

ELECTRICAL AND COMPUTER ENGINEERING TECHNOLOGY, B.S.

Begin Campus: Any Penn State Campus

End Campus: Erie

Degree Requirements

For the Bachelor of Science degree in Electrical and Computer Engineering Technology, a minimum of 128 credits is required:

Requirement	Credits
General Education	45
Requirements for the Major	107

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

Per Senate Policy 83.80.5, the college dean or campus chancellor and program faculty may require up to 24 credits of coursework in the major to be taken at the location or in the college or program where the degree is earned.

Requirements for the Major

Each student must earn at least a grade of C in each 300- and 400-level course in the major field.

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/>).

Common Requirements for the Major (All Options)

Code	Title	Credits
Prescribed Courses		
CAS 100	Effective Speech	3
COMPET 5	Engineering Methods in Engineering Technology	1
COMPET 120	Digital Electronics Laboratory	1
COMPET 211	Embedded Processors and DSP	3
EET 101	Electrical Circuits I	3
EET 109	Electrical Circuits Laboratory I	1
EET 212W	Op Amp and Integrated Circuit Electronics	4
EET 214	Electric Machines and Energy Conversion	3
EET 215	Electric Machines and Energy Conversion Laboratory	1
EET 280	System Integration Project	1
ENGL 202C	Effective Writing: Technical Writing	3
MATH 210	Calculus with Engineering Technology Applications	3
MATH 211	Intermediate Calculus and Differential Equations with Applications	3

Prescribed Courses: Require a grade of C or better

COMPET 117	Digital Electronics	3
COMPET 301	Algorithmic Processes for Electrical Systems	3
COMPET 355	Intermediate Microprocessors and Microcomputers	3
EET 114	Electrical Circuits II	4
EET 118	Electrical Circuits Laboratory	1
EET 315	Linear and Discrete System Analysis	3
EET 341	Measurements and Instrumentation	3
EET 480	Electrical and Computer Systems Senior Seminar	1
EET 490W	Electrical/Computer Senior Design Project	3
MGMT 409	Project Management for Engineers	3

Additional Courses

ECON 102	Introductory Microeconomic Analysis and Policy	3
or ECON 104	Introductory Macroeconomic Analysis and Policy	
EET 2	Introduction to Engineering Technology	1
or ET 2		
EGT 101		2
& EGT 102	and Introduction to Computer Aided Drafting	
or EGT 119	Introduction to CAD for Electrical and Computer Engineering	

Select one of the following sequences: 10

Sequence A

CHEM 110	Chemical Principles I	
CHEM 111	Experimental Chemistry I	
PHYS 250	Introductory Physics I (requires a grade of C or better)	
2 credits of science		

Sequence B

PHYS 150	Technical Physics I (requires a grade of C or better)	
PHYS 151	Technical Physics II (requires a grade of C or better)	
4 credits of science		

Select 3 credits of the following: 3

EET 275	Introduction to Programmable Logic Controls	
EET 220 and 1 credit in 200 level or higher of technical electives from school-approved list		

Additional Courses: Require a grade of C or better

EET 450		3
or QC 450	Quality Control and Quality Improvement	
MATH 22	College Algebra With Analytic Geometry and Applications II	3
or MATH 82	Technical Mathematics II	
MATH 26	Plane Trigonometry and Applications of Trigonometry	3
or MATH 81	Technical Mathematics I	
MATH 83	Technical Calculus	4
or MATH 140	Calculus With Analytic Geometry I	

Requirements for the Option

Requirements for the Option: Require a grade of C or better

Select an option 18

Requirements for the Option**Electrical Engineering Technology Option (18 credits)**

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
EET 330	Wireless Communications Systems	3
EET 416	Fluid and Thermal Design in Electrical Systems	3
EET 440	Applied Feedback Controls	3

Supporting Courses and Related Areas

Supporting Courses and Related Areas: Require a grade of C or better

Select 9 credits of technical electives at the 300 or 400 level from school-approved list (students may apply 6 credits of ROTC)	9
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Computer Engineering Technology Option (18 credits)

Code	Title	Credits
Prescribed Courses		
<i>Prescribed Courses: Require a grade of C or better</i>		
CMPET 333	Computer Networking	3
CMPET 456	Advanced Microprocessors, High Level Interfacing	3
CMPET 457	Software Engineering	3

Supporting Courses and Related Areas

Supporting Courses and Related Areas: Require a grade of C or better

Select 9 credits of technical electives at the 300 or 400 level from school-approved list (students may apply 6 credits of ROTC)	9
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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.