



COMPUTER SCIENCE

The importance and pervasiveness of information technology in our society has increased the demand in virtually every kind of organization for those with an understanding of the foundations of computing, as well as those with specific technical training. Computer science students at Illinois Wesleyan gain a broad understanding of the capabilities and limitations of computing technologies, how to solve problems and assess end-user needs, and how to adapt to changes in hardware and software technologies, as well as applications.

FOUNDATIONAL APPROACH

What sets Illinois Wesleyan's computer science program apart is its foundational approach to computing within the context of a liberal arts curriculum. The computer science course of study focuses on the context in which computers and computing structures exist in today's rapidly changing technological environment. This approach produces computer science graduates who can more readily see relationships between computing and organizational/societal problems, and needs and issues, setting them apart from those whose training is limited to more technically-oriented skills.

AFTER GRADUATION

Graduates of computer science can look forward to gaining admittance to top graduate and professional schools. Many go on to pursue advanced degrees in computer science, computer engineering, robotics, and other computer-related and technology graduate fields.

Those who decide to begin their careers following graduation will find their computer science education prepares them

Computer science at Illinois Wesleyan involves the study of data structures and algorithms, with respect to their formal properties, linguistic and hardware realizations, and multiple applications. These foundations are constants in this ever-changing field. With this approach students acquire a broad knowledge base that gives them the ability to adapt when the computing environment changes. While there are specific courses in web programming, artificial intelligence, and databases, etc., it is the underlying foundations of computers and computing structures that extend the value of a computer science education at Illinois Wesleyan.

to work in areas related to computer hardware and software, engineering, banking and financial services, healthcare, government, communications, computer consulting, electronics manufacturing, education, film, online services, data processing and more.

ENGAGED FACULTY

Computer science faculty bring to their teaching a range of educational backgrounds and research interests, including expertise in database management, web design, computational linguistics, applied logic, electrical and computer engineering, and robotics. Our faculty work closely with their students inside and outside the classroom, and are committed to providing individual attention and advising tailored to meet each student's needs.

EXCEPTIONAL FACILITIES

Computer Science is located in the Center for Natural Science Learning and Research, a modern and technology-rich building that is home to classrooms, science facilities and computer labs that rival those of many major research universities. The department maintains five computer labs and classrooms.

EXTENDING LEARNING

Computer Science faculty provide students with opportunities to become engaged in collaborative research projects and independent study. Recent project topics have included work in computational linguistics, theoretical computer science, and network security.

Students can gain work experience as lab assistants or as tutors. Internships are also available in a variety of corporate settings in Bloomington and Chicago.

The department has student chapters of the Association for Computing Machinery (ACM) and YPIE, the Computer Science Honorary Society.

DEGREE REQUIREMENTS

Illinois Wesleyan currently offers a major and minor in computer science. The major program builds on a strong background in mathematics and provides the student with both theoretical and practical computing knowledge. The 12-course major program consists of ten courses in computer science and two in mathematics. A minor program consists of six courses in computer science and one in mathematics. Underpinning the computer science program is the University's core liberal arts curriculum which encourages students to discover the interconnectedness of knowledge through a challenging course of study beyond their major.

Major Sequence:

- ▶ CS 126 Introduction to Computer Science Using the Web or CS 127 Computer Science I
- ▶ CS 128 Computer Science II, CS 255 Algorithm Design and Analysis, and CS 256 Computer Organization and Architecture
- ▶ Two courses from CS 355 Programming Languages, CS 356 Operating Systems, CS 357 Models of Computing
- ▶ Four additional upper-level courses in computer science: elective courses offered in the last few years include CS 314 Database Management Systems, CS 360 Topics in Logic, CS 365 Computational Linguistics, CS 440 Compiler Construction.

Additional courses for the major:

- ▶ Math 135 Computational Discrete Mathematics I and 235 Computational Discrete Mathematics II