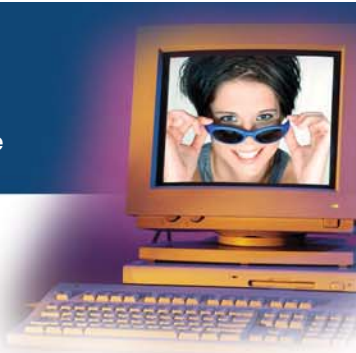
COMPUTER SCIENCE

bachelor of science

COLLEGE OF LIBERAL ARTS AND SCIENCES



The work of computer scientists has done more to change the world than the work of any other group. Computer scientists work as theorists, researchers, and inventors. Their jobs are distinguished by the higher level of theoretical expertise and innovation they apply to complex problems and the creation or application of new technology. The field continues to be the most revolutionary science or engineering field of the last forty years and the next fifty.

ADVANTAGE UIS

- **Apply yourself.** Most undergraduates complete an Applied Study Term (AST), which is what we call our practical experience semester. We place students in internships in state agencies, insurance companies, computer companies, and many other locations throughout central Illinois. You get real experience and your "employer" gets real assistance. In fact, many students are offered permanent placement from their employer. Talk about win-win.
- **Access extraordinaire.** Count on labs loaded with the latest. We provide you with access to an outstanding variety of computing systems, including Sun Micro Systems servers and microcomputers running various operating systems. In our microcomputer-based laboratories you can gain hands-on experience in design, analysis, and implementation of complex software systems.
- **Club Tech.** The UIS Computer Science Club draws like-minded students together who attend area conferences or job fairs, enter programming contests, or just talk about the latest in gaming over pizza.

What can I do with this degree?

UIS' computer science graduates take their extraordinary problem-solving skills and excel as systems analysts, programmers, database administrators, software designers, engineers or researchers. Many of our students go on to earn a master's degree.

Employers include:

Microsoft
National City Bank
NASA
Lucent Technologies
Fermilab
Boeing Aerospace Corp.
Cisco Systems
Memorial Medical Ctr.
State Farm Insurance

Online Option.

Earn the degree entirely online if you need the convenience and flexibility. You'll get the same professors as in the classroom and the same rigor. There are no "online degrees" here, only U of I degrees.

Conference Champs

Several of our undergraduate students have participated in National Science Foundation sponsored research and gone on to present their findings at conferences as well as publish formal papers delineating their research experience. We encourage our students to take advantage of these opportunities - early and often.

A.I. Meets the Real World.

Computer science majors take courses in which they design and implement a robot. The future is now.

Wise Words

Mike Parker, B.S. '84, M.S. '99
Programmer/Analyst III, Archer Daniels Midland Corporation

"The technical knowledge of the faculty was excellent but I think the best class I ever took was a user interface class. No programming involved. It was strictly about dealing with people and finding out what they need. No matter how cutting edge the program you design, it's worthless if nobody will use it."

Cyber Defense.

UIS is a partner in a multi-million dollar National Science Foundation, ATE grant to operate a regional training center for IT security. The computer science department is in charge of the Center for Systems Security and Information Assurance (CSSIA), providing students with invaluable preparation for one of the highest demand fields in the world today.

www.cssia.org

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The bachelor of science degree is designed to provide the graduate with a strong foundation in computer science and related disciplines. The degree provides students with experience in mastering problem-solving skills relevant to business, scientific, and public issues. The diversity of course offerings and rigorous degree requirements ensure that graduates acquire knowledge necessary to shape their career goals. Students have access to an outstanding variety of computing systems including a Sun SPARC 20 fileserver, additional UNIX-based computers, transputers for parallel processing, microcomputers, and a hands-on network configuration laboratory.

Faculty Sviatoslav Braynov, Lucinda Caughey, Ping Deng, Kamyar Dezhgosha, Sae Hwang, Chung-Wei Lee, Keith Miller, Ted Mims, Janis Rose, Allan Roth, Mary Sheila Tracy, Roger West

Associated Faculty: Burks Oakley II, Ray Schroeder

Online Degree

The online computer science program, which is identical to the on-campus program, allows students to actively participate in dynamic, diverse, and interactive online learning communities and to complete their degrees in their own time and at their own pace via the Internet. The online format enables them to complete coursework using the latest networked information technologies for increased access to educational resources, advisers, and materials.

