2011-13 Cal Poly Catalog

Computer Science Department

BS SOFTWARE ENGINEERING

- 60 units upper division
- 2.0 GPA

* = Required in Major/Support; also satisfies GE
Note: No major or support courses may be taken as credit/no credit.

MAJOR COURSES

2 CSC 123 Introduction to Computing .............. 4
CSC 101 Fundamentals of Computer Science I ...... 4
CSC 102 Fundamentals of Computer Science II
or CSC 108 Accelerated Intro Computer Science
CSC 103 Fundamentals of Computer Science III ...
CSC 141 Discrete Structures I or CSC 348 (8/25/15)
CSC 225 Intro to Computer Organization .......... 4
CSC 300 Professional Responsibilities ............. 4
CSC 305 Individual Software Design & Dev. ..... 4
CSC 308 Software Engineering I .................. 4
CSC 309 Software Engineering II ................. 4
CSC 349 Design and Analysis of Algorithms ..... 4
CSC 357 Systems Programming .................... 4
CSC 402 Software Requirements Engineering ... 4
CSC 405 Software Construction.................... 4
CSC 406 Software Deployment..................... 4
CSC 430 Programming Languages I ............... 4
CSC 453 Intro to Operating Systems ............... 4
CSC 484 User-Centered Interface Design & Dev. 4

1 Technical electives. .................................. 20

SUPPORT COURSES

BIO 213 (2) and ENGR/BRAE 213 (2) or ............ 2,2
BIO 111 (4) or BIO 115 (4) or BIO 161 (4) or
BOT 121 (4) or MCRO 221 (4) or
MCRO 224 (5) (B2)* (4/3/12)
ENGL 149 Technical Writing for Engineers (A3)* 4
IME 314 Engineering Economics .................... 3
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
Select one from: MATH 248, 304, 335, 336, 451 ...
3 PSY 201/202 General Psychology (D4)* ........... 4
PSY 350 Teamwork or PSY 351 Group Dynamics .... 4
Science electives (B3/4)* (Add’l 4 units Area B)* 12
Select either
CHEM 124, 125, 129 or
PHYS 141, 132, 133
STAT 312 Statistical Methods for Engineers (B6)* 4

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

97

A3 Reasoning, Argumentation and Writing * 4
units in Support ........................................ 0

Area B Science and Mathematics (no add’l units req’d)
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 a 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 (12 units)
D1 The American Experience (40404) ............. 4
D2 Political Economy ................................. 4
D3 Comparative Social Institutions ................ 4
D4 Self Dev (CSU Area E) * 4 units in Support ... 0

GENERAL EDUCATION (GE)
72 units required, 36 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

Technical Electives Guidelines
BS Software Engineering

Courses used to satisfy any other major, support, or general education requirement are not allowed to count toward Technical Elective requirement. Credit/No Credit grading is not allowed.
Contact the CSC Department for further information.

Category 1

Category 1a: Prerequisites and Individual Courses 8
Select 8 units from the following:
CSC/CPE 341/342, 365, 369, 448, 464, 471, 477,
480, 484, 488, 587

1 Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
2 An additional 4 units of CSC/CPE technical electives may be substituted, although new students are strongly encouraged to take
CSC/CPE 123. (2/27/12)
3 If CSC 492 is taken for 2 units the department waives the third unit. (10/15/15)
Category 1b: Specialization Areas

Select 4 units from each of two separate areas:

- Graphics: CSC/CPE 473, 474, 475, 476, 478, or CSC 572
- Databases: CSC/CPE 366, 466, 468, or CSC 560
- Networks: CSC/CPE 465 or 564
- Software Engineering: CSC/CPE 409, 437; CSC 508, or 509
- Distributed Computing: CSC/CPE 469 or 569
- OS: CSC/CPE 454, 456, 458, or CSC 550
- Architecture: CSC/CPE 315, 316, 416, 459, 520, or CPE 482 "Robotics"
- Languages/Compilers: CSC/CPE 431, 434, or CSC 530
- GUI/HCI: CSC/CPE 435, 483, 487, 581, or CSC 486
- Artificial Intelligence: CSC/CPE 416, 481, 485, 489, 580, 581, or CPE 482 "Autonomous Mobile Robots" or Multi-Robot Systems"
- Computational Sciences/Theory: CSC/CPE 449, CSC 343, 445, 540, or 541

Category 2

Select 4 units from the following:

- Additional CSC/CPE Electives
  - Select CSC 570 or any unused course from Categories 1a or 1b or from upper division courses approved as technical electives by CSC Department: (5/14/13)
- Auxiliary CSC/CPE Electives
  - Select from:
    - CSC 358, 400 (requires form/approval), 479 (maximum 2 units), 490 (11/9/15)
- External Electives
  - Select from:
    - AERO 450;
    - ART 384;
    - BUS 310, 320;
    - CHEM 216, 217, 218, 312, 316, 317, 318; (7/5/12)
    - ECON 339;
    - EE 201/251, 314, 336, 424;
    - ENVE 542;
    - GRC 316, 331, 338;
    - IME 301, 314, 356;
    - MATH 206, 242, 248, 304, 341, 350, 412;
    - ME 211, 212, 405;
    - PHIL 412, 422;
    - PSY 329, 333, 366, 457;
    - STAT 323, 324, 330