

# Electrical and Computer Engineering

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The department of electrical and computer engineering (ECE) offers graduate courses of study leading to one or more of the following degrees:

- PhD in electrical engineering and computer science
- Master of Science (MS) in electrical and computer engineering

## Master of Science Degree

### *Master of Science in Electrical and Computer Engineering*

The Master of Science in electrical and computer engineering (MSECE) is a flexible degree program for students seeking an advanced professional career in electrical or computer engineering, or gaining admission into PhD programs around the world. Students of the program have the opportunity to build a strong foundation in physical science and mathematics, while exploring key subdisciplines taught by active researchers having national and international recognition in communication and signal processing, computing systems, control systems and robotics, power and energy systems, and computer networking.

## Doctor of Philosophy

The Doctor of Philosophy (PhD) in electrical engineering and computer science prepares students for conducting advanced research in several specialization areas including algorithms and software systems, cyber-physical systems, cybersecurity, parallel and pervasive computing, artificial intelligence and machine learning, data science and big data analysis, communication and signal processing, computer networking, computer systems and architecture, control systems, and energy and power systems. Students of this program take courses that span the breadth of this field, as well as depth in their chosen specialization areas. Students have the option to focus on computer science, computer engineering or electrical engineering. Under the supervision of recognized researchers, students conduct research leading to archival publications, and prepare themselves for a research-oriented career.

## Facilities

Modern laboratories contain facilities for experimental work in areas of control systems and robotics, computers and digital systems, communications, energy conversion, power electronics, power quality, and computer networking.

## Programs in Electrical and Computer Engineering

- PhD in Electrical Engineering and Computer Science (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/phd-in-eecs/>)
- MS in Electrical and Computer Engineering (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/ms-electrical-and-computer-engineering/>)
- Accelerated BS to MS in Electrical and Computer Engineering (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/accelerated-bs-msece/>)

## Certificates in Electrical and Computer Engineering

- Graduate Certificate in Computing Systems (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/certificate-computing-systems/>)
- Graduate Certificate in Control Systems (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/certificate-control-systems/>)

- Graduate Certificate in Data-Centric Modern Communications (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/certificate-data-centric-modern-communications/>)
- Graduate Certificate in Energy Engineering (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/certificate-energy-engineering/>)
- Graduate Certificate in Power System Operations (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/certificate-power-system-operations/>)
- Graduate Certificate in Power System Planning (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/certificate-power-system-planning/>)
- Graduate Certificate in Renewable Energy and Storage (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/certificate-renewable-energy-storage/>)
- Certificate in Transportation Electrification (<http://catalog.wichita.edu/graduate/engineering/electrical-computer-engineering/certificate-transportation-electrification/>)

## Courses in Electrical and Computer Engineering

- Electrical and Computer Engineering (ECE) (<http://catalog.wichita.edu/graduate/courses/ece/>)