

# Kansas State Polytechnic: College of Technology and Aviation

## Electronic and Computer Engineering Technology

### Overview

Imagine a world without electronics. There would be no music playing on the radio. No telephones to communicate with friends and family. No computers to help business and industry prosper. Obviously, electronic circuits and systems affect the daily lives of every citizen in our country. Our electronic and computer engineering technology program prepares you for an exciting career in electronics.

### Professional options

#### Careers

Electronic and computer engineering technology graduates generally work as members of a team of engineers, scientists and other technical professionals in research and development, manufacturing, technical sales, maintenance and customer service.

#### Employers

Employers include companies using and developing data communications equipment, automated manufacturing systems and computer peripheral equipment. Associate degree graduates work as engineering technicians in product development, plant operation and maintenance, production and technical sales.

The advanced expertise attained by bachelor's degree graduates opens additional career paths in product design and development, industrial control systems design, maintenance engineering and management.

### Academics

#### Degree options

The degree programs offered in electronic and computer engineering technology provide a solid foundation in a range of electronic circuit topics. Students study circuit analysis, digital

#### Points of pride

Graduates of Kansas State University's electronic and computer engineering technology program find work in a wide variety of areas, ranging from product design to advanced data communications.

electronics, microprocessor programming and interfacing, computer programming, and radio frequency communication circuits and systems. These technical subjects are taught in conjunction with courses in mathematics, science and interpersonal communications.

### Accreditation

The bachelor's degree program option in electronic and computer engineering technology is accredited by the Engineering Technology Accreditation Commission of ABET, <http://www.abet.org>.

### Preparation

The electronic and computer engineering technology program is for students interested in the practical application of electronic circuit theories. The ability to think through a problem in a logical, step-by-step manner is very important in this field, as is a genuine interest in hands-on laboratory activities. High school studies should concentrate on mathematics, physical sciences with related laboratory activities, and written and oral communications.

### Facilities

Laboratory facilities used in the electronic and computer engineering technology program include an electrical manufacturing laboratory, a computer-controlled instrumentation laboratory, a power circuits laboratory, and a digital circuits and systems laboratory. Several computer laboratories on campus provide access to modern circuit simulation programs, compilers, business software and the Internet.

### Required coursework

#### Electronic and Computer Engineering Technology, bachelor's degree option (126 credit hours)

##### Freshman

##### Fall semester (17 credit hours)

3	COMM 106	Public Speaking I
4	ECET 100	Basic Electronics
4	ECET 250	Digital Logic
3	ENGL 100	Expository Writing I
0	ETA 020	Engineering Technology Seminar
3	MATH 100	College Algebra

##### Spring semester (16 credit hours)

3	CHM 110	General Chemistry
1	CHM 111	General Chemistry Laboratory
3	CMST 103	Computing Principles
3	CMST 250	Hardware and Network Fundamentals
3	ECET 101	Direct Current Circuits
3	MATH 150	Plane Trigonometry

##### Sophomore

##### Fall semester (16 credit hours)

4	ECET 110	Semiconductor Electronics
4	ECET 201	Alternating Current Circuits
1	ECET 335	Industrial Control Topics
3	ENGL 302	Technical Writing
4	MATH 220	Analytic Geometry and Calculus I

##### Spring semester (17 credit hours)

3	ECET 240	Electronics Manufacturing
4	ECET 350	Microprocessor Fundamentals
3	MET 382	Industrial Instrumentation and Controls
4	PHYS 113	General Physics I
3		Humanities/Social Science elective

##### Junior

##### Fall semester (14 credit hours)

3	CMST 302	Applications for C Programming for Engineering Technology
3	ECET 304	Electric Power and Devices
4	ECET 352	Digital Circuits and Systems
4	MATH 221	Analytical Geometry and Calculus II

##### Spring semester (17 credit hours)

3	BUS 315	Supervisory Management
4	ECET 320	Electronic Communications Systems
3	ENGL 200	Expository Writing II
3		Humanities/Social Science elective
4		Science elective with lab

##### Senior

##### Fall semester (14 credit hours)

3	ECET 430	Network Analysis
4	ECET 450	Digital Systems and Computer Architecture
1	ECET 480	Electronics Design I
3		Humanities/Social Science elective
3		Technical elective

##### Spring semester (15 credit hours)

4	ECET 420	Communications Circuits Design
2	ECET 481	Electronics Design II
3		Humanities/Social Science elective
3		Humanities/Social Science elective*
3		Technical elective

\*Marked electives must be upper-level courses, 300 and above.

# Electronic and Computer Engineering Technology, associate degree option

(66 credit hours)

## Freshman

### Fall semester (17 credit hours)

3	COMM 106	Public Speaking I
4	ECET 100	Basic Electronics
3	ECET 250	Digital Logic
3	ENGL 100	Expository Writing I
0	ETA 020	Engineering Technology Seminar
3	MATH 100	College Algebra

### Spring semester (16 credit hours)

3	CHM 110	General Chemistry
1	CHM 111	General Chemistry Laboratory
3	CMST 103	Computing Principles
3	CMST 250	Hardware and Network Fundamentals
3	ECET 101	Direct Current Circuits
3	MATH 150	Plane Trigonometry

## Sophomore

### Fall semester (16 credit hours)

4	ECET 110	Semiconductor Electronics
4	ECET 201	Alternating Current Circuits
1	ECET 335	Industrial Control Topics
3	ENGL 302	Technical Writing
4	MATH 220	Analytic Geometry and Calculus I

### Spring semester (17 credit hours)

3	ECET 240	Electronics Manufacturing
4	ECET 350	Microprocessor Fundamentals
3	MET 382	Industrial Instrumentation and Controls
4	PHYS 113	General Physics I
3	Humanities/Social Science elective	

**For more information about  
the electronic and computer  
engineering technology program,  
contact:**

Kansas State Polytechnic  
Office of Admissions  
2310 Centennial Road  
Salina, KS 67401-8196  
785-826-2640  
polytechnic@k-state.edu

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## KANSAS STATE UNIVERSITY

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Post-Graduation Statistics  
k-state.edu/postgrad-stats  
ksdegrestats.org

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