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:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
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<tbody>
<tr>
<td>General Education</td>
<td>45</td>
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<tr>
<td>Requirements for the Major</td>
<td>107</td>
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</table>

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.

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.)

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

Knowledge Domains

- Arts (GA): 6 credits
- Health and Wellness (GHW): 3 credits
- Humanities (GH): 6 credits
- Social and Behavioral Sciences (GS): 6 credits
- Natural Sciences (GN): 9 credits

Integrative Studies (may also complete a Knowledge Domain requirement)

- Inter-Domain or Approved Linked Courses: 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 (http://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.

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 (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/82-00-and-83-00-degree-requirements/#82-44).

Common Requirements for the Major (All Options)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CAS 100</td>
<td>Effective Speech</td>
<td>3</td>
</tr>
<tr>
<td>CMPET 5</td>
<td>Engineering Methods in Engineering Technology</td>
<td>1</td>
</tr>
<tr>
<td>CMPET 120</td>
<td>Digital Electronics Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CMPET 211</td>
<td>Embedded Processors and DSP</td>
<td>3</td>
</tr>
<tr>
<td>EET 101</td>
<td>Electrical Circuits I</td>
<td>3</td>
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</tbody>
</table>
Electrical Circuits Laboratory I
EET 212W Op Amp and Integrated Circuit Electronics
EET 214 Electric Machines and Energy Conversion
EET 215 Electric Machines and Energy Conversion Laboratory
EET 280 System Integration Project
ENGL 202C Effective Writing: Technical Writing
MATH 210 Calculus with Engineering Technology Applications
MATH 211 Intermediate Calculus and Differential Equations with Applications

Prescribed Courses: Require a grade of C or better

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

Additional Courses

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

Select one of the following sequences:

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:

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 or QC 450 Quality Control and Quality Improvement
MATH 22 College Algebra II and Analytic Geometry
or MATH 82 Technical Mathematics II
MATH 26 Plane Trigonometry

or MATH 81 Technical Mathematics I
MATH 83 Technical Calculus
or MATH 140 Calculus With Analytic Geometry

Requirements for the Option

Electrical Engineering Technology Option (18 credits)

Prescribed Courses: Require a grade of C or better

EET 330 Wireless Communications Systems
EET 416 Fluid and Thermal Design in Electrical Systems
EET 440 Applied Feedback Controls

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)

Computer Engineering Technology Option (18 credits)

Prescribed Courses: Require a grade of C or better

CMPET 333 Computer Networking
CMPET 456 Advanced Microprocessors, High Level Interfacing
CMPET 457 Software Engineering

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)