CCAF Electronic Systems Technology to, Electronic Engineering Technology, Bachelor of Science

ecpi UNIVERSITY

Program Overview

If you are the type of person who likes working with your hands, putting things together, and combining different systems to come up with a solution for a real life problem, then a career in Electronics Engineering could be the right choice for you. Learn to analyze and troubleshoot electronic and telecommunication systems. Take a look around you. You are surrounded by these systems from traditional electronic products to wireless PDAs, iPods, iPhones, iPads, and others.

In these times of emerging technologies, a skilled workforce in the electronics field has been and will continue to be in demand in maintenance and repair, installation, quality assurance, and research and development.

Program Objectives

- Apply acquired technical and analytical skills as it relates to their professional positions in electrical, electronic, and related industries.
- Apply relative mathematical, science, and engineering methods to solve technical problems.
- Analyze and implement complex systems including both hardware and software.
- Pursue lifelong learning and successful professional careers.
- Perform as effective team members through adequate oral and written communication skills.
- Relate and exercise an educated judgment in regards to their professional and ethical responsibilities.

Program Outcomes

Students in the B.S. Electronics Engineering Technology program learn to design and build electronic systems and learn about analog and digital electronics. They are able to apply the engineering and mathematical principles that they learn in order to implement and maintain electronic systems, such as computers and controllers.

Upon completion of the Bachelor of Science in Electronics Engineering Technology, graduates are able to:

- An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined engineering technology activities.
- An ability to select and apply a knowledge of mathematics, science, engineering and technology to engineering technology problems that require the application of principles and applied procedures or methodologies.
- An ability to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.
- An ability to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.
- An ability to function effectively as a member or leader on a technical team
- An ability to identify, analyze, and solve broadly defined engineering technology problems.
- An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- An understanding of the need for an ability to engage in self-directed continuing professional development.
- An understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity.
- A knowledge of the impact of engineering technology solutions in a societal and global context.
- A commitment to quality, timeliness, and continuous improvement.

***ECPI is a Category III partner and requires students to complete more than 60 semester hours of credit beyond the AAS and meet all other AU-ABC specifications.**

**** The college may accept credits from an institution recognized by the Council of Higher Education Accreditation (CHEA). ECPI will accept credit toward a degree or certificate for satisfactory performance on the Advanced Placement of the College Board (AP), College-Level Examination Program (CLEP), and Defense Activity for Non-Traditional Support (DANTES) exams. Prospective students should contact the college for a list of exams that apply to CLEP and DANTES. A minimum score of 50 is required to receive transfer credit.**

*****In addition to courses listed under Advanced Technical requirement, a student's scheduled may consist of other courses in this concentration or other concentrations. The Advanced Technical requirement is 19 credits. Students can satisfy the credit requirement by transferring applicable courses from their *CCAF Technical Electives and taking a combination of courses listed in the Advanced Technical section of the degree plan. Below is a snapshot of what can possible transfer into the BS EET Program.***

Concentration outcomes

In 2.5 years, through our year-round schedule, you can earn a Bachelor of Science in Electronics Engineering Technology.

Graduates of this degree program are able to design, install, maintain, and repair electrical and electronic equipment.

Degree Program Requirements

Degree Requirement	Required Semester Credits	Possible CCAF Transfer Credits	Courses to take at Institution
Core Concentration Credits	**32**	**16**	**16**
CIS121 Logic and Design	3		3
CIS126 Programming I	3		3
CIS150 Networking I	3		3
CIS225 Networking II	3		3
EET110 Electric Circuits I	3	3(ELT1702)	
EET111 Electric Circuits II	3	3(ELT1701)	
EET11L Electric Circuits II LAB	1	1(ELT5728)	
EET120 Semiconductor Devices	3	3(ELT1712)	
EET121 Electronic Systems Applications	3	3(ELT1714)	
EET130 Digital Systems I	3	3(ELT1106)	
EET230 Digital Systems II	3		3
EET230L Digital Systems II LAB	1		1
Required Concentration Credits	**33**	**16**	**17**
EET220 Industrial Applications	3	3(ELT5714)	
EET221L Instrumentation & Measurement LAB	1	1(ELT1716)	
EET250 Computer Configuration I	3		3
EET251 Computer Configuration II	3		3
EET251L Computer Configuration II LAB	1		3
EET252 Data Communications & Networking	3		3
EET280 Introduction to Communication Systems	3	3(ELT1108)	
EET282 Wireless Security	3		3
EET301 Special Topics in Engineering Technology	3	3(ELT1457)	
EET310 Circuit Analysis	3	3(ELT1453)	
EET380 Digital Communications I	3	3(ELT1456)	
EET430 Microcontrollers	3		3
EET430L Microcontrollers LAB	1		1
Required Arts & Science Credits	**31**	**15**	**16**
ENG 110 College Composition	3	3	
COM115 Principles of Communication	3	3	
MTH131 College Algebra	3	3	
PSY105 Introduction to Psychology	3	3	
HUM205 Culture & Diversity	3	3	
ENG120 Advanced Composition	3		3
MTH200 Pre -Calculus	3		3
PHY120 Physics	3		3
PHY120L Physics Lab	1		1

PSY220 Positive Psychology OR ECO201 Macroeconomics OR ECO202 Microeconomics OR SOC100 Introduction to Sociology	3		3
CAP480 Arts & Science Capstone	3		3
Self-Integration & Computer Literacy	**9**		**9**
CIS 106 Introduction to Operating Systems	3		3
CIS115 Computer Applications	3		3
FOR110 Essentials for Success	3		3
COR090 Career Orientation	0		0
Required Advanced Technical Credits	**19**		**19**
CIS202 Intro to Routing and Switching	3		3
CIS204 Intermediate Routing & Switching	3		3
CIS207 Network Routing & Switching LAB	1		3
CIS214 Object-Oriented Programming Using C#	3		3
CIS215 Programming II	3		3
MTH220 Applied Calculus	3		3
MTH320 Applied Calculus II	3		3
EET191 Materials Science	3		3
EET272 Fiber Optic Communications	3		3
EET272L Fiber Optic Communications LAB	1		3
EET281 Wireless Technologies	3		3
EET300 Emerging Wireless Technologies	3		3
EET302 Senior Internship	3		3
EET331 Programmable Controllers & Robotics	3		3
EET331L Programmable Controllers & Robotics LAB	1		3
EET402 Capstone Project	3		3
EET411 Senior Project	3		3
EET411L Senior Project LAB	1		1
Total Credits Required Bachelor of Science Degree	**124**	**47**	**77**

******This is a snapshot of possible transfer credits into the BS EET Program could. An official transcript evaluation is required to receive applicable transfer credit towards the BS EET degree.**