

ELECTRICAL ENGINEERING



Electrical Engineering at Drexel

The technologies created by engineers and scientists have placed us in the center of a great technological and educational revolution. The Electrical Engineering program at Drexel University offers a broad focus on electrical systems and electronics, electromagnetic radiation and microwaves, control, electric power generation and distribution, signal processing, computer hardware and software, and communications.

Drexel Co-op for Electrical Engineering

A key part of the major is Drexel's prestigious co-operative education program, in which students alternate periods of classroom study with periods of professional work experience. Electrical Engineering students can choose from the following:

- Three Co-op Option (Five Years): includes three six-month periods of full-time employment
- One Co-op Option (Four Years): includes one six-month period of full-time employment

A Few Drexel Co-op Position Titles

- Control Systems Engineer
- Designer/Drafter
- Operations Support Engineer
- Software Developer

Employers

Here are some of the companies that have hired Drexel students as co-op or full-time employees:

- Comcast Corporation
- Lockheed Martin
- PPL Corporation
- SAP America

Potential Careers

Electrical Engineer. Designs, develops, tests, and supervises the manufacture of electrical equipment, including electric motors, lighting and wiring in buildings, radar and navigation systems, and power-generating devices used by electric utilities. Usually specializes in areas such as electrical equipment manufacturing or power systems engineering.

Electronics Engineer. Designs, develops, tests, and supervises the manufacture of electronic equipment such as broadcast and communications systems. Works on technologies ranging from portable music players to robots. May work in areas closely related to computers.

Financial Engineer. Applies mathematical models of financial investing, risk management, and other financial problems.

Courses You'll Really Enjoy

Electric Circuits. Covers basic electric circuit concepts and laws, circuit theorems, mesh and node methods, analysis of first- and second-order electric circuits, force and natural response, sinusoidal steady state analysis, and complex frequency.

Electric Motor Control Principles. Introduces machinery principles, magnetic circuits, three-phase circuits, the electrical and economic structure of the power industry, AC and DC machine fundamentals, and power electronic converters and their interfaces with electric motors.

Electrical and Computer Engineering Laboratory. Offers laboratory experience using both modeling software and digital and analog hardware relevant to both electrical and computer engineers. Multi-week design projects and design teams are used to prepare students for Senior Design work.

Wireless, Mobile, and Cellular Communication. Covers the concepts of wireless systems; propagation effects, including loss, dispersion, fading, transmission, and reception; mobile systems, including design of base units and mobile units; micro cells and pico cells; cell division, including frequency use and reuse; concepts of FDMA, TDMA, and CDMA; error rates and outage probability; and circuits and components for wireless and mobile systems.

Learn More: University Catalog

A list of required courses for the Electrical Engineering major is available online at www.drexel.edu/catalog.

Accelerated Degree Options

Accelerated degree programs, such as the BS/MD, BS/PhD in Engineering, BS/JD, and BS/MBA, enable academically qualified students to earn both a bachelor's and an advanced degree, graduating sooner than they would in traditional programs. Eligible students can be admitted to an accelerated degree program in one of two ways: apply as an incoming freshman through Undergraduate Admissions or apply to the Office of Graduate Studies after completing a minimum of 90 credits. To learn more about accelerated degree options, visit www.drexel.edu/em/ug/accelerated.

For More Information

Undergraduate Admissions
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Apply online at www.drexel.edu/apply