Department of Computer Science

Contact Information:
Campus Location: 1120 Science and Engineering Offices (SEO) Student Services Office: 905 SEO (312) 996–3422
Student Services Office: (312) 996–3463 ugrad@cs.uic.edu
www.cs.uic.edu

Administration:
Professor and Head of the Department, Robert Sloan
Director of Undergraduate Studies, John Lillis, lillis@uic.edu

Computer science is a relatively young but extremely rich and diverse discipline. At one end of the spectrum, computer science may be viewed as the formal study of what can be computed and what resources are required for computation. At the other end of the spectrum, computer science may be seen as the application of human resources, software, and, of course, computers to solve computational problems relating to society’s and individuals’ needs.

A well-trained computer scientist requires knowledge of both ends of this spectrum—and several points in between. The Computer Science program in the Department of Computer Science is intended to provide that broad background. Along with a strong theoretical component, the Computer Science program places special emphasis on the development of applied skills in design, implementation, and validation of computer systems. In our experience, industry and graduate programs alike value—above all—people who can solve real problems, and who come prepared to use the tools of their trade.

All students acquire a common background in the fundamental areas of computer science: computer systems, organization and architecture, algorithms and data structures, principles of software design, elements of the theory of computation, and operating systems. In addition, students obtain specialized backgrounds through the selection of five technical elective courses in computer science. Required and elective courses include mathematics, algorithms, formal languages, computer architecture, and operating systems. In our experience, industry and graduate programs alike value—above all—people who can solve real problems, and who come prepared to use the tools of their trade.

The Department of Computer Science also offers a Human-Centered Computing Concentration (HCC) within the BS in Computer Science program. The HCC concentration emphasizes the knowledge and skills needed to begin a professional practice in areas such as: user-interface design and development for desktop or mobile devices; computer graphics and animation for video games, movie special effects; and scientific-, engineering- and medical visualization. The concentration continues to cover in depth the fundamental areas of computer science including programming, data structures, discrete mathematics, algorithms, formal languages, computer architecture, and operating systems. In addition the concentration focuses on key topics of human-centered computing practice such as user-interface design, computer graphics, visual media, and natural language processing.

The Department of Computer Science also offers a Software Engineering Concentration within the BS in Computer Science program. The Software Engineering Concentration emphasizes the knowledge and skills needed to begin a professional practice in software engineering. The concentration continues to cover in depth the fundamental areas of computer science including programming, data structures, discrete mathematics, algorithms, formal languages, computer architecture, and operating systems. In addition, the concentration focuses on key topics of software engineering practice such as software cost estimation, large-scale software development, and risk management.

Degree Programs
• BS in Computer Science (http://catalog.uic.edu/ucat/colleges-depts/engineering/cs/bs-cs)
• BS in Computer Science with Computer Systems Concentration (http://catalog.uic.edu/ucat/colleges-depts/engineering/cs/bs-cs-syst-conc)
• BS in Computer Science with Human-Centered Computing Concentration (http://catalog.uic.edu/ucat/colleges-depts/engineering/cs/bs-cs-hcc-conc)
• BS in Computer Science with Software Engineering Concentration (http://catalog.uic.edu/ucat/colleges-depts/engineering/cs/bs-cs-se-conc)

Minors
• Minor in Computer Science (http://catalog.uic.edu/ucat/colleges-depts/engineering/cs/bs-cs)
• Minor in Information Technology (http://catalog.uic.edu/ucat/colleges-depts/engineering/cs/bs-cs-it)