

ELECTRONIC ENGINEERING TECHNOLOGY, A.A.S. - EET3

With electronic and computer circuits now being used in everything from the most complex industrial equipment to the simplest of household appliances, the engineering technician in this field is prepared to work in an extremely wide variety of businesses and industries.

Skilled in the operation, troubleshooting, calibration and repair of electronic instruments and systems found in process control, communications, computers, manufacturing, programmable logic controllers and microprocessors, the graduate is not limited to one specific area of employment. Practical, hands-on experience on sophisticated electronic equipment provides the student with the skills necessary to assist in the basic design, construction, analysis, modification, inspection and calibration of electronic circuits and systems.

Requirements

Courses	Course Title	Credit Hours
General Education Courses		
ENG 101	English Composition I	3
or ENG 165	Professional Communications	
MAT 110	College Algebra	3
MAT 111	College Trigonometry	3
PSY 103	Human Relations	3
or PSY 201	General Psychology	
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
Subtotal		15
Required Core Subject Areas		
EET 141	Electronic Circuits	4
EET 145	Digital Circuits	4
EET 231	Industrial Electronics	4
EET 235	Programmable Controllers	3
Subtotal		15
Other Courses Required for Graduation		
EET 113	Electrical Circuits I	4
EET 114	Electrical Circuits II	4
EET 131	Active Devices	4
EET 212	Industrial Robotics	3
EET 234	Principles of Mechatronics	3
EET 241	Electronic Communications	4
EET 251	Microprocessor Fundamentals	4
EET 273	Electronics Senior Project	1
EGR 130	Engineering Technology Applications and Programming	3
EGT 151	Introduction to CAD	3
PHY 201	Physics I ¹	4

PHY 202	Physics II ²	4
Subtotal		41
Total Hours		71

¹ or for transfer PHY 221 University Physics I (if prerequisite MAT 140 Analytical Geometry and Calculus I has been completed)

² or for transfer PHY 222 University Physics II

Graduation Plan

For Summer 2021: EGR 130 is available for the summer semester. Student who have not yet completed EGR 130 are encouraged to include this course on their Summer 2021 schedule.

Fall Start

Course	Title	Hours
First Year		
Fall Semester		
EET 113	Electrical Circuits I	4
EET 212	Industrial Robotics	3
EGR 130	Engineering Technology Applications and Programming	3
EGT 151	Introduction to CAD	3
MAT 110	College Algebra	3
Hours		16

Spring Semester

EET 114	Electrical Circuits II	4
ENG 101	English Composition I	3
MAT 111	College Trigonometry	3
PHY 201	Physics I	4
or PHY 221	or University Physics I	
Hours		14

Summer Semester

EET 131	Active Devices	4
EET 145	Digital Circuits	4
PHY 202	Physics II	4
or PHY 222	or University Physics II	
Hours		12

Second Year

Fall Semester

EET 141	Electronic Circuits	4
EET 231	Industrial Electronics	4
EET 234	Principles of Mechatronics	3
PSY 103	Human Relations	3
or PSY 201	or General Psychology	
Hours		14

Spring Semester

EET 235	Programmable Controllers	3
EET 241	Electronic Communications	4
EET 251	Microprocessor Fundamentals	4
EET 273	Electronics Senior Project	1



Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)	3
Hours	15
Total Hours	71

Spring Start

Course	Title	Hours
First Year		
Spring Semester		

EGR 130	Engineering Technology Applications and Programming	3
EGT 151	Introduction to CAD	3
ENG 101	English Composition I	3
MAT 110	College Algebra	3
Hours		12

Summer Semester		
MAT 111	College Trigonometry	3
Hours		3

Fall Semester		
EET 113	Electrical Circuits I	4
EET 212	Industrial Robotics	3
PHY 201 or PHY 221	Physics I or University Physics I	4
PSY 103 or PSY 201	Human Relations or General Psychology	3
Hours		14

Second Year		
Spring Semester		
EET 114	Electrical Circuits II	4
PHY 202 or PHY 222	Physics II or University Physics II	4
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
Hours		11

Summer Semester		
EET 131	Active Devices	4
EET 145	Digital Circuits	4
Hours		8

Fall Semester		
EET 141	Electronic Circuits	4
EET 231	Industrial Electronics	4
EET 234	Principles of Mechatronics	3
Hours		11

Third Year		
Spring Semester		
EET 235	Programmable Controllers	3
EET 241	Electronic Communications	4
EET 251	Microprocessor Fundamentals	4

EET 273	Electronics Senior Project	1
Hours		12
Total Hours		71

Summer Start

Course	Title	Hours
First Year		
Summer Semester		

ENG 101	English Composition I	3
MAT 110	College Algebra	3
Hours		6

Fall Semester		
EET 113	Electrical Circuits I	4
EGR 130	Engineering Technology Applications and Programming	3
MAT 111	College Trigonometry	3
PHY 201 or PHY 221	Physics I or University Physics I	4
Hours		14

