BS BIOCHEMISTRY

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 371 Biochemical Principles ........................................... 5
CHEM 372 Metabolism ............................................................ 4
CHEM 373 Molecular Biology .................................................. 3
Select one course from:
  CHEM 375 Molecular Biology Laboratory, or
  CHEM 474 Protein Techniques Laboratory ......................... 2
Select one course from:
  CHEM 375, 439^1, 474^2, BIO 361^3, 476^4 ................................ 2
CHEM 459 Undergraduate Seminar (2) or SCM 491^5 Student Teacher Seminar (1)(1) .......................... 2
CHEM 461 Senior Project Report ........................................... 1
Select 12 units of advanced approved biochemistry electives or Polymers and Coatings Concentration to complete major.
At least two courses must be from List A, including one lecture. .......................... 12-18
List A

BIO/PSC 424;
SCM 302, 325, 451;
(5/17/12)/2/21/15)
List B

BIO 361, 405, 432, 452;
MCRO 402, 423, 424; ZOO 331, 332, 422
(11/17/14) .......................... 74-85 80

SUPPORT COURSES

BIO 161 Intro to Cell & Molecular Biology (B2)* .................. 4
MATH 141, 142, 143 Calculus I, II, III (B1)* .................. 4,4,4

PHYS 121, 122, 123 College Physics or
PHYS 141, 132, 133 General Physics .......................... 4,4,4
MCRO 224^2 Gen Microbio I or BIO 452 Cell Bio 4-5

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

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 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 Major ......................... 0
B4 One lab taken with either a B2 or B3 course ................ 0

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

FREE ELECTIVES ......................................................... 11-18 6-23 18

1 Students should take CHEM 331 as soon as possible after completing CHEM 129.
2 Required for Molecular Biology concentration.
3 Excess units count as approved advanced Biochemistry electives.
4 SCM 491only for students pursuing Single-Subject Teaching Credential.
5 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.
6 No more than 2 units may apply to approved advanced biochemistry electives.
7 No more than 4 units may apply to approved advanced biochemistry electives.