

2011-13 Cal Poly Catalog

Computer Science Department

BS COMPUTER SCIENCE

- ☐ 60 units upper division ☐ GWR
☐ 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

⁴ 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	4
CSC 103 Fundamentals of Computer Science III....	4
CSC 141 Discrete Structures I or CSC 348 (8/25/15)...	4
¹ CSC 225 Intro to Computer Organization (4).....	4
CSC 300 Professional Responsibilities	4
CSC 307 Intro to Software Engineering (4) or ² 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
CSC 445 Theory of Computing	4
CSC 453 Introduction to Operating Systems.....	4
⁵ CSC 491, 492 Senior Project Design Lab I, II	2,2-3
³ Technical electives.....	28/24
Select from lists in technical electives guidelines, below.	
	89

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)*	4
³ 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; any approved GE C4 or GE D5 course. (1/13/16)	
Mathematics/statistics electives. Select from	8
CSC 142; MATH 143, 206, 241, 244, 248, 306, 335, 336, 437, 470; STAT 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	
	52

GENERAL EDUCATION (GE)

72 units required, 32 of which are specified in 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 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 (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
	180 - 181

Technical Electives Guidelines

BS Computer Science

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 or CPE 133, and CPE 229&269 or CPE 233 may be substituted for CSC 225.

² CSC 309 counts as technical elective.

³ 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.

⁴ 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)

⁵ 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

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 8/12

Select from Categories 2a, 2b, and/or 2c.

If CSC 308 and 309 are taken for the Major Core, only 8 units are required for Category 2.

Category 2a: 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 323, 358, 371, 400 (requires form/approval), 479 (maximum 2 units), 410, 424, 429, 477, 490, 496; DATA 301 (6/24/14)(11/9/15)(2/4/16)

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