

For a B.S. degree in Mechanical Engineering Technology, a minimum of 128 credits is required. See "Courses" for details.

Courses

In addition to <u>General Education requirements</u> (45 credits), this major requires the following:

PRESCRIBED COURSES (48 credits)

CHEM 110 GN(3), CHEM 111 GN(1) (Sem: 1-4)
MATH 140 GQ(4) (Sem: 1-5)
ENGL 202C GWS(3) (Sem: 3-4)
ENGR 420Y US;IL(3), I E 303(2), IET 308(3), MET 321(2),
MET 332(3), MET 336(3), MET 341(3), MET 358(3), MET
431(3), MET 438(3), MET 448(2), MET 454(3), MET 481(1),
MET 486(3) (Sem: 5-8)

ADDITIONAL COURSES (35-39 credits)

Select 3 credits from: EDSGN 100(3) or EG T 120(3) (Sem: 1-2)

Select 3-4 credits from: PHYS 150 GN(3) or PHYS 211 GN(4) (Sem: 1-2)

Select 3 credits from: E MCH 211(3) or ET 300(3) or MCH T 111(3) (Sem: 2-3)

Select 3-4 credits from: PHYS 151GN(3) or PHYS 212 GN(4) (Sem: 2-4)

Select 3 credits from: IET 101(3) or IET 311(3) (Sem: 2-5) Select 3-4 credits from: IET 215(2) and IET 216(2) or IET 321(3) (Sem: 2-5)

Select 4 credits from: STAT 200 GQ(4) or MATH 141 GQ(4) (Sem: 2-6)

Select 3 credits from: E MCH 212(3), ET 321(3), or MET 206(3) (Sem: 3-4)

Select 3 credits from: ET 322(3), E MCH 213(3), or MCH T 213(3) (Sem: 3-4)

Select 1 credit from: ET 323(1) or MCH T 214 (1) (Sem: 3-6) Select 3 credits from: MET 210W(3) or MET 365(3) (Sem: 3-6)

Select 3-4 credits from: EET 101(3) and EET 109(1); or EET 320(3) (Sem: 3-7)

SUPPORTING COURSES AND RELATED AREAS (14-18 credits)

Select 5-9 credits from the department approved list of courses. (Sem: 5-8)

Select 9 credits from 300-400 level technology and engineering elective courses in consultation with an academic adviser and in support of the student's interests. (Sem: 5-8)

Undergraduate Admissions Requirements

Minimum high school course requirements for admission to baccalaureate (four-year) degree programs are listed below. Keep in mind that specific programs may have additional requirements or recommendations.

English

Four units, including one unit each in composition and literature, are required.

Social Studies/Art/Humanities

Three units in any combination of social studies, arts, and humanities are required.

World Language

Two units in a single world language other than English are required. However, a student may be admitted with fewer than two units in a world language other than English, but must correct this deficiency by the time s/he earns 60 credits or graduates from Penn State, whichever comes first. This deficiency may be corrected by passing one three- or four-credit college level world language course or by demonstrating proficiency equivalent to two units of high school world language study.

Either a third unit in the same language or an additional unit in a second world language other than English is recommended.

Science

Three units of science are required
Preparation in chemistry and physics is recommended but
not required for our Science and Engineering/Engineering
Technology programs

Math

Three units of mathematics are required (four are recommended), selected from any combination of algebra, geometry, and trigonometry

Some programs have additional mathematics requirements. Our Business, Engineering/Engineering Technology, and Science programs require one-half unit of trigonometry or higher level math within the required three units

Penn State requires proof of graduation or a GED for admission to four-year degree programs.

*In most high school curricula, one unit = one year.

Visit Undergraduate Admissions: Admissions Requirements for more information (http://goo.gl/eVGAMB)