

ELECTRICAL ENGINEERING, B.S. (ENGINEERING)

Seven Penn State campuses are scheduled for closure after Spring 2027: DuBois, Fayette, New Kensington, Mont Alto, Shenango, Wilkes-Barre, and York. New students are not being admitted at these campuses.

Begin Campus: Any Penn State Campus

End Campus: University Park

Career Paths

Electrical engineers design, analyze, and integrate cyber-physical systems across a wide range of industries including defense, communication, transportation, manufacturing, entertainment, healthcare, construction, and energy. Many graduates become design engineers in research and development labs, creating state-of-the-art sensors, robotics, embedded systems, chips, AI hardware, and intelligent devices. Others work in manufacturing and industrial automation, where they improve production processes. Still others work in field engineering or system integration, where they help to deploy and maintain complex engineering solutions. Many graduates hold leadership roles or work as independent consultants who assist organizations in solving advanced technical and system level challenges.

Careers

Career opportunities span a wide range of modern technologies and application domains, including:

- Circuit and system design for smartphones, wearables, AI glasses, and next generation consumer electronics
- Power systems for advanced manufacturing and AI data centers
- Industrial automation and electrification
- Antennas and optical systems for next generation (NextG) communication systems
- Signal processing hardware and software for immersive virtual, augmented, and mixed reality applications
- Image processing and computer vision for medical imaging and intelligent sensing
- Software, algorithms, and embedded intelligence for artificial intelligence, cybersecurity, and largescale data analytics
- Chip design and semiconductor engineering supporting high-performance computing and AI hardware.

MORE INFORMATION ABOUT POTENTIAL CAREER OPTIONS FOR GRADUATES OF THE ELECTRICAL ENGINEERING PROGRAM (<https://www.eecs.psu.edu/students/undergraduate/EECS-Students-Undergrad-EE-Specialization.aspx>)

Opportunities for Graduate Studies

A Penn State graduate degree is recognized for producing graduates with broad academic credentials in theoretical and experimental research, and developing specialized skills that improve marketability in the global workplace. Students with a Bachelor of Science in Electrical Engineering are well-prepared to continue their technical education with a Master's or PhD in electrical engineering or fields such as computer science and engineering, material science, or physics, preparing them for employment in research labs or higher education.

Additionally, some graduates opt for professional degrees in medicine, law or business administration to pursue careers in medical imaging, patent law, and engineering management.

MORE INFORMATION ABOUT OPPORTUNITIES FOR GRADUATE STUDIES (<https://www.eecs.psu.edu/students/graduate/Graduate-Degree-Programs-EE.aspx>)

Professional Resources

- Penn State IEEE (<https://sites.psu.edu/psuieee/>)
- Eta Kappa Nu (<https://sites.psu.edu/hkneecs/>)
- Association of Women in Computing (<https://awc.cse.psu.edu>)
- Penn State SPIE/OSA (<http://spie.ee.psu.edu/about.html>)
- Association for Computing Machinery (<https://acm.psu.edu>)