2009-11 Cal Poly Catalog

Computer Science Department

Flowchart

BS COMPUTER SCIENCE

- 60 units upper division
- 2.0 GPA
- USCP

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

MAJOR COURSES

CSC 101 Fundamentals of Computer Science I ........ 4
CSC 102 Fundamentals of Computer Science II
  or CSC 108 Introductory Computer Science ... 4
CSC 103 Fundamentals of Computer Science III .... 4
CSC 141 Discrete Structures ................................ 4
1 CSC 225 Intro to Computer Organization (4) .... 4
CSC 300 Professional Responsibilities ................. 4
CSC 307 Intro to Software Engineering (4) or
  or CSC 308, 309 Software Engineering I, II (4/4) 4/8
CSC 315 Computer Architecture .......................... 4
CSC 349 Design and Analysis of Algorithms ........ 4
CSC 357 Systems Programming ............................ 4
CSC 430 Programming Languages I ........................... 4
3 CSC 431 Programming Languages II .................... 4
CSC 445 Theory of Computing ............................ 4
CSC 453 Introduction to Operating Systems .......... 4
CSC 491, 492 Senior Project Design Lab I, II ........ 2,3
4 Technical electives ...................................... 28/24
Select from lists in technical electives guidelines, below.

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
MATH 141, 142 Calculus I, II (B1)* ...................... 4,4
STAT 321 Prob/Stats for Engrs/Scientist or STAT
  312 Stat Methods for Engrs (B6)* (7/23/09) .... 4
4 Approved support electives ........................... 8

The courses selected may not be used to satisfy
other major, support, or General Education
requirements (no double counting of coursework)
Select 8 units from the following:
ENGL 302, 310, 392;
PSY 252, 302;
RELS 370;
COMS 201, 301, 315

Mathematics/statistics electives. Select from ........ 8
CSC 142; MATH 143, 206, 241, 244, 248, 306,
335, 336, 437, 470; STAT 322-325.

Science elective (Add’l Area B)* Select from
BIO 111, 115, 161; BOT 121; CHEM 124; MCRO
221, 224; PHYS 141 (no double counting of units) .... 4

Physical science electives (B3/4)* (Add’l Area B)* 12
CHEM 124, 125, 129 or PHYS 141, 132, 133

GENERAL EDUCATION (GE)

72 units required, 32 of which are specified in 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 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 (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
D3 Comparative Social Institutions .................... 4
D4 Self Development (CSU Area E) .................. 4

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

Technical Electives Guidelines

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 ...................................................... 16

Category 1a: Prerequisites and Individual Courses
Select 8 units from the following:
CSC/CPE 305, 341/342, 365, 369, 448, 464, 471,
477, 480, 484, 488, 587

1 CPE 129/169 and CPE 229/269 may be substituted for CSC 225.
2 CSC 309 counts as technical elective.
3 CSC/CPE 123 replaces CSC 431 for freshmen and transfer students
  admitted Fall 2010. (4/29/10) Alternately, an additional 4 units of
  CSC/CPE technical electives may be substituted. (2/27/12)
4 Consultation with advisor is recommended prior to selecting technical
  electives or approved electives; bear in mind your selections may
  impact pursuit of post-baccalaureate studies and/or goals.
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
- Distributed Computing: CSC/CPE 469 or 569
- OS: CSC/CPE 454, 456, 458, 556, or CSC 550
- Architecture: CSC/CPE 316, 416, 459, 520, or CPE 482 "Robotics"
- Languages/Compilers: CSC/CPE 434 or CSC 530
- Software Engineering: CSC/CPE 402, 405, 406, 409, 437; CSC 508, or 509
- 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, 540, or 541

Category 2: Additional CSC/CPE Electives
Select CSC 570 or any unused course from Categories 1a and 1b (maximum 12 units) 5/14/13.

Category 2b: Auxiliary CSC/CPE Electives
(maximum 4 units)
Select from:
  - CSC 358, 400 (requires form/approval), 479
  (maximum 2 units), 490, 496 6/24/14

Category 2c: External Electives
(maximum 4 units)
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, 241, 242, 244, 248, 304, 341, 350, 412;
  - ME 211, 212, 405;
  - PHIL 412, 422;
  - PSY 329, 333, 351, 366, 457;
  - STAT 323, 324, 330

  28/24