



UC Davis

Computer Science

Computer Science, B.S.

Major Description

The major in Computer Science is designed to prepare students for careers involving the design of computer systems and their application to science, industry and management. The major emphasizes the mathematical background of computer science and the theoretical foundations essential to all computers. The major provides solid grounding in fundamentals of computer languages, operating systems, computer architecture and the mathematical abstraction required to use the computer in solving complex tasks.

Starting Your Computer Science Degree

Lower-Division Major Requirements in Computer Science

From UC's perspective, community college is where you begin working on the first two years of your bachelor's degree. This includes taking lower-division coursework specifically related to your field of study that may be applied toward graduation in your major.

Listed below are the lower-division requirements for **Computer Science, B.S.** that may be satisfied with approved community college courses unless otherwise noted. To find out which of these requirements are shared by other UC campuses, see the UC Statewide Transfer Preparation Path in Computer Science.

- Calculus (full sequence)
- Multivariable Calculus
- Linear Algebra or Modern Linear Algebra
- Discrete Mathematics for Computer Science
- C Programming
- C++ Programming
- Computer Organization and Machine-Dependent Programming or Computer Structure and Assembly Language (one course)
- Data Structures and Programming
- Basic Statistical Analysis Through Computers
- One of the following four sequences: General Chemistry (full sequence); General Chemistry (two terms) and Introduction to Biology (one term); Honors General Chemistry (full sequence); or Calculus-based Physics and Vector Analysis

!!! IMPORTANT !!!

All of these requirements do not necessarily have to be completed **before** you transfer. See the next section of this path for what you must do to be competitive for admission.

FIND YOUR COURSES

Every course at your community college that can be used to meet any of the lower-division major requirements is listed at www.assist.org

UC Davis Computer Science

Becoming Competitive for Admission to Computer Science

Selection Requirements

Below are the lower-division requirements that this campus advises applicants to complete — and by when and with what GPA — to be competitive for admission to the major. It is important to note that meeting these requirements does not necessarily guarantee admission to the campus or major. The stronger your major preparation, the more competitive you will be.

- To be a competitive applicant, you **must** have an overall transfer GPA of 2.8 or higher.
- You are **strongly** advised to complete as many lower-division major-preparation courses as possible prior to transfer. Although completion of all major-preparation courses is not an admissions requirement, completion, or near completion, of these courses will help you move efficiently toward graduation.

Satisfying General Education in Computer Science

General Education Requirements

While all UC campuses urge you to focus on your lower-division major requirements while in community college, it is important to remember that general education (GE), or “breadth,” requirements for your bachelor’s degree may also be met with approved community college courses. In fact, some majors require completion of lower-division GE coursework as part of your preparation prior to transfer. The good news is you may be able to double-count some of your lower-division major coursework for related GE requirements.

The Intersegmental General Education Transfer Curriculum (IGETC) is a series of courses at California community colleges that students may complete to satisfy GE requirements. Certain students, however, may not be well served by following this GE option. Specific information about satisfying GE requirements as a Computer Science major is listed below.

- You are advised to complete lower-division major-preparation coursework prior to completing GE requirements. IGETC is not recommended for this major but is accepted for GE requirements.

Related Majors

Preparation for the following majors may be similar to the Computer Science major described above (consult the campus catalog and www.assist.org).

- Computer Engineering, B.S.
- Computer Science and Engineering, B.S.
- Electrical Engineering, B.S.
- Electronic Materials Engineering, B.S.