College of Engineering
TEMPLE UNIVERSITY®

Electrical and Computer Engineering

Electrical engineers are involved in the design and development of telecommunications networks, consumer electronics, control systems for space vehicles and robots, and in many aspects of the power and automotive industries. Electrical engineers are creators who design innovative technologies such as satellite communications, cell phones, fiber optic networks, radar systems, sophisticated control systems for defense, and neural networks. Within all of these industries, electrical engineers work in areas of research, manufacturing, development, design, planning, and testing equipment.

Computer engineers are responsible for designing, implementing, and the application of computers and digital systems. The field covers hardware, software, and the interaction between them. Computer engineers develop networks, microprocessors, computers, and workstations, for the servers and switches that support the internet. They also deal with the integration of hardware and protocols that support the telecommunications network. Computer engineers build microprocessor chips that control computers and other electronic hardware.

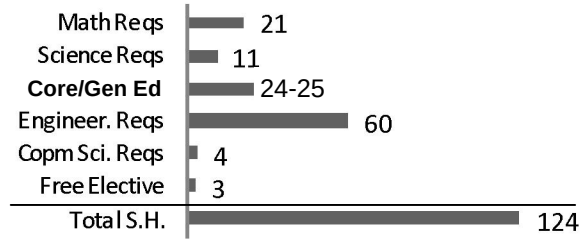
Electrical and Computer Engineering stands as the largest of the engineering professions. Approximately one third of the world's engineers are 'Electrical or Computer'

Career Opportunities

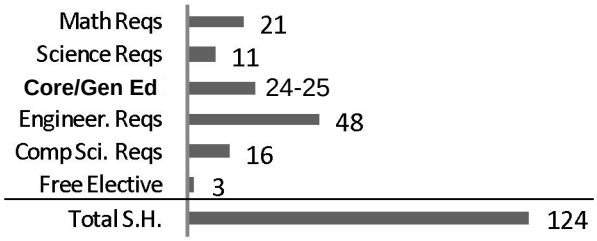
Consumer Electronics (CD Players, Televisions, MP3, Stereos, Gaming Systems)
Computer Equipment (Motherboards, Processors, Monitors, Printers)
Communication Devices (Telecommunication devices, Cellular phones, GPS navigation)
Information Technology (Deployment of computer equipment, Computer networks, 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)

Curriculum
The objective of the program is to provide the students with a broad knowledge of Electrical and Computer Engineering fundamentals as well as mathematical and physical sciences, communication skills, and societal factors from which students can synthesize unique solutions to complex engineering problems. Courses offered in the major include: **Circuit Analysis, Microelectronics, Digital Logic Circuits, Microprocessors, Digital Signal Processing, Communication Systems, Control Systems, Electromagnetics, and Power Systems.**

Electrical Engineering Curriculum



Computer Engineering Curriculum



Faculty
Temple's Engineering faculty is noted and recognized for its talents in teaching, advising, mentoring, and in scholarship. The College of Engineering currently has 35 full-time faculty members, making the faculty to student ratio about 20:1, and the size of a typical engineering class is 10-20 students.

Senior Design Project
The Senior Design Project is a capstone course of the senior year for electrical 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.

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