



## GRADUATE STUDIES FACT SHEET

### COMPUTER SCIENCE

#### PROGRAM OF STUDY

The M.S. in computer science program provides students with the intellectual and practical tools they will need either to pursue a career as a professional computer scientist in industry or a doctorate degree in computer science. The curriculum is designed with three goals in mind:

- To provide a solid foundation in the fundamental principles of computer science
- To expose students to a variety of subject areas (i.e., to provide breadth)
- To expose students to current research topics and to provide in-depth knowledge in several areas of study (through the 600-level courses)

Two options are available for students who pursue computer science at the graduate level: the master of science degree program and three certificate programs in computer security, information systems, and Web technology.

The three graduate certificate programs in computer science are designed for working professionals to increase their knowledge and skills in specialized areas of computer security and information assurance. Each certificate may be earned by taking five courses.

#### THE FACILITIES

The Department of Computer Science maintains three laboratories for graduate course instruction. One lab is dedicated to computer-security information and projects. It houses a variety of windows and Linux systems as well as other dedicated networking equipment. In addition, it consists of several robotic kits and sensors that are used as the basis of several graduate-level courses.

The second lab consists of 25 PC's that are used for many programming projects and

simulations in the Microsoft Windows environment.

The third lab consists of Linux workstations connected to a main server that is used as the basis for several graduate courses. The satellite servers in this lab also function as student-controlled, Linux-based projects.

Additionally, the Academic Computing Center houses more than approximately 200 Windows-based PC's which can be used for further access to the University and departmental facilities.

#### THE CURRICULUM

##### Master of Science in Computer Science Program (33 credits)

Completion of the following core courses:

CSC 520 Foundations of Computer Science

CSC 530 Data Structures

CSC 540 Programming Languages

CSC 560 Analysis of Algorithms

The four core courses must be completed within the first six courses taken and the core must be completed before students enroll in any 600-level courses.

Completion of at least four computer science electives.

Completion of at least two 600-level courses chosen from the following:

CSC 600 Advanced Seminar (may be taken twice)

CSC 610 Independent Study

CSC 620 Thesis

##### Graduate Certificate Programs: Computer Security; Information Systems; and Web Technology

Students must hold a bachelor's degree (in any subject area) and have successfully completed either the prerequisite graduate

course CSC 516 (with prerequisite CSC 512 for those students who have no programming background) or an undergraduate data structures course introducing an object-oriented programming language that is the equivalent of West Chester University's CSC 241.

Each program requires six courses for a total of 18 credits. Specific courses and descriptions are online through the department Web site ([www.cs.wcupa.edu/grad](http://www.cs.wcupa.edu/grad)).

#### ADMISSION REQUIREMENTS FOR M.S.

Applicants should submit the following materials to the Office of Graduate Studies and Extended Education:

- Completed graduate application, including goals statement (apply online at [www.wcupa.edu/grad](http://www.wcupa.edu/grad))
- Official academic transcript(s) from all colleges and universities attended
- Graduate Record Exam (GRE) scores
- Scores from TOEFL (non-native speakers only); score of 550 or better required (213 computer-based exam, or 79 Internet); or IELTS score of 6.5
- Two letters of recommendation

#### FOR MORE INFORMATION

Write: Office of Graduate Studies and Extended Education  
McKelvie Hall  
102 West Rosedale Avenue  
West Chester University  
West Chester, PA 19383

Call: 610-436-2943

Fax: 610-436-2763

E-mail: [gradstudy@wcupa.edu](mailto:gradstudy@wcupa.edu)

Web: [www.wcupa.edu/grad](http://www.wcupa.edu/grad)

Visit: [www.facebook.com/wcugrad](http://www.facebook.com/wcugrad)

For information on graduate programs in computer science, visit the department Web site: [www.cs.wcupa.edu/grad/](http://www.cs.wcupa.edu/grad/).

The Graduate Catalog is available online at [www.wcupa.edu/\\_information/official\\_documents/graduate.catalog/](http://www.wcupa.edu/_information/official_documents/graduate.catalog/).

## ABOUT GRADUATE STUDIES

West Chester University offers high-quality graduate degrees in more than 70 disciplines or areas of study, as well as certificate and certification programs. The graduate studies program has grown remarkably since its introduction in 1960. West Chester University's program is the largest within the 14 institutions in the Pennsylvania State System of Higher Education enrolling more than 2,100 graduate students.

Programs can be taken on a part-time basis, and most of the graduate classes are scheduled during late afternoons and evenings for the benefit of in-service teachers and other employed persons.

## ABOUT WEST CHESTER UNIVERSITY

A regional, public institution, West Chester University of Pennsylvania offers high-quality undergraduate and graduate degrees, as well as certification and certificate programs, in more than 100 subject areas. As the second largest member of the State System of Higher Education, West Chester offers a full and rewarding educational experience as well as reasonable tuition.

With a rich heritage dating back to the 19th century, West Chester University was founded in 1871 as West Chester Normal School for the purpose of training teachers for the Commonwealth's newly established public schools. In 1960, West Chester State Teachers College expanded its programs to include liberal arts and graduate degrees and, as a result, dropped "Teachers" from its name. In 1983, West Chester State College became one of the 14 institutions in the

State System of Higher Education. Along with its university status, the school acquired a new system of governance and the opportunity to expand its degree programs.

Today, more than 15,400 graduate and undergraduate students, as well as 1,500 faculty and staff, study and work on the 406-acre campus. Situated in the Borough of West Chester, the campus is a picturesque mix of Gothic, Victorian, and modern architecture with pleasant, tree-shaded walks.

Strategically located at the center of the mid-Atlantic corridor, West Chester University is just 25 miles west of Philadelphia and 17 miles north of Wilmington, Del. The campus is convenient to major cultural institutions, recreational activities, and commercial businesses, many of which provide internship opportunities for WCU's students.

