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>
</tr>
</thead>
<tbody>
<tr>
<td>General Education</td>
<td>45</td>
</tr>
<tr>
<td>Requirements for the Major</td>
<td>107</td>
</tr>
</tbody>
</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)

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<thead>
<tr>
<th>Code</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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Electrical and Computer Engineering Technology, B.S. 1
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

CMPET 117  Digital Electronics  3
CMPET 301  Algorithmic Processes for Electrical Systems  3
CMPET 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
ECON 104  Introductory Macroeconomic Analysis and Policy  3
EET 2  Introduction to Engineering Technology  1
EET 2 or ET 2
EGT 101 and Introduction to Computer Aided Drafting  2
EGT 102 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  3
CHEM 111  Experimental Chemistry I  3
PHYS 250  Introductory Physics I (requires a grade of C or better)  3

2 credits of science

Sequence B

PHYS 150  Technical Physics I (requires a grade of C or better)  3
PHYS 151  Technical Physics II (requires a grade of C or better)  3

4 credits of science

Select 3 credits of the following: 3

EET 275  Introduction to Programmable Logic Controls  1
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  Quality Control and Quality Improvement  3
MATH 22  College Algebra II and Analytic Geometry  3
MATH 26  Plane Trigonometry  3

or MATH 81  Technical Mathematics I  4
or MATH 140  Calculus With Analytic Geometry I  4

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)

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<td>Technical Calculus</td>
<td>4</td>
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<tr>
<td>MATH 140</td>
<td>Calculus With Analytic Geometry I</td>
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Prescribed Courses

Prescribed Courses: Require a grade of C or better

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

Computer Engineering Technology Option (18 credits)

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<td>Computer Networking</td>
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</tr>
<tr>
<td>CMPET 456</td>
<td>Advanced Microprocessors, High Level Interfacing</td>
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<tr>
<td>CMPET 457</td>
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