The Bachelor of Science degree in Computer Engineering is offered by University of the Pacific through the Department of Electrical and Computer Engineering (ECPE). Computer engineers solve problems in hardware, software, systems, and networks that address almost every industry including: telecommunications, energy, health care, banking, networking, electronics, manufacturing, etc.

All computer engineering students complete a team-oriented, multidisciplinary senior design project, which provides an opportunity to apply engineering fundamentals and design methods to the solution of a real problem. Graduates of this program have the knowledge essential for entry into this dynamic field of engineering or to continue their education through graduate studies. The computer engineering laboratories include state-of-the-art software and hardware platforms, as well as standard test and measurement equipment. Students have easy access to computer and laboratory equipment, and can conduct approved independent research.

**COOPERATIVE EDUCATION PROGRAM**
CO-OP coordinators work with students to arrange 7 months full-time, paid jobs with engineering employers. (CO-OP is optional for non-U.S. citizens)

**COMPUTER ENGINEERING PROGRAM OBJECTIVES**
Through their careers in computer engineering or related professions, Pacific graduates are expected to demonstrate the following within a few years of earning their bachelor's degree in Computer Engineering:

- Competency in the computer engineering profession via promotion to positions of increasing responsibility, publications, and/or conference presentations

- Adaptability to new developments in science and technology by successfully completing or pursuing graduate education in engineering or related fields, or participating in professional development and/or industrial training courses

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# Bachelor of Science in Computer Engineering - Program Curriculum

## General Education
- PACS 001 [4] Pacific Seminar 1
- PACS 003 [3] Pacific Seminar 3
- Gen. Ed. [3-4] (II-A or II-C)

*Category I Gen. Eds must be from different areas.

## Mathematics & Basic Science
- MATH 051 [4] Calculus I
- MATH 053 [4] Calculus II
- MATH 055 [4] Calculus III
- PHYS 053 [5] Physics I
- PHYS 055 [5] Physics II
- Science Elective [3-5] (see list below)
- Discrete Math Elec. [4] (see list below)

## Computer Engineering Core:
- ECPE 005 [1] Intro to Electrical & Computer Engr.
- ECPE 041 [3] Circuits
- ECPE 041L [1] Circuits Lab
- ECPE 131 [3] Electronics
- ECPE 131L [1] Electronics Lab
- ECPE 194 [0] Core Assessment Exam

## Computer Engineering Electives:
### Science Electives
- CHEM 027 [5] General Chemistry
- BIOL 051 [4] Principles of Biology

### Comp Electives
- COMP 137 [3] Parallel Computing
- COMP 141 [4] Programming Languages
- COMP 191 [3-4]* Independent Study
- COMP 197 [3-4]* Undergraduate Research
- COMP 2XX Any Graduate Comp Course

### Discrete Math Electives

### ECPE Electives
- ECPE 191 [3-4]* Independent Study
- ECPE 193 [3-4]* Special Topics
- ECPE 197 [3-4]* Undergraduate Research
- ECPE 2XX Any Graduate ECPE Course

### SOECS Elective
- Any BENG, CIVL, COMP, ENGR, EMGT, or MECH Course

(COMP or COMP must be 100 level. Excludes ENGR 10, 19, 25, 30, 150, 181, 182, 183)

## Minimum Totals:
- 120 Academic Units: 32 Co-op Units

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**32 Units of Co-op are required to graduate. Co-op is optional for non-U.S. Citizens.**

*ECPE 191: Independent Study, and ECPE 197: Undergraduate Research can be taken for 1-4 units; a minimum of 3 or maximum of 4 units can count as an ECPE elective. ECPE 193: Special topics may qualify as an ECPE elective. Graduate (200 level) courses may also count as ECPE electives. A 3.0 GPA is required to take a 200 level course as an elective.

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