2009-11 Cal Poly Catalog

**Computer Engineering Program**

**Flowchart**

**BS COMPUTER ENGINEERING**

- 60 units upper division
- 2.0 GPA
- GWR
- 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 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
- CPE 229, 269 Comp Des/Assembly Lang Prog, Lab 3,1
- 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

1 2 3 Technical electives ........................................ 12

Select 12 units from the following:

- Any 300-500 level CPE, CSC or EE 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, 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 323, 403, 408, 412, 424, 425, 452;
  - UNIV/HNRS 424

**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’ll Area B)* .............. 4
- MATH 241 Calculus IV .................................... 4
- MATH 244 Linear Analysis I ............................... 4

4 ME 211 Engr Statics or MATE 210, 215 (4) .......... 3

- PHYS 141 General Physics IA (Add’ll 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

60

**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

**Area D/E Society and the Individual (16 units)**

- D1 The American Experience (40404) ............... 4
- D2 Political Economy .................................... 4

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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 CSC/CPE 123 replaces ME 211 or MATE 210, 215 for freshmen and transfer students admitted Fall 2010. (3/25/10)

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

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2009-2011 Cal Poly Catalog
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<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>D3 Comparative Social Institutions</td>
<td>4</td>
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<tr>
<td>D4 Self Development (CSU Area E)</td>
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<tr>
<td><strong>FREE ELECTIVES</strong></td>
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<td><strong>Total</strong></td>
<td><strong>192</strong></td>
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