

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	
⁴ CPE 123 Intro to Computing	4	
CPE 101 Fundamentals Computer Science I.....	4	
CPE 102 Fund Computer Science II <i>or</i> CPE 108 Accelerated Intro to Computer Science	4	
CPE 103 Fund Computer Science III	4	
CPE 129, 169 Digital Design and Lab (3)(1) <i>or</i> CPE/EE 133 Digital Design (4).....	4	
CPE 229, 269 Comp Des/Assembly Lang Prog, Lab (3)(1) <i>or</i> 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	
⁵ 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 <i>or</i> 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	
^{1,2,3} Technical electives.	12	

Select 12 units from the following:
 Any 300-500 level CPE, CSC³ or EE³ course;
⁵ 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)

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SUPPORT COURSES

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

¹ Approved CSC, EE, Math or Science elective.	3	
<i>Select from:</i>		
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	
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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)		
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	
	40	

FREE ELECTIVES..... 0

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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 CPE 400 requires an approved course substitution form and up to 4 units may be used. (3/1/13)(9/16/15)

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.