



Computer Engineering



CURRICULUM

Chemistry and Physics
Computer Architecture
Computer Programming
Computer Systems
Digital System Design
Discrete Structures
Electric and Electronic Circuits
Electronic Devices
Integrated Circuits
Linear Control Systems
Mathematics
Microprocessor Interfacing
Networking Systems
Operating Systems
Robotics
Senior Project
Signal Processing
Signal Transmission
Software Engineering
Technical Electives

HIGH SCHOOL PREPARATION

Math through advanced algebra, trigonometry, physics and chemistry.

COMMUNITY COLLEGE TRANSFER STUDENTS

Complete mathematics up to and including differential equations, three semesters of calculus-based physics, chemistry, electronic circuits, computer programming, material engineering and engineering mechanics. In addition to the technical courses, the following general education courses should be completed: English composition, critical thinking, speech, literature, philosophy and U.S. history. Check with your counseling office for articulation agreement on transfer credit.

Cal Poly Homepage:
www.calpoly.edu

CPE Program Homepage:
www.cpe.calpoly.edu

Mission Statement

The mission of the Computer Engineering Program (CPE) is to provide students with a well-rounded education encompassing the theory and practice of selected, balanced topics in electrical engineering and computer science, to enable students to contribute and continue their education in a wide range of computer-related engineering careers. The program seeks to emphasize "hands-on" experience, problem solving skills, the creative process and responsible action. Through professional development activities, CPE faculty strive for excellence in teaching and contributions to the state-of-the-art.

The Program

The Computer Engineering Program is an interdisciplinary program drawing from the curriculums of the Electrical Engineering and Computer Science Departments as well as specialized computer engineering courses. CPE offers a B.S. program in computer engineering, which is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET).

The Computer Engineering major consistently ranks at the top of the ratings among institutions in the United States, according to U.S. News and World Report and other published reports. Cal Poly is also recognized as the "Best Public Undergraduate University in the West," as well as one of the "Best Bargains" in the United States.

The curriculum provides a sound theoretical background along with current, practical engineering knowledge. The CPE Program exemplifies Cal Poly's "learn by doing" philosophy through a laboratory-intensive approach to Computer Engineering. Students build upon a core curriculum and choose technical electives in specializations including:

- Computer Architecture
- Computer Networks
- Electronics Implementation and VLSI
- Graphics and Multimedia
- Robotics and Computer Based Control
- Software Systems

During the last year of study CPE majors must take a sequence of teamwork, project-oriented specification, design, deployment and documentation courses and complete a

practical senior design project. Students demonstrate their understanding of engineering principles and their ability to apply computer engineering knowledge creatively to real problems.

Career Preparation for Positions as:

Systems Engineer/Analyst
Computer Hardware Engineer
Software Engineer
Network Engineer/Specialist
R & D Engineer
Web Developer
Test/QA Engineer
Computer Applications Engineer
Programmer

Cooperative Education opportunities abound for computer engineering majors who wish to gain on-the-job experience during a one or two quarter break in their academic studies.

Computing Facilities

A wide variety of state-of-the-art computer facilities are available on campus. Twelve Computer Engineering laboratories and several related hardware and software design facilities are provided. Computer Engineering majors have accounts on Electrical Engineering and Computer Science Department systems, as well as on a university-wide system, with full Internet access and web site development resources.

**For additional information, contact
Computer Engineering Program
California Polytechnic State University
San Luis Obispo, CA 93407
(805) 756-1229, Fax (805) 756-1458
Email: cpe@calpoly.edu
www.cpe.calpoly.edu**

OR

**College of Engineering Advising Center
California Polytechnic State University
San Luis Obispo, CA 93407
(805) 756-1461
<http://www.eadvise.calpoly.edu/>**

Prospective students are encouraged to review admissions requirements in the [Cal Poly Catalog](#) or on the Web at:

Curriculum Requirements:
www.calpoly.edu/~acadprog/

Cal Poly Admissions:
www.ess.calpoly.edu/~admiss/