

# MECHANICAL ENGINEERING TECHNOLOGY, B.S. (CAPITAL)

**Begin Campus:** Any Penn State Campus

**End Campus:** Harrisburg

## Degree Requirements

**For the Bachelor of Science degree in Mechanical Engineering Technology, a minimum of 128 credits is required:**

Requirement	Credits
General Education	45
Requirements for the Major	104

**21 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 3 credits of GWS courses; 9 credits of GN courses; 6 credits of GQ courses, 3 credits of GS courses.**

### Requirements for the Major

To graduate, a student enrolled in the major must earn a grade of C or better in each course designated by the major as a C-required course, as specified by Senate Policy 82-44 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44>).

Code	Title	Credits
<b>Prescribed Courses</b>		
CHEM 110	Chemical Principles I	3
CHEM 111	Experimental Chemistry I	1
ENGL 202C	Effective Writing: Technical Writing	3
IET 308	Statistical Quality Control	3
MATH 140	Calculus With Analytic Geometry I	4
MET 321	Analytical Techniques	2
MET 338	Thermal/Fluids Laboratory	1
MET 358	Process Design Engineering	3
MET 370	Engineering Materials Laboratory	1
MET 438	Thermal Engineering B	3
MET 454	Automatic Controls	3
MET 458	Controls Laboratory	1
MET 481	Project Design	3
MET 486	Project Design	3
<i>Prescribed Courses: Require a grade of C or better</i>		
ENGR 320Y	Design for Global Society	3
MET 332	Thermal Engineering A	3
MET 336	Engineering Fluid Mechanics	3
MET 341	Mechanical Measurements and Instrumentation	3
MET 431	Heat Transfer	3
<b>Additional Courses</b>		
EDSGN 100	Cornerstone Engineering Design	3
or EGT 120	Introduction to Graphics and Solid Modeling	
EET 101 & EET 109	Electrical Circuits I and Electrical Circuits Laboratory I	3-4
or EET 320	Industrial Electricity and Electronics	

IET 101	Manufacturing Materials, Processes, and Laboratory	3
or IET 311	Elements of Metallurgy	
IET 215 & IET 216	Production Design and Production Design Laboratory	3-4
or IET 321	Manufacturing Processes	
MET 210W	Machine Design	3
or MET 365	Design of Machine Elements	
PHYS 150	Technical Physics I	3-4
or PHYS 211	General Physics: Mechanics	
PHYS 151	Technical Physics II	3-4
or PHYS 212	General Physics: Electricity and Magnetism	
STAT 200	Elementary Statistics	4
or MATH 141	Calculus with Analytic Geometry II	

*Additional Courses: Require a grade of C or better*

Select 3 credits from the following:		3
EMCH 211	Statics	
ET 300	Mechanics I: Statics	
MET 111	Mechanics for Technology: Statics	
Select 3 credits from the following:		3
EMCH 212	Dynamics	
ET 321	Dynamics	
MET 206	Dynamics	
Select 3 credits from the following:		3
EMCH 213	Strength of Materials	
ET 322	Strength of Materials	
MET 213	Strength and Properties of Materials	

### Supporting Courses and Related Areas

Select 5-9 credits from the department approved list of courses	5-9
Select 12 credits from 300-400 level technology and engineering elective courses in consultation with an academic adviser and in support of the student's interests	12

### General Education

Connecting career and curiosity, the General Education curriculum provides the opportunity for students to acquire transferable skills necessary to be successful in the future and to thrive while living in interconnected contexts. General Education aids students in developing intellectual curiosity, a strengthened ability to think, and a deeper sense of aesthetic appreciation. These are requirements for all baccalaureate students and are often partially incorporated into the requirements of a program. For additional information, see the General Education Requirements (<https://bulletins.psu.edu/undergraduate/general-education/baccalaureate-degree-general-education-program/>) section of the Bulletin and consult your academic adviser.

The keystone symbol appears next to the title of any course that is designated as a General Education course. Program requirements may also satisfy General Education requirements and vary for each program.

### Foundations (grade of C or better is required and Inter-Domain courses do not meet this requirement.)

- **Quantification (GQ):** 6 credits
- **Writing and Speaking (GWS):** 9 credits

### **Breadth in the Knowledge Domains (Inter-Domain courses do not meet this requirement.)**

- **Arts (GA):** 3 credits
- **Health and Wellness (GHW):** 3 credits
- **Humanities (GH):** 3 credits
- **Social and Behavioral Sciences (GS):** 3 credits
- **Natural Sciences (GN):** 3 credits

### **Integrative Studies**

- **Inter-Domain Courses (Inter-Domain):** 6 credits

### **Exploration**

- **GN**, may be completed with Inter-Domain courses: 3 credits
- **GA, GH, GN, GS, Inter-Domain courses.** This may include 3 credits of World Language course work beyond the 12th credit level or the requirements for the student's degree program, whichever is higher: 6 credits

## **University Degree Requirements**

### **First Year Engagement**

All students enrolled in a college or the Division of Undergraduate Studies at University Park, and the World Campus are required to take 1 to 3 credits of the First-Year Seminar, as specified by their college First-Year Engagement Plan.

Other Penn State colleges and campuses may require the First-Year Seminar; colleges and campuses that do not require a First-Year Seminar provide students with a first-year engagement experience.

First-year baccalaureate students entering Penn State should consult their academic adviser for these requirements.

### **Cultures Requirement**

6 credits are required and may satisfy other requirements

- United States Cultures: 3 credits
- International Cultures: 3 credits

### **Writing Across the Curriculum**

3 credits required from the college of graduation and likely prescribed as part of major requirements.

### **Total Minimum Credits**

A minimum of 120 degree credits must be earned for a baccalaureate degree. The requirements for some programs may exceed 120 credits. Students should consult with their college or department adviser for information on specific credit requirements.

### **Quality of Work**

Candidates must complete the degree requirements for their major and earn at least a 2.00 grade-point average for all courses completed within their degree program.

### **Limitations on Source and Time for Credit Acquisition**

The college dean or campus chancellor and program faculty may require up to 24 credits of course work in the major to be taken at the location or in the college or program where the degree is earned. Credit used toward degree programs may need to be earned from a particular source or within time constraints (see Senate Policy 83-80 (<https://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#83-80>)). For more information, check the Suggested Academic Plan for your intended program.