ELECTRO-MECHANICAL ENGINEERING TECHNOLOGY, B.S. (ENGINEERING)

Seven Penn State campuses are scheduled for closure after Spring 2027: DuBois, Fayette, New Kensington, Mont Alto, Shenango, Wilkes-Barre, and York. New students are not being admitted at these campuses.

Begin Campus: Any Penn State Campus

End Campus: Fayette, New Kensington, York

Degree Requirements

For the Bachelor of Science degree in Electro-Mechanical Engineering Technology, a minimum of 130 credits is required:

Requirement	Credits
General Education	45
Requirements for the Major	109-116

24 of the 45 credits for General Education are included in the Requirements for the Major. This includes: 3 credits of GH courses; 9 credits of GN courses; 6 credits of GQ courses; 6 credits of GWS courses. The remaining 21 General Education credits must be distinct from the Requirements for the Major.

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/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/).

Code	Title	Credits
Prescribed Courses		
CMPET 211	Embedded Processors and DSP	3
EDSGN 100	Cornerstone Engineering Design	3
EET 105	Electrical Systems	3
EET 275	Introduction to Programmable Logic Controls	3
EGT 114	Spatial Analysis and Computer-Aided Drafting	2
EMET 100	Computation Tools for Engineering Synthesis	1
EMET 215	Manufacturing Engineering	3
EMET 225	Applied Dynamics	2
EMET 325	Electric Drives	3
EMET 326	Mechanical Drives	3
EMET 405	Fluid Mechanics and Heat Transfer	3
EMET 410	Automated Control Systems	4
IET 101	Manufacturing Materials, Processes, and Laboratory	3
IET 333	Engineering Economics for Technologists	2
STS/PHIL 233	Ethics and the Design of Technology	3
Prescribed Courses: Require a grade of C or better		
CMPET 117	Digital Electronics	3
CMPET 120	Digital Electronics Laboratory	1
EET 114	Electrical Circuits II	4
EET 118	Electrical Circuits Laboratory	1
EET 212W	Op Amp and Integrated Circuit Electronics	4
EMET 222	Applied Mechanics	3
EMET 230	Computerized I/O Systems	3
EMET 330	Measurement Theory and Instrumentation	3
ENGL 202C	Effective Writing: Technical Writing	3
MET 111	Mechanics for Technology: Statics	3
Additional Courses		
EMET 350	Quality Control, Inspection, and Design	2-3
or EMET 351	Quality Control, Inspection, and Design	
EMET 403 & EMET 440	Electromechanical Design Project Preparation and Electro-Mechanical Project Design	4
or EMET 441 & EMET 442	Mechatronics Project Design and Mechatronics Project Implementation	
Select 3 credits from the following:		3
CMPSC 121	Introduction to Programming Techniques	
CMPSC 131	Programming and Computation I: Fundamentals	
CMPSC 200	Programming for Engineers with MATLAB	
CMPSC 201	Programming for Engineers with C++	
Select 6-8 credits of GN courses from two of the following groups:		6-8
Group 1		
CHEM 110 & CHEM 111	Chemical Principles I and Experimental Chemistry I	
Group 2		
PHYS 150	Technical Physics I	
PHYS 211	General Physics: Mechanics	
PHYS 250	Introductory Physics I	
Group 3		
PHYS 151	Technical Physics II	
PHYS 212	General Physics: Electricity and Magnetism	
PHYS 251	Introductory Physics II	
Additional Courses: Require a grade of C or better		
MATH 83	Technical Calculus [1]	4
or MATH 140	Calculus With Analytic Geometry I	
MATH 210	Calculus with Engineering Technology Applications	3-4
or MATH 141	Calculus with Analytic Geometry II	
MATH 250	Ordinary Differential Equations [2]	3
or MATH 211	Intermediate Calculus and Differential Equations with Applications	
Select 3 credits from the following:		3
CAS 100	Effective Speech	
CAS 100A	Effective Speech	
CAS 100B	Effective Speech	
Select 3-5 credits from the following:		3-5
MATH 26	Plane Trigonometry and Applications of Trigonometry	
MATH 40		
MATH 82	Technical Mathematics II [3]	
Supporting Courses and Related Areas		
Select 3-4 credits of science courses, in consultation with an adviser, from the approved department list		3-4

Select 6 credits of General Technical Elective courses, in consultation with an adviser, from the approved department list	6

[1] Students taking MATH 83 must take MATH 210 and MATH 211.
[2] Note that MATH 250 does not carry a C-requirement.
[3] Students taking MATH 81 and MATH 82 must take MATH 83.

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/students/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/)). For more information, check the Suggested Academic Plan for your intended program.