

# BS SOFTWARE ENGINEERING

2020-2021

updated  
1.11.20

Units Required 183-184

NAME \_\_\_\_\_  
STUDENT ID \_\_\_\_\_  
MINOR \_\_\_\_\_



# CAL POLY

Cal Poly, Higher Ed, and Major GPA at least 2.00 [ ] YES [ ] NO  
US Cultural Pluralism Met [ ] YES [ ] NO  
60 Units Upper Division Met Taken/Remaining [ ] YES [ ] NO  
GWR Met [ ] YES [ ] NO  
Upper Div GE Met Taken/Remaining [ ] YES [ ] NO  
Free Electives Met [ ] YES [ ] NO  
C- or higher in A1, A2, A3, and B4 [ ] YES [ ] NO  
Residency Requirements Met [ ] YES [ ] NO

**NOTE:** This is a snapshot of the curriculum as originally published in the catalog. The Degree Progress Report (DPR) reflects updates to the published catalog. The DPR will be used to award your degree and calculate your EAP.

Note: No major or support courses may be selected as credit/no credit.

MAJOR COURSES (88)	Units	Grade	Grd Pts
CSC/CPE 101 Fundamentals of Computer Sci	4		
CSC/CPE 202 <b>or</b> CSC/CPE 108	4		
CSC/CPE 123 Introduction to Computing <sup>2</sup>	4		
CSC/CPE 203 Project-Based Object-Oriented Prog	4		
CSC 225 Intro to Computer Organization	4		
CSC 300 Professional Responsibilities <b>or</b> PHIL 323 <sup>7</sup>	4		
CSC 305 Individual Software Des & Dev	4		
CSC 308 Software Engineering I	4		
CSC 309 Software Engineering II	4		
CSC 348 Discrete Structures	4		
CSC 349 Design & Analysis of Algorithms	4		
CSC/CPE 357 Systems Programming	4		
CSC 365 Intro. To Database Systems	4		
CSC 402 Software Requirements Engr	4		
CSC 405 Software Construction	4		
CSC 406 Senior Project - Software Deployment	4		
CSC 430 Programming Languages	4		
CSC 484 User-Centered Interface Des & Dev	4		
Technical Electives <sup>3,4,5</sup> (see reverse for list)	16		

## GENERAL EDUCATION (GE)

36

72 units required, 36 of which are specified in Major/Support

Refer to current schedule or <http://www.ge.calpoly.edu> to choose GE courses.  
You will not receive credit for courses not on the approved lists.

Minimum of 8 units required at the 300 level.

### Area A English Language Comm and Critical Thinking

8

A1 Oral Communication ..... 4  
A2 Written Communication ..... 4  
A3 Critical Thinking (4 units in Support)<sup>1</sup>

### Area B Scientific Inquiry & Quantitative Reasoning

28 units are listed in Support<sup>1</sup>

### Area C Arts and Humanities

16

Lower-division courses in Area C must come from three different subject prefixes

C1 Arts<sup>6</sup> ..... 4  
C2 Humanities<sup>6</sup> ..... 4  
Lower-Division C Elective: C1 or C2<sup>6</sup> ..... 4  
Upper-Division C<sup>7</sup> ..... 4

### Area D Social Sciences

12

D1 American Institutions (Title 5, Sec. 40404) ..... 4  
D2 Lower-Division D ..... 4  
Area D Elective: ..... 4

