2011-13 Cal Poly Catalog  
Computer Engineering Program

BS COMPUTER ENGINEERING

☑ 60 units upper division  ☑ GWR
☑ 2.0 GPA  ☑ USCP

* = Required in Major/Support; also satisfies GE

Note: No major or support courses may be taken as credit/no credit.

MAJOR COURSES

CPE 100 Computer Engineering Orientation .......... 1
CPE 123 Intro to Computing ......................... 4
CPE 101 Fundamentals Computer Science I .......... 4
CPE 102 Fund Computer Science II or CPE 108
Accelerated Intro to Computer Science .......... 4
CPE 103 Fund Computer Science III .................. 4
CPE 129, 169 Digital Design and Lab (3)(1) or
CPE/EE 133 Digital Design (4) ..................... 4
CPE 229, 269 Comp Des/Assembly Lang Prog, Lab
(3)(1) or CPE/EE 233 Comp Des/Assembly Lang Prog(4) 4
CPE 315 Computer Architecture ....................... 4
CPE 329 Progr Logic/Micro-Based Sys Des .......... 4
CPE 350 Capstone I .................................. 4
CPE 357 Systems Programming ......................... 4
CPE 450 Capstone II .................................. 4
CPE 453 Operating Systems I ......................... 4
CPE 461, 462 Senior Project I, II ........................ 3,2
CPE 464 Introduction to Computer Networks ....... 4
CSC 141 Discrete Structures I or CSC 348 (9/29/15) 4
EE 112 Electric Circuit Analysis I .................... 2
EE 211, 241 Electric Circuit Analysis II and Lab 3,1
EE 212, 242 Electric Circuit Analysis III and Lab 3,1
EE 228 Continuous-Time Signals and Systems ...... 4
EE 306, 346 Semiconductor Device Electr, Lab ...... 3,1
EE 307, 347 Digital Integrated Electronics and Lab 3,1

Technical electives ........................................ 12
Select 12 units from the following:
Any 300-500 level CPE, CSC or EE course; 4
CPE 400 (up to 4 units);
Up to four units from the following:
BMED 440, 450 (Topic: Tissue Engineering);
CHEM 312, 316;
CSC 300;
ENGR 551 (Topic: Microcirculation);
IME 301, 303, 314, 319, 351, 401, 457;
IME/MATE 458/CPE 488;
MATE 325, 326, 327, 430, 435, 550, (10/5/15)
MATE/ME 555;
MATH 304, 408, 409, 412, 413, 414, 417,
432, 451*, 453;
ME 318, 341, 342, 343, 405, 415;
PHYS 322, 323, 403, 408, 412, 424, 452;
UNIV/HNRS 424 (3/27/12) (3/1/13)

SUPPORT COURSES

BIO 213 and ENGR/BRAE 213 (B2)* ................... 2,2
CHEM 124 Gen Chem for Engineering (B3/B4)* .... 4

1  Approved CSC, EE, Math or Science elective ........ 3
Select from:
CHEM 125, CSC 349, EE 328;
MATE 210/215 (both needed), or ME 211
ENGL 149 Technical Writing for Engineers (A3)* 4
IME 156/IME 157/IME 458 ................................ 2
MATH 141, 142 Calculus I, II (B1)* .................... 4,4
MATH 143 Calculus III (Add’l Area B)* ............ 4
MATH 241 Calculus IV .................................. 4
MATH 244 Linear Analysis I ............................ 4
PHYS 141 General Physics IA (Add’l Area B)* .... 4
PHYS 132, 133 General Physics II, III .................. 4,4
PHYS 211 Modern Physics I ............................ 4
STAT 350 Prob/Random Processes Engr (B6)* ...... 4

GENERAL EDUCATION (GE)

72 units required, 32 of which are specified in Major/Support.
→See page 39 for complete GE course listing.
→Minimum of 8 units required at the 300 level.

Area A Communication (8 units)
A1 Expository Writing .................................. 4
A2 Oral Communication ................................ 4
A3 Reasoning, Argumentation, and Writing * 4
units in Support ........................................ 0

Area B Science and Mathematics (no add’l units reqd)
B1 Mathematics/Statistics * 8 units in Support 0
B2 Life Science * 4 units in Support ................. 0
B3 Physical Science * 4 units in Support .......... 0
B4 One lab taken with either a B2 or B3 course
B5 (not required for Engineering students) .... 0
B6 Upper-division Area B * 4 units in Support 0
Additional Area B units * 8 units in Support 0

Area C Arts and Humanities (16 units)
C1 Literature ............................................ 4
C2 Philosophy .......................................... 4
C3 Fine/Performing Arts ................................ 4
C4 Upper-division elective ............................ 4

Area D/E Society and the Individual (16 units)
D1 The American Experience (40404) ............ 4
D2 Political Economy .................................. 4
D3 Comparative Social Institutions ................. 4
D4 Self Development (CSU Area E) ................. 4

FREE ELECTIVES ......................................... 0

1 Consultation with advisor is recommended prior to selecting approved elective;
bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
2 The courses selected to satisfy this requirement may not be used to satisfy other
major, support, or general education requirements (no double counting of coursework).
3 The following courses may not be used to satisfy this requirement: COOP units;
any 100 or 200 level course; BUS 499; CSC 302, 303, 310, 400, 500; EE 321, 361, 400, 460, 500, 563.
4 An additional 4 units of CSC/CPE approved technical electives may be
substituted, although new students are strongly encouraged to take
CSC/CPE 123. (2/27/12)(4/2/12)
5 Find the courses marked with an asterisk (*).

1, 2, 3

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5 If CPE 450 is taken for 3 units than 1 additional unit of Technical electives is required. (9/29/15)

† Not for students with credit in CSC 341 or 342 or 343.