COMPUTER SCIENCE, MINOR

College of Engineering

The Major Program

The Department of Computer Science administers two majors: Computer Science & Engineering (CSE) and Computer Science (CS). It also administers two minors: Computer Science and Computational Biology. For information on the Computer Science & Engineering curriculum and the minor in Computational Biology, see Computer Science Engineering (https://catalog.ucdavis.edu/departments-programs-degrees/computer-science-engineering/computer-science-engineering-bs/).

The primary differences between the CSE and CS majors are the extent of hardware coverage and curricular flexibility. The CSE major develops a solid understanding of the entire machine, including hands-on experience with its hardware components. The CS major teaches some hardware, at the digital-design level, on simulators. The CSE major has fewer free electives. The CS major's more generous electives make it easier to complete a minor or double major.

Students in the CS major receive a solid grounding in the fundamentals of computer languages, operating systems, computer architecture, and the mathematical abstractions underpinning computer science. Students are prepared for both industry and postgraduate study.

Code	Title	Units
Choose any three upper division Computer Science Engineering (ECS) courses [1]		11-12
Choose any two upper division ECS courses or any upper division course in MAT: [2]		8-10
EEC 100	Circuits II	
EEC 171	Parallel Computer Architecture	
EEC 172	Embedded Systems	
EEC 180	Digital Systems II	
ECN 122	Theory of Games & Strategic Behavior	
STA 131A	Introduction to Probability Theory	
STA 131B	Introduction to Mathematical Statistics	
STA 141B	Data & Web Technologies for Data Analysis	
STA 141C	Big Data & High Performance Statistical Computing	
PSC 120	Agent-Based Modeling	
LIN 127	Text Processing & Corpus Linguistics	
LIN 177	Computational Linguistics	
Total Units		**19-22**

1

A single approved course of 3-5 units from ECS 192 or ECS 199 is allowed.

2

Excluding MAT 111.