Computer Science, B.S.

DEPARTMENT

BS in Computer Science, B.S.
MS in Computer Science, M.S.
MN in Computer Science, Minor

REQUIREMENTS

Department

Bachelor of Science Degree - Computer Science Major Requirements

Undergraduate Program

The bachelor's degree in computer science prepares students for careers in the computing industry or for graduate study. Combined with a minor in another field of study, the bachelor's degree allows students to utilize their computing expertise in a variety of specialized fields. The core and computer science theory courses are excellent preparation for students who intend to pursue an advanced degree in computer science.

For the computer science major, the department offers courses that represent both the core of study considered essential to all aspects of computing and advanced study sequences in particular fields of interest. The core classes introduce all majors to the spectrum of thought represented in computing. The advanced sequences allow the individual student to pursue concentrated work within such areas as computer architecture, artificial intelligence, databases, compilers, operating systems, computer science theory, computer graphics, software engineering, programming languages, networking, distributed systems, and parallel processing. The department also offers topics courses to keep students informed of current advances and methods in computing.

In addition to courses designed for majors, the department offers courses intended to introduce computing to nonmajors. These courses will benefit any major who wishes to include computing in their undergraduate study.

Grade Requirements

All courses taken to fulfill major course requirements must be taken for a letter grade. All courses required as prerequisites for a course must be completed with a grade of C or better before registration will be permitted.

Administrative Academic Probation

A minimum Grade Point Average (GPA) of 2.0 must be maintained in all courses taken in the College of Science and Mathematics. Students who fail to maintain a 2.0 GPA in courses within their major may be placed on administrative academic probation. Failure to eliminate the grade point deficiency could result in disqualification from the College of Science and Mathematics.

Computer Science Major

1. Major requirements (59 units) and Additional requirements (10 units)
CSCI 40, CSCI 41, CSCI 60, CSCI 112, CSCI 113, CSCI 114, CSCI 115, CSCI 117, CSCI 119 (35 units)

Select seven of the following, including one of the sequences (21 units)
CSCI 124, CSCI 126, CSCI 130, CSCI 134, CSCI 146, CSCI 148, CSCI 150, CSCI 152E, CSCI 154, CSCI 156, CSCI 164, CSCI 166, CSCI 168E, CSCI 172, CSCI 173, CSCI 174, CSCI 176, CSCI 177, CSCI 186, CSCI 188, CSCI 191T (max total 6 units)

Approved sequences:
CSCI 126 - CSCI 130
CSCI 114 - CSCI 146 or CSCI 114 - CSCI 148
CSCI 150 - CSCI 152
CSCI 156 - ECE 146
CSCI 164 - CSCI 166
CSCI 172 - CSCI 173
And, complete an eighth course, either CSCI 198, CSCI 198S or an additional second course in one of the sequences above (3 units)

Additional requirements (10 units)
MATH 75, MATH 76, PHYS 2A and PHYS 2B or PHYS 4A, PHYS 4AL, PHYS 4B, PHYS 4BL

2. General Education requirements (48 units)
MATH 75 and PHYS 2A or PHYS 4A are used to satisfy the General Education requirements.

3. Other requirements (9 units)
American Government and Institutions (PLSI 2), Multicultural and International (MI), and Upper-division writing. Note: Computer Science majors are exempt from the MI requirement

4. Sufficient elective units to meet required total units (varies)

5. Total (120 units)

FACULTY

The faculty comes from a variety of areas including computer systems and architecture, theoretical computer science, programming languages, software engineering, computer graphics, distributed systems and parallel processing, neural networks, image processing, computer vision, pattern recognition, wireless communication and mobile computing, robot swarm communication, evolutionary computation, domain-specific languages, and real-time and embedded systems. They have in common a desire to provide a program that will give the student a broad range of experience in computer science as well as the depth of education that will be needed in the student's later career, whether professional or academic.

For faculty phone numbers and e-mail, see the campus directory.

For more on the faculty, see the faculty pages. The faculty pages are updated by the department or program.