Select either an additional lower-division D2 or an upper-division D course

### Area E Lifelong Learning and Self-Dev (4 units in Support)<sup>1</sup>

FREE ELECTIVES ..... 0/4

## SUPPORT COURSES (59-60)

Select from <sup>1</sup> : BIO 111 (B2 & B3), 161 (B2 & B3), BIO 213 <b>and</b> BMED 213 (B2); BOT 121 (B2 & B3); MCRO 221 (B2 & B3), 224 (B2 & B3)	4-5
ENGL 149 Technical Writing for Engineers (A3) <sup>1</sup>	4
IME 314 or IME 315	3
MATH 141 Calculus I (B4) <sup>1</sup>	4
MATH 142 Calculus II (B4) <sup>1</sup>	4
MATH 143 Calculus III (Add'l Area B) <sup>1</sup>	4
MATH 241 Calculus IV	4
MATH 244 Linear Analysis I	4
Select from: MATH 248, 304, 335, 336, 451	4
PSY 201/202 General Psychology (E) <sup>1</sup>	4
PSY 350 <b>or</b> COMS 217	4
Science Electives (B1/3, Additional 4 units Area B) <sup>1</sup> CHEM 124, 125, 126 <b>or</b> PHYS 141, 132, 133	12
STAT 312 Statistical Methods for Engineers (UD-B) <sup>1</sup>	4

<sup>1</sup> Required in Major/Support; also satisfies GE.

<sup>2</sup> An additional 4 units of CSC/CPE technical electives may be substituted, although new students are strongly encouraged to take CSC 123.

<sup>3</sup> 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.

<sup>4</sup> An additional 4 units of CPE/CSC technical electives is needed if CSC 123 is not taken.

<sup>5</sup> Any course selected to satisfy this requirement may not be used to satisfy another Major or Support course requirement. No double counting allowed between Major and Support courses.

<sup>6</sup> C1, C2, and C elective must come from three different subject prefixes

<sup>7</sup> If PHIL 323 is taken and double-counted for the Major Course requirement and the Upper-Division GE Area C requirement, you will need 4 units of Free Electives to reach the total number of units required for this degree.

## TECHNICAL ELECTIVES

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.

*Select Technical Electives from the following:*<sup>1</sup>

CSC/CPE 321, 431, 453, 454, 458, 469, 471, 476, 515, 564, 569;  
CSC 301, 313, 323, 325, 344, 366, 369, 371, 377, 378, 400<sup>2</sup>, 409,  
410, 422, 424, 429, 435, 436, 437, 445, 448, 466, 468, 473, 474,  
477, 478, 480, 481, 482, 483, 486, 487, 489, 490<sup>2</sup>, 496<sup>2</sup>, 497 &  
498, 508, 509, 521, 530, 540, 550, 560, 566, 570, 572, 580, 581,  
582;  
CPE 315, 400<sup>2</sup>, 416, 419, 464, 465, 482, 485;  
CPE/EE 428;  
CPE 488/IME 458/MATE 458;  
DATA 301

The following restrictions must be satisfied.

4 units must be satisfied by a course that has as a prerequisite either

- 1) An upper-division course required by the major (excluding CSC 357 & 348) or
- 2) Another technical elective

*Select from the following:*

CSC/CPE 431, 454, 476, 515, 564;  
CSC 325, 366, 409, 410, 422, 424, 429, 435, 437, 448, 466, 468,  
473, 474, 477, 478, 481, 482, 483, 486, 487, 489, 497&498, 508,  
509, 521, 530, 540, 550, 560, 566, 572, 580, 581, 582;  
CPE 416, 465

Up to 4 units may be taken from CSC 400, CPE 400 (maximum of 2 units), or CSC 490.

Up to 4 units may be taken from approved external electives.

*Select from the following:*

AERO 450;  
ART 384;  
BUS 310;  
CHEM 216, 217, 218, 312;  
ECON 339;  
EE 201 & 251, 314, 424;  
EE/CPE 336;  
ENVE 542;  
IME 301, 356;  
MATH 206, 242, 248, 304, 341, 350, 412;  
ME 211, 212, 405;  
PHIL 412, 422;  
PSY 329, 333, 357;  
STAT 313, 323, 324, 330, 331, 334, 416, 418, 419, 434

<sup>1</sup> A total of 16 technical elective units selected from upper-division and graduate CSC and CPE courses that are open to those in the major and that are not otherwise required by the major. An additional 4 units of CPE/CSC technical electives may substitute for CSC 123 in major requirements.

<sup>2</sup> Up to a combined 4 units may be taken from CSC 400, CPE 400, CSC 490, or CSC 496.