ADDITIONAL RESOURCES

Internships and student work: Students in computer science can supplement their classroom and laboratory education with on-the-job experience through an internship with a major corporation or a campus student work position. Internships usually entail a semester or a summer term of full-time work. SIUC computer science students have pursued rewarding internships with such organizations as Motorola, IBM, Eli Lilly, State Farm, Caterpillar and Texas Instruments, to name a few. It is becoming increasingly important for students to engage in some career-related employment before graduation. In fact, many employers require it. In response to this, University Career Services offers seminars to assist students in securing summer internships.

SIUC has an extensive student employment program, with approximately 6,000 students employed each year. Students work in every department of the University and many departments employ students to do computer programming, web development, software and hardware installation, and so forth.

SIUC operates a computing center and laboratories and maintains extensive information systems that include academic and financial records. Students can often find computer-related part-time jobs in departmental offices or with SIUC's Information Technology-Computing Services.

Computing facilities: We have extensive facilities available for instructional and research use. Department instructional facilities contain numerous Pentium-based PCs running Windows and Linux. Every computer science major is provided an account for these systems, with access to e-mail and the Internet. All departmental systems are integrated into a high-speed local area network that is connected to the campus area network. Laptop computers are available for use on a semester-by-semester basis for students who have no access to their own personal computer.

The University's central computing service provider, Information Technology, has several computer learning centers on campus, containing hundreds of personal computers.
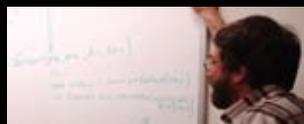
FINANCIAL ASSISTANCE

In addition to financial assistance for qualified students from the federal and state governments and the University, the department administers scholarship programs available to computer science students. There are several computer science alumni scholarships available to outstanding computer science students who have advanced to junior-level courses in the major. An additional scholarship is given to an outstanding incoming transfer student from an Illinois community college. Four-year scholarships are available on a competitive basis to incoming freshman.

MORRIS LIBRARY

Morris Library, the University's main library, will be an important resource for you. It holds more than 2.4 million volumes, 3.1 million microform units and more than 12,500 current periodicals and serials. You will have access to I-Share (the statewide automated system) as well as a wide array of databases and other electronic data files. Our library offers a wide range of services, including reference assistance, instructional and technical support, distance learning, geographic information systems (GIS), and multimedia courseware development.

FOR MORE INFORMATION

Undergraduate Program Director
Department of Computer Science
Faner Hall Room 2125 – Mail Code 4511
Southern Illinois University Carbondale
1000 Faner Drive
Carbondale, IL 62901
618 | 536.2327
csinfo@cs.siu.edu
www.cs.siu.edu
www.siu.edu/siuc

Undergraduate Admissions
Admissions Reception Center – Mail Code 4710
Southern Illinois University Carbondale
425 Clocktower Drive
Carbondale, IL 62901
618 | 536.4405
joinsiuc@siu.edu
www.admissions.siu.edu

WHY STUDY AT SIUC?

• Our computer science classes are taught by continuing faculty members, all holding doctoral degrees and actively involved in research.

• SIUC provides access to extensive instructional and research facilities.

• SIUC computer science students are recruited by top corporations and laboratories.

• A student chapter of the Association for Computing Machinery is active in our department, and any student at SIUC with an interest in computers can become a member. There is also a Minorities in Computer Science club. These clubs host both local and external speakers, coordinate programming contests, organize and sponsor field trips to industrial computing facilities, and hold various social events.

• A full-time faculty member serves as undergraduate adviser in the department. This adviser helps students with questions about careers, degree requirements, course content and scheduling classes.

• Each undergraduate student is assigned a faculty mentor who is available to assist students with academic challenges and career questions related to the computer science degree.

Computer Science

A DEGREE WITH ENDLESS POSSIBILITIES....

We Have A Place For You!
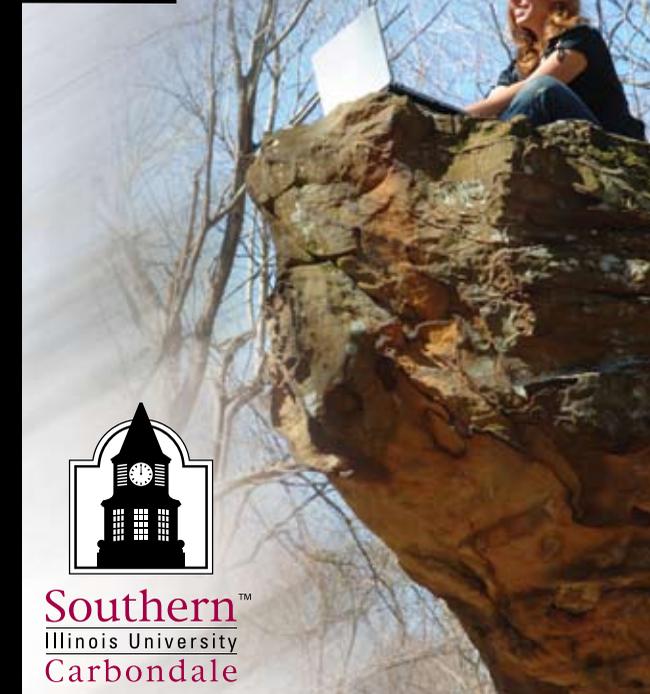
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WHAT IS COMPUTER SCIENCE?

