

## 2011-13 Cal Poly Catalog

## Chemistry &amp; Biochemistry Department

## BS CHEMISTRY

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

\* = Required in Major/Support; also satisfies GE

Course sequencing: See flowcharts at  
[www.csmadvising.calpoly.edu](http://www.csmadvising.calpoly.edu)

Note: No major, support or concentration courses  
may be taken as credit/no credit.

## MAJOR COURSES

CHEM 127 General Chemistry (B3 & B4)* .....	4
CHEM 128 General Chemistry .....	4
CHEM 129 General Chemistry .....	4
CHEM 316 Organic Chem I <i>or</i> CHEM 216 (3/18/16) .....	5
CHEM 317 Organic Chem II <i>or</i> CHEM 217 & CHEM 221 (3/18/16) .....	5
CHEM 318 Organic Chem III <i>or</i> CHEM 218 (3/18/16) .....	3
CHEM 319 Advanced Organic Chemistry Lab <i>or</i> CHEM 324 (3/18/16) .....	2
<sup>1</sup> CHEM 331 Quantitative Analysis .....	5
CHEM 351 Physical Chemistry I .....	3
CHEM 352 Physical Chemistry II .....	3
CHEM 353 Physical Chemistry III .....	3
CHEM 354 Physical Chemistry Laboratory .....	2
CHEM 357 Physical Chemistry III Laboratory .....	1
CHEM 371 Biochemical Principles .....	5
CHEM 439 Instrumental Analysis .....	5
<sup>2</sup> CHEM 459 Undergraduate Seminar (2) <i>or</i> SCM 491 Student Teacher Seminar (1) (1) .....	2
CHEM 461 Senior Project Report .....	1
CHEM 481 Inorganic Chemistry .....	3
CHEM 484 Inorganic Chemistry Lab .....	2
<sup>3</sup> Select 15 units from the below list of advanced chemistry electives ( <i>a minimum of three courses from List B</i> ) or Polymers and Coatings Concentration to complete major .....	15/18
<b>Advanced Chemistry Electives (10/25/11)</b> <b>List A</b> CHEM 252, 302, 341, 349, 372, 373, 377, 400 <sup>4</sup> , 401 <sup>5</sup> , 466, 447, 448, 449, 454, 465, 474, 477, 478, 485 <sup>4</sup> , 495 <sup>4</sup> , 528; (3/17/16) BIO/CHEM 375, 441; PSC/BIO 424; SCM 325, 451 <b>List B (Select at least 3 courses)</b> CHEM 405, 414, 419, 420, 444, 445, 446, 458, 463, 470	

(11/17/14)

77/80

## SUPPORT COURSES

BIO 161 Intro to Cell & Molecular Biology (B2)*	4
MATH 141, 142, 143 Calculus I, II, III (B1)* .....	4,4,4
MATH 241 Calculus IV .....	4
MATH 244 or 200-400 level STAT or CSC course	4
PHYS 141 General Physics IA .....	4
PHYS 132 General Physics II .....	4
PHYS 133 General Physics III .....	4

Physics elective (200-level and above) .....	3
	<b>39</b>

## GENERAL EDUCATION (GE)

72 units required, 16 of which are specified in Major/Support.

→See page 39 for complete GE course listing.

→Minimum of 12 units required at the 300 level.

## Area A Communication (12 units)

A1 Expository Writing .....	4
A2 Oral Communication .....	4
A3 Reasoning, Argumentation, and Writing .....	4

## Area B Science and Mathematics (no additional units are required)

B1 Mathematics/Statistics * 8 units in Support .....	0
B2 Life Science * 4 units in Support .....	0
B3 Physical Science * 4 units in Major .....	0
B4 One lab taken with either a B2 or B3 course	

## Area C Arts and Humanities (20 units)

C1 Literature .....	4
C2 Philosophy .....	4
C3 Fine/Performing Arts .....	4
C4 Upper-division elective .....	4
Area C elective (Choose one course from C1-C4)	4

## Area D/E Society and the Individual (20 units)

D1 The American Experience (40404) .....	4
D2 Political Economy .....	4
D3 Comparative Social Institutions .....	4
D4 Self Development (CSU Area E) .....	4
D5 Upper-division elective .....	4

## Area F Technology Elective (upper division) (4 units)

	<b>56</b>
<b>FREE ELECTIVES</b> .....	<b>5-8</b>
	<b>180</b>

## Concentration

(Students may select the following concentration instead of advanced chemistry electives in Major Courses)

## Polymers and Coatings Concentration

CHEM 444 Polymers and Coatings I .....	3
CHEM 445 Polymers and Coatings II .....	3
CHEM 446 Surface Chemistry of Materials .....	3
CHEM 447 Polymers and Coatings Lab I .....	2
CHEM 448 Polymers and Coatings Lab II .....	2
CHEM 449 Internship in Polymers and Coatings .....	2
MATE 210 Materials Engineering .....	3
	<b>18</b>

<sup>1</sup> Students should take CHEM 331 during their second year.

<sup>2</sup> SCM 491 only for students pursuing Single-Subject Teaching Credential.

<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> No more than 2 units may apply to approved advanced chemistry electives.

<sup>5</sup> No more than 4 units may apply to approved advanced chemistry electives.