

Computer Science

Bachelor of Arts Degree
Bachelor of Science Degree

Contact

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Admission Requirements

(In years as established by the college)

A high school diploma with the following specific courses:

- 4 English
- 2 Algebra I & II
- 1 Geometry
- 2 Lab Science (including biology)
- 2 History/Social Studies
- 2 Foreign Language
(same language or two years of
American Sign Language) Academic
electives (to equal at least 17 credits)

To ensure current mathematical skills, students should take a mathematics course during their senior year of high school.

Did You Know?

Our program is small and very friendly. Our introductory courses introduce students to the full range of activities in the school and in the profession. Our students are very competitive and graduate with a strong background in computer science.

College of Liberal Arts and Sciences

Program Description

We are one of two computer science programs in Maine accredited by ABET (formerly known as the Accreditation Board for Engineering Technology). There are only two accredited programs in New Hampshire, four in Connecticut and 10 in Massachusetts. Thus, there are only 18 accredited computer science programs in New England and only four in northern New England. We are very active in cybersecurity and finished second in the 2010 North East Collegiate Cyber Defense Competition.

Specialized Information

The school has several research laboratories focusing on such areas as artificial intelligence, software agents, database systems, high-performance computing, cybersecurity, homeland security, and computer modeling. These laboratories routinely include undergraduates who assist professors and graduate students in their research. Students mentored by the professors and graduate students get a good idea of what research and graduate school are like. In addition to the interesting and valuable experience gained, students are often paid and/or co-author research papers. Our undergraduates have worked on running cybersecurity honey pots and building a cybersecurity competition infrastructure, finding physical locations of IP addresses, producing graphics outputs for supercomputers, exploring how to speed up scientific programs, and on Bluetooth localization projects.

Associated Honor Societies and Student Organizations

Students are encouraged to join the Student Chapter of the Association of Computing Machinery (ACM), Upsilon Pi Epsilon Computer Science Honors Society, the University of Maine Cybersecurity Team, and the University of Maine Programming Team.

Career and Graduate Opportunities

Computer science graduates are well-positioned to secure rewarding, high-paying jobs in the computer industry that are relatively immune to outsourcing. In addition, graduates can apply their knowledge wherever computers are used, including businesses, research institutions, educational institutions, and government laboratories and agencies. The B.S. and B.A. degrees both provide a rigorous emphasis on computer science, along with a strong liberal arts education. Consequently, students are well prepared to enter any career that requires a liberal arts degree. Graduates of the School of Computing and Information Science are well prepared to enter graduate school for further study in computer science or other related fields or, with some additional preparation, to enter a professional school.

Representative Courses

COS 125 Introduction to Problem Solving using Computer Programming
COS 140 Foundations of Computer Science
COS 225 Introduction to Object-Oriented Programming and Design
COS 226 Introduction to Data Structures
COS 250 Discrete Structures
COS 301 Programming Languages
COS 335 Computer Organization and Architecture

COS 350 Data Structures and Algorithms
COS 397 Computer Science Capstone I
COS 420 Introduction to Software Engineering
COS 430 Introduction to Cybersecurity
COS 431 Operating Systems
COS 451 Automata, Computability and Languages
COS 490 Computers, Ethics and Society
COS 497 Computer Science Capstone II

UMaine Graduate Programs

Master of Science in Computer Science
Doctor of Philosophy in Computer Science

About UMaine

The University of Maine, founded in Orono in 1865, is the state's premier public university. It is among the most comprehensive higher education institutions in the Northeast and attracts students from across the U.S. and more than 60 countries. It currently enrolls 12,000 total undergraduate and graduate students who can directly participate in groundbreaking research working with world-class scholars. Students are offered 88 bachelor's degree programs, 64 master's degree programs, 25 doctoral programs and one of the oldest and most prestigious honors programs in the U.S. The university promotes environmental stewardship on its campus, with substantial efforts aimed at conserving energy, recycling and adhering to green building standards in new construction. For more information about UMaine, go online (umaine.edu). Equal opportunity information also is available online (umaine.edu/eo).

How do I apply?

Visit go.umaine.edu for an application, as well as information about academics and life at UMaine.



Academic Programs 2011–12

The latest versions of the UMaine fact sheets are online (factsheets.umaine.edu). This fact sheet is intended for informational purposes only and is subject to change.

