

Electrical and Computer Engineering

Electrical engineering and computer engineering are some of the fastest growing career fields in the United States and around the world. All of career paths in electrical or computer engineering provide opportunities to work with teams of engineers and make a huge difference in the lives of people worldwide. The Bachelor of Science in Electrical and Computer Engineering program involves the study of hardware, software, communications, and the interactions between them. Its curriculum focuses on the theories, principles, and practices of traditional electrical engineering and mathematics and applies them to the design of computers and computer-based devices. This undergraduate program is structured to establish analytical thinking and design skills in areas such as computer architecture, digital logic design, circuits analysis, computer communication networks, digital computer control, integrated circuit engineering, project management, VLSI design, digital signal processing and embedded systems. The graduates can work in industries ranging from health care, renewable energy, and retail to security, gaming, and telecommunications.

Sample Job Titles

- Associate Embedded Software Engineer
- Electrical Design Engineer
- Fire Protection Engineer
- Fire Protection Code Consultant
- Hardware Engineer
- Implementation Engineer
- Network Engineer
- Process Engineer
- User Experience Designer & Developer

Enhancing Employability

Employers will increasingly prefer applicants with college degrees, internships, and previous full-time or part-time experiences in the related fields.

Employers of Electrical and Computer Engineers

- Aerospace Industry
- Automotive Industry
- Computer and Electronics Manufacturing Industry
- Defense
- Guidance and Control Systems
- Telecommunications
- Transportation

Professional Associations and Affiliations

Institution of Electrical and Electronic Engineers (IEEE)

<https://www.ieee.org/>

Institution of Engineering and Technology (IET)

<https://www.theiet.org/>

Association for Computing Machinery (ACM)

<https://www.acm.org/>

IEEE Computer Society

<https://www.computer.org/>

American Association for Artificial Intelligence (AAAI)

<http://www.aaai.org/>

Audio Engineering Society (AES)

<http://www.aes.org/>

Electric Power Research Institute (EPRI)

<https://www.epri.com>