



## **Computer Science at Drexel**

Computer scientists design and build large software systems, invent easy ways to use computing devices, ensure the security of networks, and explore the limits of what computers can do. As the amount of digitally stored information continues to grow at astounding rates, computer scientists are needed more than ever to help process, interpret, correlate, and represent such sources as audio and video recordings, DNA-codes, physical measurements, and representations of human artifacts.

Drexel's Computer Science program teaches the underlying principles of computer science, how to apply them to a variety of problem domains, and how to keep current in an ever-changing technological world. The program exposes students to several programming paradigms and languages. Students acquire a thorough understanding of algorithms, computer systems, and the software development process including design, implementation, documentation, and testing. Students develop strong analytical and communication skills. Working in teams, students learn to appreciate the dynamic and collaborative nature of problem solving.

Computer Science majors have the option of a bachelor of science (BS) degree, with a greater emphasis on mathematics and science, or a bachelor of arts (BA) degree, which provides a broader education in humanities and liberal arts.

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

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. Computer Science 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**

- IT Security Analyst
- Scientific Visualization Programmer
- Software Engineer in Artificial Intelligence
- Software Quality Assurance Technician

## **Employers**

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

- Microsoft Corporation
- Lockheed Martin
- Google
- Siemens
- UNISYS Corporation

## Potential Careers

**Software Developers/Engineers.** Responsible for a large and growing part of the infrastructure of our civilization. Software developers/engineers create, maintain, and evolve the software that operates computers, cars, medical devices, flight control systems, GPS, and spacecrafts.

**Game Developers.** Cooperate with artists and psychologists to create attractive, engaging games and human-computer interfaces. Maximize computer performance through building virtual realities that provide players with realistic sound and video animation in real time.

**Network Systems Analysts.** Design, evaluate, and maintain wide-area and local-area networks, intranets, and the Internet. Using appropriate hardware and software components in a suitable network architecture, network systems analysts provide Web services with specified performance and security characteristics.

## Computer Science Concentrations

**Artificial Intelligence.** Examines methods and techniques for designing machinery that can reason and think like humans.

**Computer Graphics.** Focuses on the mathematics, algorithms, and systems that create computer-generated images.

**Computer and Network Security.** Focuses on issues affecting the security of computer systems and networks.

**Human-Computer Interaction.** Studies the design of software systems as it has a large impact on the way they are used.

## Learn More

A list of required courses for the Computer Science major is available online at [www.drexel.edu/catalog](http://www.drexel.edu/catalog) and [www.cs.drexel.edu](http://www.cs.drexel.edu).

## 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 Graduate Studies Office after completing a minimum of 90 credits. To learn more about accelerated degree options, visit [www.drexel.edu/em/ug/accelerated](http://www.drexel.edu/em/ug/accelerated).

## For More Information

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