

2009-11 Cal Poly Catalog

Computer Science Department

Flowchart

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

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	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
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.	
89	

SUPPORT COURSES

BIO 213 and ENGR/BRAE 213 (B2)*	2,2
ENGL 149 Technical Writing for Engineers (A3)*	4
MATH 141, 142 Calculus I, II (B1)*	4,4
STAT 321 Prob/Stats for Engrs/Scientist <i>or</i> STAT 312 Stat Methods for Engrs (B6)* (7/23/09)	4
⁴ <i>Approved support electives.</i>	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	
<i>Mathematics/statistics electives.</i> Select from	8
CSC 142; MATH 143, 206, 241, 244, 248, 306, 335, 336, 437, 470; STAT 322- 325. <i>Corrected effective Summer 2009.</i>	
<i>Science elective (Add'l Area B)*</i> Select from BIO 111, 115, 161; BOT 121; CHEM 124; MCRO 221, 224; PHYS 141 (no double counting of units).....	4

<i>Physical science electives (B3/4)* (Add'l Area B)*</i>	12
CHEM 124, 125, 129 <i>or</i> PHYS 141, 132, 133	
52	

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
40	

FREE ELECTIVES	0
181	

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
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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)**

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 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 any unused course from Categories 1a and 1b
(maximum 12 units).

Category 2b: Auxiliary CSC/CPE Electives

(maximum 4 units)

Select from:

CSC 358, 400 (requires form/approval), 479
(maximum 2 units), 490

Category 2c: External Electives

(maximum 4 units)

Select from:

AERO 450;

ART 384;

BUS 310, 320;

CHEM 312, 316, 317, 318;

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