BS COMPUTER SCIENCE

**NOTE:** This document can be used as a compact display of courses and other curricular requirements. The Degree Progress Report must be used to track students’ progress in all degree requirements, throughout their Cal Poly career.

**MAJOR COURSES (89)** | Units
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CSC/CPE 123 Introduction to Computing | 4
CSC/CPE 101 Fund Computer Science | 4
CSC/CPE 102 or CSC/CPE 108 | 4
CSC/CPE 103 Fund Computer Science III | 4
CSC 141 Discrete Structures I | 4
CSC/CPE 225 Intro to Computer Organization | 4
CSC/CPE 300 Professional Responsibilities | 4
CSC/CPE 307 Intro to Software Engineering or | 4 or
CSC 308, CSC 309 Software Engineering I | 4, 4
CSC/CPE 315 Computer Architecture | 4
CSC/CPE 349 Design and Analysis of Algorithms | 4
CSC/CPE 357 Systems Programming | 4
CSC/CPE 430 Programming Languages I | 4
CSC 445 Theory of Computation I | 4
CSC/CPE 453 Introduction to Operating Systems | 4
CSC 491 Senior Project Lab I | 2
CSC 492 Senior Project Lab II | 3
Technical Electives (Select from the lists in technical electives guidelines on reverse) | 24/28

**SUPPORT COURSES (52/53)**

Select from the following:

ENGR/BRAE 213 and BIO 213; BIO 111, 161; BOT 121; MCRO 221, 224 (B2)
ENGL 149 Technical Writing for Engineers (A3) | 4
MATH 141 Calculus I (B1) | 4
MATH 142 Calculus II (B1) | 4
STAT 321 Probability and Stats for Engineers and Scientists (B6) or STAT 312 Statistical Methods for Engineers (B6) | 4

Approved Support Electives

The courses selected may not be used to satisfy other Major, Support, or General Education requirements (no double counting of coursework).

Select from: ENGL 302, 310, 392; PSY 252, 302; RELS 370; COMS 201, 301, 315 | 8

Mathematics/Statistics Electives

Select from: MATH 143, 206, 241, 244, 248, 306, 335, 336, 437, 470; STAT 325 | 8

Science Elective (Additional Area B) | 4
Select from: BIO 111, 161; BOT 121; CHEM 124; MCRO 221, 224; PHYS 141
Physical Science Electives (B3/B4) (Additional Area B) | 12
CHEM 124, 125, 129 or
PHYS 141, 132, 133

**GENERAL EDUCATION (GE)**

72 units required, 32 of which are in Major/Support

Refer to current schedule or [http://www.ge.calpoly.edu](http://www.ge.calpoly.edu) to choose GE courses. You will not receive credit for courses not on the approved list.

Minimum of 8 units required at the 300 level.

**Area A Communication**

A1 Expository Writing | 4
A2 Oral Communication | 4
A3 Reasoning, Argu & Writing (4 units in Support) | 4

**Area B Science and Mathematics**

(No add'l units req'd) 28 units are listed in Support

**Area C Arts and Humanities**

C1 Literature | 4
C2 Philosophy | 4
C3 Fine/Performing Arts | 4
C4 Upper-division elective | 4

**Area D/E Society and the Individual**

D1 The American Exp (40404) | 4
D2 Political Economy | 4
D3 Comp Social Institutions | 4
D4 Self Dev (CSU Area E) | 4

**FREE ELECTIVES**

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1. CPE 129 & CPE 169 or CPE 133, and CPE 229 & CPE 269 or CPE 233 may be substituted for CSC 225.
2. CSC 309 counts as technical elective.
3. Consultation with advisor is recommended prior to selecting technical electives or approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
4. An additional 4 units of CSC/CPE technical electives may be substituted, although new students are strongly encouraged to take CSC/CPE 12.

**OTHER DEGREE REQUIREMENTS:**
- Cal Poly, Higher Ed, and Major GPA must all be at least 2.00

All students must complete:
- United States Cultural Pluralism Requirement
- Graduation Writing Requirement
- 60 units Upper Division (any 300–400 level classes)
- Upper Division units in the Major: 27
- Residency Requirements: See Degree Progress Report for details
Select Technical Electives from the following:
- CSC 540, 541, 550;
- CPE 582, 336, 400*, 415, 428, 482, 488

Note: The following restrictions must be satisfied.
4 units must be satisfied by a course that has as a prerequisite either
1) An upper-division course required by the major (excluding CSC 357) or
2) Another technical elective.
Select from the following:
- CSC 479, 486, 508, 509, 530, 540, 541, 550, 560, 568, 572, 582;
Up to 4 units may be taken from CSC 358, CSC 400*, CPE 400*, CSC 479 (maximum 2 units), or CSC 490.

Up to 4 units may be taken from approved external electives.
Select from the following:
- AERO 450;
- ART 384;
- BUS 310;
- CHEM 216, 217, 218, 312;
- ECON 339;
- EE 201/251, 314, 336, 424;
- ENVE 542;
- IME 301, 314, 356;
- MATH 206, 241, 242, 244, 248, 304, 341, 350, 412;
- ME 211, 212, 405;
- PHIL 412, 422;
- PSY 329, 333, 351, 457;
- STAT 323, 324, 330

1 A total of 28 technical elective units selected from upper-division and graduate CSC and CPE courses that are open to those in the major and that are not otherwise required by the major. Subtract 4 units if CSC 308 and CSC 309 are taken instead of CSC 307. Add 4 units if CSC 123 is not taken
2 An approved course substitution form is required.