2009-11 Cal Poly Catalog

Computer Engineering Program

Flowchart

BS COMPUTER ENGINEERING

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

* = Required in Major/Support; also satisfies GE

MAJOR COURSES

CPE 100 Computer Engineering Orientation .......... 1
CPE 101 Fundamentals Computer Science I .......... 4
CPE 102 Fund Computer Science II or CPE 108 Accelerated Intro to Computer Science (3/10/10) .......... 4
CPE 103 Fund Computer Science III ................. 4
CPE 129, 169 Digital Design and Lab (3)(1) or CPE/EE 133 Digital Design (4) (10/22/10) ............. 4
CPE 229, 269 Comp Des/Assembly Lang Prog, Lab (3)(1) or CPE/EE 233 Comp Des/Assembly Lang Prog (4) (10/22/10) ........................................... 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 .......................... 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

Select 12 units from the following:

Any 300-500 level CPE, CSC³ or EE³ course;
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 430, 435, 550, 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 (3/29/12)/(3/11/13) ................. 92

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
ME 211 Engr Statics or MATE 210, 215 (4) .......... 3
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 50 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 (requirement for Liberal Arts students only)
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

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 CSC/CPE 123 replaces ME 211 or MATE 210, 215 for freshmen and transfer students admitted Fall 2010. (5/25/10)

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

† Not for students with credit in CSC 341 or 342 or 343.
### Area D/E  Society and the Individual (16 units)

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 The American Experience (40404)</td>
<td>4</td>
</tr>
<tr>
<td>D2 Political Economy</td>
<td>4</td>
</tr>
<tr>
<td>D3 Comparative Social Institutions</td>
<td>4</td>
</tr>
<tr>
<td>D4 Self Development (CSU Area E)</td>
<td>4</td>
</tr>
<tr>
<td><strong>FREE ELECTIVES</strong></td>
<td><strong>0</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
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**192 units**