Core Prerequisites

Formal application to the program is required for admission. Enrollment in CSC 305 Entrance Assessment is required during the first semester. Core prerequisite requirements include two semesters of programming experience in the high-level language Java. CSC 325 and CSC 375 may be taken at UIS to satisfy this requirement. Core prerequisite requirements also include one semester of calculus as well as discrete math and statistics. MAT 115, MAT 121, and MAT 302 may be taken at UIS to satisfy these requirements; for transfer students 12 of these hours may be counted toward the degree as general electives. Students considering an advanced degree or a career in a scientific field are strongly encouraged to take a second semester of calculus.

Degree Requirements

The core curriculum provides a strong foundation in computer science. CSC electives are chosen in consultation with the student's adviser to ensure depth of knowledge in topics of particular interest to the student. There are no restrictions for general electives. CSC courses must be taken for a letter grade. Students may choose to emphasize Systems Security and Information Assurance or Software Engineering.

Core Requirements

CSC 305 Entrance Assessment	0 Hrs.
CSC 405 Exit Assessment	0 Hrs.
CSC 376 Computer Organization	4 Hrs.
CSC 385 Data Structures and Algorithms	4 Hrs.
CSC 387 Foundations of Computer Science	4 Hrs.
CSC 388 Programming Languages or CSC 368 Systems Programming Languages	4 Hrs.
CSC 389 Introduction to Operating Systems	4 Hrs.
CSC 478 Software Engineering Capstone or CSC 438 Systems Security and Information Assurance Capstone	4 Hrs.
Total core	24 Hrs.

Other Requirements

CSC Electives	12 Hrs.
General Electives	11 Hrs.
Total other	23 Hrs.
ECCE Requirements (300-400 level)	13 Hrs.
Total	**60 Hrs.**

Engaged Citizenship Common Experience (ECCE Requirement) 300-400 level

All undergraduate studetns are required to take a minimum of 13 hours in the following categories which reflect UIS' heritage, mission, vision and values: **U.S. Communities - 3 hrs.; Global Awareness - 3 hrs.; Engagement Experience - 3 hrs.; ECCE Elective - 3 hrs.; Speaker Series - 1 hr**

Computer Science Minor

A minor in computer science is designed for students who wish to develop a working knowledge of the computer that will allow them to apply effective computer techniques and computational problem-solving skills in a variety of contexts. It is useful for students with virtually any academic major, including accountancy, business administration, clinical laboratory science, economics, management, and others. A working knowledge of computers allows people to apply computer techniques in their careers and to introduce effective, computer-based methods. The minor provides a foundation in computer science for non-majors. Appropriate CSC electives are chosen in consultation with a CSC adviser. CSC courses must be taken for a letter grade.

Requirements

MAT 302 Discrete Mathematics	4 Hrs.
CSC 325 Computer Science I	4 Hrs.
CSC 375 Computer Science II	4 Hrs.
CSC Electives	12 Hrs.
Total	24 Hrs.

Visit our website for more information on:

Advising
Assessment
Grading Policy
UIS Admission Requirements
Application for Admission
Financial Aid

To view course descriptions:

uis.edu/uiscatalog

CONTACT INFORMATION

Computer Science

(217) 206-6770 or csc@uis.edu and csconline@uis.edu for students interested in the online program.

Website csc.uis.edu/

Office of Admissions and Records:
(217) 206-4847 or Toll free (888) 206-4847
uis.edu/admissions

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The University of Illinois Springfield is one of three campuses of the world class University of Illinois. Located on 746 picturesque acres in the state capital, UIS is a small, public liberal arts university where you learn in small classes with professors who know you. UIS offers 43 degree programs – 22 bachelor's, 20 master's, and the Doctorate of Public Administration. The university has a special mission in public affairs and is known for extraordinary internships, extensive online offerings, and a commitment to engaging students in the community and the world. Enrollment is 4,961 (fall 2009).

UIS