MAJOR COURSES
CHEM 127 General Chemistry (B3 & B4)* ........... 4
CHEM 128 General Chemistry ......................... 4
CHEM 129 General Chemistry ....................... 4
CHEM 316 Organic Chemistry I ......................... 5
CHEM 317 Organic Chemistry II ....................... 5
CHEM 318 Organic Chemistry III ..................... 3
CHEM 319 Advanced Organic Chemistry Lab .......... 2
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
CHEM 459 Undergraduate Seminar (2) or SCM 491 Student Teacher Seminar (1) (1) ............. 2
CHEM 461 Senior Project Report .................... 1
CHEM 481 Inorganic Chemistry ..................... 3
CHEM 484 Inorganic Chemistry Laboratory .......... 2

Select 15 units from the list of approved chemistry electives (a minimum of three courses from List B) or Polymers and Coatings Concentration to complete major .......... 15/18

List A
BIO/Chem 375;
PSC/Bio 424; SCM 325, 451

List B (Select at least 3 courses)
CHEM 405, 414, 419, 420, 444, 445, 446, 458, 463, 470

(11/4/11) (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

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GENERAL EDUCATION (GE)
72 units required, 16 of which are specified in Major/Support.
→ See page 50 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) ................................................. 4

56

180

FREE ELECTIVES ........................................ 8/5

Concentrations
(Students may select the following concentration)

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

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1 Students should take CHEM 331 during their second year.
2 SCM 491 only for students pursuing Single-Subject Teaching Credential.
3 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.
4 No more than 2 units may apply to approved advanced chemistry electives.
5 No more than 4 units may apply to approved advanced chemistry electives.