COMPUTER SCIENCE

College of Engineering

Dipak Ghosal, Ph.D., Chairperson of the Department

Department Office

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The Computer Science & Engineering Program

The Department of Computer Science administers two curricula: Computer Science & Engineering and Computer Science. It also administers two minors: Computer Science and Computational Biology. For information on the Computer Science curriculum and minor; see Computer Science.

Mission

The University of California, Davis, is, first and foremost, an institution of learning and teaching, committed to serving the needs of society. The Department of Computer Science contributes to the mission in three ways. First, its undergraduate and graduate education programs seek to educate students in the fundamental principles of computer science and the skills needed to solve the complex technological problems of modern society. The breadth of coursework provides a framework for life-long learning and an appreciation for multidisciplinary activities. Second, through its research programs, the department contributes to the development and progress of computer science, and software and information technology, to provide innovative, creative solutions for societal needs. Finally, the department disseminates its research to enhance collaborations with the public sector, further interdisciplinary interests that benefit society, and educate the public through publications, public service, and professional activities.

Department Objectives

Teaching—We seek to provide undergraduate students with a thorough understanding of the key principles and practices of computing, which include a strong theoretical background in mathematics, basic sciences, and engineering fundamentals and an ability to apply this knowledge to practical problems. We endeavor to provide students with sufficient breadth to work creatively and productively in multidisciplinary work teams; this breadth, in its broadest context, will form the basis for an appreciation and interest in life-long learning. We provide students with the opportunities to design and conduct experiments, and to collect and analyze data in core, as well as more specialized, areas of computer science. We provide students with breadth in the humanities and social sciences so they learn to communicate effectively, understand professional and ethical issues in society, and appreciate the interrelatedness between computing and society. We educate graduate students to be our next generation of teachers or leaders in industry, or to pursue meaningful, creative research in industry, government, or academia.

Research—We develop and maintain research programs that produce fundamental scientific advances, as well as useful technological innovations, while simultaneously training the next generation of researchers and leaders in the field of computer science.

Objectives

We train graduates to practice computer science and engineering in a broad range of industries; we prepare interested graduates for graduate education or other professional degrees; we give students an understanding of computer software and hardware systems, and both theoretical and experimental approaches to problem-solving; we ready graduates for lifelong learning; and we encourage graduates to contribute to their profession and society.

- Computational Biology, Minor (https://catalog.ucdavis.edu/departments-programs-degrees/computer-science-engineering/computational-biology-minor/)
- Computer Science & Engineering, Bachelor of Science (https://catalog.ucdavis.edu/departments-programs-degrees/computer-science-engineering/computer-science-engineering-bs/)
- Computer Science, Bachelor of Science (https://catalog.ucdavis.edu/departments-programs-degrees/computer-science-engineering/computer-science-bs/)
- Computer Science, Minor (https://catalog.ucdavis.edu/departments-programs-degrees/computer-science-engineering/computer-science-minor/)