

Electrical and Computer Engineering

Electrical and Computer Engineering (ECE) Program is preparing students for careers as practicing engineers in such areas as electrical and electronic circuits, digital design, signals and systems, microprocessors applications, analog and digital communications, and to be able to both work in teams and effectively communicate through written and oral communication. The program has design integrated across the curriculum beginning from the very first semester, and culminates with an integrated design experience that encapsulates technical communications, professional development and engineering design into a four-semester capstone design experience.

Undergraduate program offers degree options:

- Electrical engineering;
- Computer engineering;
- Bioelectrical engineering.

Graduate program areas:

- Signal and image processing;
- Controls;
- Hardware.

Faculty members are also active in related areas such as:

- Communications;
- Energy systems;
- Intelligent systems;
- Microelectronics;
- Robotics.

Career Opportunities

An engineering education at Temple is not just about coursework or research, but all about [rewarding job opportunities](#), lifelong learning and professional development. Our students receive personal attention from our faculty and develop lifelong relationships in what we refer to as the engineering education lifecycle. There is always a shortage of good, creative engineers who can make a difference.

- **Consumer Electronics** (CD Players, televisions, MP3, Stereos, Gaming Systems);
- **Computer Equipment** (Motherboards, processors, Monitors, Printers);
- **Communication Devices** (Telecommunication devices, Cellular phones, GPS navigation);
- **Information Technology** (Deployment of computer equipment, Computer networks, Programming);
- **Healthcare** (Biological signal and image processing, Implantable sensors);
- **Security** (Information and data security, Radar and sonar);
- **Electrical Power** (Generation, Distribution, Planning);
- **Manufacturing Process** (Machine control, Automation, Programming).

Coursework

The ECE Department offers an undergraduate degree program, leading to **Bachelor of Science in Electrical Engineering**. The Department also offers an option in Computer Engineering (CpE) and Bioelectrical Engineering (BioE), which are specialization tracks within the degree program. The curriculum is designed to provide preparation for a professional career in those areas. All students in the ECE Department receive a broad background in the fundamentals of electrical and computer engineering.

The **EE curriculum** is defined by the requisite courses in electromagnetic, electronics, and control systems.

The **CpE curriculum** is defined by the requisite courses in computer science, digital logic and microprocessor, and embedded systems.

The **BioE curriculum** is defined by requisite courses in biology, anatomy, physiology, electromagnetic, control systems, and digital signal processing.

Faculty

The Department of Electrical and Computer Engineering at Temple University currently consists of 13 **highly dedicated** and **capable** full-time. By judicious design of our curriculum, our faculty, though small in number, are **well-qualified** to support the three concentrations that we offer. The EE concentration is covered by a number of faculty members, whose expertise covers typical EE disciplines such as electronics, power, physical devices, controls and signal processing. The CpE concentration is covered by several faculty who have expertise in digital systems, software and embedded systems. The CpE concentration also builds on the expertise of our faculty in the Department of Computer and Information Sciences. The BioE concentration is covered by several faculty, who have formal training in bioengineering but also who contribute to our other concentrations. Our Bioelectrical concentration will enjoy good synergy with newly established Department of Bioengineering.

Senior Design Projects

The Senior Design Project is a capstone course of the senior year for electrical and computer engineering students, as well as all others engineering students. The course is broken into two semesters and is designed to create a professional work environment in which a group of students, along with a faculty advisor (sometimes a local company may provide assistance and donate materials) work together to provide a solution to a problem.

Honors Program

Honors students at Temple University are part of the ultimate learning community. These exceptionally talented students enjoy course sections designed exclusively for them; the latest technology is integrated into all sections. The distinguished Honors Program faculty challenges students while addressing their unique needs. The Temple University Honors Program is available to students who have completed AP or high school honors courses, rank near the top of their class, and/or score in top percentiles on the SAT or ACT. The program is also available to transfer students who complete at least 24 credits at an ABET certified college and earn at least a 3.5 GPA.

Contact Us

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