Spring Semester		
EET 114	Electrical Circuits II	4
EGT 151	Introduction to CAD	3
PHY 202 or PHY 222	Physics II or University Physics II	4
Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/)		3
Hours		14

Second Year		
Summer Semester		
EET 131	Active Devices	4
EET 145	Digital Circuits	4
PSY 103 or PSY 201	Human Relations or General Psychology	3
Hours		11

Fall Semester		
EET 141	Electronic Circuits	4
EET 212	Industrial Robotics	3
EET 231	Industrial Electronics	4
EET 234	Principles of Mechatronics	3
Hours		14

Spring Semester		
EET 235	Programmable Controllers	3
EET 241	Electronic Communications	4
EET 251	Microprocessor Fundamentals	4
EET 273	Electronics Senior Project	1
Hours		12
Total Hours		71

Application and Advising

If you are ready to start your education, there are a few simple steps involved in enrolling at Piedmont Technical College.

Get Started Today (<https://www.ptc.edu/admissions/new-students/>)

Advising Information

The following information provides a guide for advisors who are helping students enroll in this program.

For Summer 2021: EGR 130 is available for the summer semester. Student who have not yet completed EGR 130 are encouraged to include this course on their Summer 2021 schedule.

Program Notes

Courses for this program are offered day and evening, and/or online as available.

Starting program courses in the fall semester is preferred. Contact the Electronic Engineering Technology instructor, Jason White, if students would like to start program courses any other semester.

Tools will be required for EET 231 and other senior-level courses.

Recent high school graduates should be asked if they have participated in Project Lead the Way. If so, high school transcripts should be forwarded to Christina Knight for possible exemption credit. When students enter this program with Project Lead the Way course credit in high school, they may receive the following credit:

- Principles of Engineering (POE) - EGR 130

Students will need to purchase a calculator (approximately \$75).

Notes About Individual Classes

The English required for this program is ENG 165. Students will follow this progression, with their starting point being determined by their placement test scores: ENG 032/012 and/or RDG 032/012 (or RWR 032/012) > ENG 100 and/or RDG 100 (or RWR 100) > ENG 165 or ENG 101. If students are planning to transfer to a four-year school, they should choose to take ENG 101 instead of ENG 165.

The first math course required for this program is MAT 110. Students will follow this progression, with their starting point being determined by their placement test scores: MAT 032/012 > MAT 152 or MAT 101 > MAT 102 > MAT 110.

To enroll in EGR 130, students must have completed MAT 152 or MAT 101 or have placement scores indicating readiness for MAT 102. Completion of MAT 102 is preferred, but student may take MAT 102 along with EGR 130.

To enroll in EET 113, students must have completed MAT 102, have completed MAT 110, or have test scores indicating readiness for MAT 110.

Please note that EET 241 is only offered during spring semesters.

If a student is not ready to take college-level courses, he or she should enroll in the appropriate developmental or transitional coursework.

Students who need MAT, ENG or RDG 032 courses as prerequisites should not enroll in EET, EGR, or EGT courses.

Accredited by the Engineering Technology Accreditation Commission of ABET, (<http://www.abet.org>), this program offers a comprehensive introduction both to the theoretical principles governing electronic systems and the practical application of those principles.

Electronic Engineering Technology Enrollment and Degree Data (<https://www.ptc.edu/sites/default/files/documents/academics/Engineering/EET%20Enrollment%20and%20Degree%20Data.pdf>)

Program Educational Learning Outcomes Purpose Statement

The mission of the Electronic Engineering Department is to provide an accessible, affordable and quality education that prepares students for the highly skilled and technological workplace in engineering. The department utilizes on-going assessment strategies and teaching methods that support continuous improvement in instruction, learning opportunities, support services and management practices.

EET Program Educational Objectives:

The objectives of the Electronic Engineering Technology program is to produce graduates who during their first few years of professional practice will;

- Work in Electronics Engineering related industry as Electrical Tester, Automated Teller and Office Machine Technicians, Customer Service Technicians, Electronic Technicians, Engineering Technicians, Field Service Technicians, Manufacturing Technicians, etc.
- Develop a career that includes employment or self-employment in engineering related industry or academia, working as a technician.
- Pursue higher education if interested in getting a Bachelor's degree in the field of Electronics or Electrical Engineering Technology.

Program Student Learning Outcomes

Students completing Electronic Engineering Technology will be able to demonstrate:

1. An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the Electronic Engineering Technology discipline.
2. An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the Electronic Engineering Technology discipline.
3. An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments and an ability to identify and use appropriate technical literature.
4. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results.
5. An ability to function effectively as a member of a technical team.