

# COMPUTER ENGINEERING



## ***Computer Engineering at Drexel***

Computer engineers work in a variety of areas. They design smaller, faster, and more reliable digital systems. They embed microprocessors in larger systems. They work on theoretical issues in computing, use object-oriented programming languages, and design large-scale software systems and computer networks. In a time of rapid technological change and advancement, it's important that new professionals enter the field with the right preparation and the ability to adapt quickly.

Drexel at BCC's Computer Engineering program offers a broad focus on digital circuit design, computer hardware and organization, programming and computer software, algorithms, and networks. This foundation is combined with hands-on training to provide you with the skills you'll need.

## ***Drexel Co-op for Computer Engineering***

Drexel's prestigious co-operative education program, in which students alternate between periods of classroom study and periods of professional work experience, is a key part of the major. Computer Engineering majors participate in one six-month co-op period of full-time employment.

## **A Few Drexel Co-op Position Titles**

- Applications Developer
- Systems Analyst
- Web Developer
- Help Desk Associate

## ***Employers***

Companies that have hired Drexel students include:

- Cingular Wireless
- Comcast Corporation
- Motorola
- Unisys Corporation

## ***Potential Careers***

**Computer Engineer.** Researches, designs, develops, tests, and oversees the manufacture and installation of computer hardware. Works exclusively with computers and computer-related equipment leading to rapid advances in technology.

**Electrical Engineer.** Designs, develops, tests, and supervises the manufacture of electrical equipment. Usually specializes in areas such as electrical equipment manufacturing or power systems engineering.

**Project Manager.** Develops requirements, budgets, and timetables for a firm's information technology projects. Coordinates projects from development through implementation, working with internal and external clients, vendors, consultants, and computer specialists. Increasingly involved in projects that upgrade an organization's information security.

### ***Courses You'll Really Enjoy***

**Computer Structures.** Explores the organization of computers, covering number representations, microprocessor machine instructions, storing of numbers and memory, computer arithmetic, the arithmetic logic unit (ALU), input/output organization, and popular microprocessors.

**Design with Microcontrollers.** Offers hands-on experience in the design of controllers that incorporate microcontrollers as an embedded component in a larger system. The microcomputer topics to be studied include architecture, software, programming, and interfaces.

**Introduction to Computer Networks.** Learn the history of the Internet. Discover how data packets move through the application, Internet transport, and network layers of Internet protocols.

**Security in Computing.** Introduces ideas from cryptography and fault tolerant computing. Cryptography studies how masks secure information from eavesdropping. Students will learn how fault tolerance helps to maintain functional computing systems in the face of hardware failures or system noise.

### ***For More Information***

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