

2011-13 Cal Poly Catalog

Computer Science Department

BS SOFTWARE ENGINEERING

- ☐ 60 units upper division ☐ GWR
- ☐ 2.0 GPA ☐ USCP

* = 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	4
CSC 103 Fundamentals of Computer Science III....	4
CSC 141 Discrete Structures I <i>or</i> CSC 348 (8/25/15)	4
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
³ CSC 491, 492 Senior Project Design Lab I, II.....	2,2-3
¹ Technical electives.	20
Select from Category 1 and 2 in technical electives guidelines, below.	
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SUPPORT COURSES

BIO 213 (2) <i>and</i> ENGR/BRAE 213 (2) <i>or</i>	2,2
BIO 111 (4) <i>or</i> BIO 115 (4) <i>or</i> BIO 161 (4) <i>or</i> BOT 121 (4) <i>or</i> MCRO 221 (4) <i>or</i> 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	4
PSY 201/202 General Psychology (D4)*	4
PSY 350 Teamwork <i>or</i> PSY 351 Group Dynamics or COMS 217 (2/4/16)	4
Science electives (B3/4)* (Add'l 4 units Area B)* Select either	12
CHEM 124, 125, 129 <i>or</i>	
PHYS 141, 132, 133	
STAT 312 Statistical Methods for Engineers (B6)*	4
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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

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
	36

FREE ELECTIVES	0
	191 - 192

**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..... 8*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** 4*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 323, 358, 371, 400 (requires form/approval),
410, 424, 429, 477, 479 (maximum 2 units), 490;
DATA 301 (11/9/15)(2/4/16)**+ 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