Computers are a very prominent part of modern business and society. Many of the most important and exciting technological developments today involve computers and computer systems. The expanding role of computer-based systems has caused a high demand for computer professionals, a situation that is expected to continue well into the future.

Computer science is an extremely exciting, challenging and rewarding area of study. It incorporates an excellent combination of theoretical and intellectual content on the one hand, and practical application and societal importance on the other. By some standards, it is the strongest discipline in academia today, and has been for the past three decades.

Computer science is a broad and multidisciplinary field. Its general focus is on the design, analysis and use of computer hardware and software. As an academic discipline, it does not focus on just one technology, programming language, or computer architecture. Rather, it seeks to ground the student in fundamental concepts that are applicable to many environments.

WHAT WE OFFER

Our curriculum prepares graduates for positions in the computer industry, as well as for advanced studies and research. We offer an undergraduate major leading to the bachelor of science and bachelor of arts degrees, an undergraduate minor, and graduate programs leading to the master of science degree and doctor of philosophy degree in computer science.

CURRICULUM

The bachelor's degree programs in computer science provide students with the technical background necessary to use, design, analyze and implement computer software and systems. All students must complete the required University Core Curriculum and satisfy the College of Science requirements. Computer science majors are required to take a core set of courses dealing with programming, data structures and algorithms, computer organization, operating systems, social issues of computing, and a senior project.

Along with taking the core courses, computer science majors may choose from a broad selection of computer-based courses in order to complete their departmental requirements. This broad selection of courses covers all principal areas of computer science: languages, networks, databases, architecture, graphics, software engineering, artificial intelligence, bioinformatics, web development, computer security, robotics and parallel computing. The curriculum for the bachelor of science degree is more traditional and somewhat more flexible than that for the bachelor of arts degree. It prepares students for a wide range of technical careers as software developers, systems administrators, database administrators, network administrators, etc. It also prepares students for entry into graduate degree programs in computer science. The bachelor of arts program includes eight business courses. It provides students with a combined background in computer science and business, and it prepares students to pursue a fifth year of studies leading to an MBA degree.

Our department also offers a minor in computer science. Students can choose from a variety of specializations. Service courses are also available for students who wish to acquire some computer literacy but are not pursuing a career as a computer professional. Computer science majors can enrich their computer science degree with a secondary concentration, minor, or double major in areas such as mathematics, engineering, business, communications, etc.
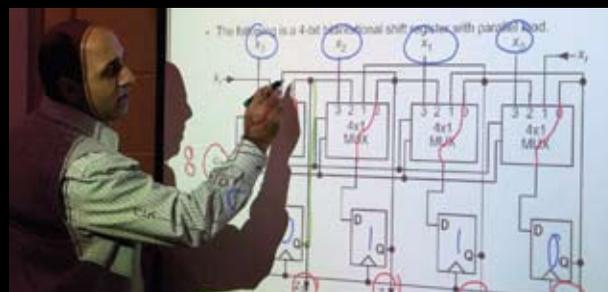
FACULTY

All of our continuing faculty members hold doctorates from such respected universities as Alabama (Birmingham), Case Western Reserve, Louisiana State, Maryland (Baltimore County), Massachusetts, Michigan State, Southern Mississippi, State University of New York (Buffalo) and such internationally renowned universities as Calcutta (India), and Bejing University of Aeronautics and Physics (China). The ability to attract excellent professors from such diverse backgrounds illustrates the national and international respect our department has earned.

Our faculty members are active researchers. Their research specialties include: artificial intelligence, computer graphics, database systems, distributed and parallel processing, computer networks, computer security, wireless sensors, soft computing, fault-tolerant computing, visualization, object-oriented programming, logic programming, bioinformatics, and multi-agent systems. The results of their research are published in both journals and conference proceedings. Faculty members also present results of their research at national and international conferences in their fields of specialization. Faculty research is integrated into the curriculum, keeping students abreast of the latest developments in the field.

Teaching continues to be the central mission of our department, and all courses are taught by full-time faculty members. We work to maintain and improve the strength of our courses and to offer students the best possible instruction. Two members of the faculty have received college-wide awards for outstanding teaching. Graduate students are used primarily as teaching assistants in support of the full-time faculty, helping with laboratory sessions, grading, tutoring and consulting.

CAREERS IN COMPUTER SCIENCE

Career opportunities in computer science are excellent, both now and into the foreseeable future. The work of computer professionals involves much more than just writing programs. It also encompasses the analytical and technical skills needed to design algorithms and data structures, understand and exploit the sophisticated hardware and software systems available today and in the future, and develop new systems for myriad applications.

Graduates find careers in computer science available from a variety of employers and in all regions. Some of the companies that have recently hired SIUC computer science graduates are: Microsoft, Boeing, Lockheed-Martin, Motorola, Caterpillar, State Farm Insurance, Trans Union Credit, United Airlines, Nortel Networks, and TAOS. The positions these graduates have filled include: software engineer, systems analyst, programmer, manager, and systems administrator.

University Career Services coordinates a vigorous placement program for all students. It offers assistance with resume preparation and interview skills. For a small fee, they will provide job notices and mail your cover letters, resumes and references to specific job openings. The office also plans and publicizes campus recruiting visits by employers and will help you arrange interviews with recruiters. They will help you maintain a placement file with the University for as long as you like.