

# COMPUTER SCIENCE

The Department of Computer Science offers a program leading to the bachelor of science degree in computer and information sciences.

## Career Opportunities

The bachelor of science degree prepares you for a career in the field of computer science and its applications, and for additional study in computer science at the graduate level. Within this degree, you may choose various electives to emphasize particular aspects of computer science. This degree is fully accredited by the Accreditation Board for Engineering and Technology (ABET).

A computer security certificate includes a series of courses recognized by the National Security Agency (NSA) as the basis for a Center for Academic Excellence in Information Assurance. It prepares you for a government or business career in the rapidly growing field of computer security.

All computer science majors have the opportunity to gain valuable on-the-job experience through an internship program with local businesses. Some major companies that have provided internships include the following:

Lockheed Martin

Merck

Siemens Health Services

Smith Kline Beecham

UNISYS

Internships can be done on a full-time or part-time basis and often lead to a full-time position after graduation.

Graduates of the program have found success in all areas of computer science and hold positions with such well-known companies as the following:

DuPont

General Electric

Merck

QVC

SUN Microsystems

UNISYS

Graduates also have entered advanced study programs at the following universities:

Brown University

Cornell University

Temple University

University of Delaware

University of Pittsburgh

## Undergraduate Degree

**Bachelor of Science in Computer Science.** The bachelor of science in computer science introduces you to the art and science of computing and includes a study of structured programming and object-oriented programming languages (such as Java), data structures, foundations of computer science, computer organization, and software engineering.

This core is followed by courses covering the major areas of computer science, such as visual programming, database management systems, operating systems, compiler construction, networking, computer security, programming language concepts and paradigms, user interfaces, and artificial intelligence. Courses pertaining to new technologies are added to the curriculum as needed to keep our degree program as current as possible.

For course descriptions and more details on degree requirements, see the department's Web page at [www.cs.wcupa.edu/](http://www.cs.wcupa.edu/). For information on our nationally recognized degree and certificate programs in computer security, see our undergraduate Web page at [www.cs.wcupa.edu/undergrad/](http://www.cs.wcupa.edu/undergrad/).

Many computer science courses are offered during late afternoon and evening hours.

## Minors

The Department of Computer Science offers three minors:

- Computer science: a standard 19-credit minor consisting of mainly computer science core courses
- Information technology: contains the basic concepts of computer science with less focus on programming (not to be taken by computer science majors)
- Web technology: a multidisciplinary minor focusing on World Wide Web concepts and development (can be taken by computer science majors)

## Facilities

The West Chester University Academic Computing Center maintains a network of Microsoft Windows-based PC computers. Available through these computers are the standard Microsoft packages offering word processing, spreadsheets, database, electronic mail, and World Wide Web browsing. Additional programming packages (such as Java, C++, and Visual Basic) are used to teach computer science courses. The department has three of its own labs (Linux, Windows, and security) for its majors.

The Department of Computer Science is a member of the Microsoft Academic Alliance, which makes a wide range of software available to students at little or no cost.

The department maintains its own network of Linux-based servers. As a student taking upper-level computer science

# UNDERGRADUATE FACT SHEET

courses, you will be given Linux accounts and access to these servers from computer science labs via X-terminals as well as through the Internet. You also have the opportunity to create your own World Wide Web home page.

Courses taught in the computer science curriculum will provide you with exposure to both UNIX-based and Windows-based platforms. Much of the software used runs on both platforms, offering you the convenience of working on projects at home as well as at school.

## Special Study Opportunities

The department has contacts with more than 100 businesses in the area, including, Glaxo Smith Kline, Siemens, UNISYS, TV Guide, and Verizon, where you as a computer science intern could be working. Nearly all of the internships are paid positions. The department has a high rate of successful placement for its graduates.

## Special Entrance Requirements

If you enter WCU as a freshman computer science major, you must meet the following high school criteria:

- Rank in top two-fifths of your graduating class
- Pass algebra I, algebra II/trigonometry, geometry, and a senior-year math course
- Earn a math SAT original score of 530 (or recentered score of 550) or better
- Earn a combined SAT original score of 950 (or recentered score of 1020) or better

Those who seek to transfer to the computer science major from another college or from another major within WCU must first have the following:

- A grade of C– or better for both CSC 141 and CSC 142
- A grade of C– or better in at least two of the following three courses: MAT 151, MAT 161, and MAT 162
- A GPA of at least 2.5 over all CSC major courses taken, and a GPA of 2.0 over all required MAT courses taken

## Faculty

You can find a complete listing of faculty and their degree qualifications for this program on the department's Web page, or from one of the contact people listed below.

### For General Program Information

Dr. James Fabrey, Chairperson  
Department of Computer Science  
25 University Avenue, Room 150  
West Chester University  
West Chester, PA 19383  
610-436-3228 or 436-2204  
E-mail: [jfabrey@wcupa.edu](mailto:jfabrey@wcupa.edu)  
Department Web page: [www.cs.wcupa.edu](http://www.cs.wcupa.edu)

Undergraduate Catalog: [http://wcupa.edu/\\_information/official.documents/undergrad.catalog/](http://wcupa.edu/_information/official.documents/undergrad.catalog/)

### For Information on Specific Topics

#### Computer Science Graduate Program

Dr. Afrand Agah  
25 University Avenue, Room 136  
610-430-4419  
E-mail: [aagah@wcupa.edu](mailto:aagah@wcupa.edu)

#### Internship Opportunities

Dr. Mehran Asadi  
25 University Avenue, Room 142  
610-436-6998  
E-mail: [masadi@wcupa.edu](mailto:masadi@wcupa.edu)

## Information on Admission

### Office of Admissions

Emil H. Messikomer Hall, 100 West Rosedale Ave.  
West Chester University, West Chester, PA 19383  
610-436-3411 • Toll-free: 1-877-315-2165  
E-mail: [ugadmiss@wcupa.edu](mailto:ugadmiss@wcupa.edu)  
WCU home page: [www.wcupa.edu](http://www.wcupa.edu)  
Facebook: [www.facebook.com/wcupa](http://www.facebook.com/wcupa)

