

BS MICROBIOLOGY**2013-2015**updated
4.11.13**Units Required 180**

NOTE: This document can be used as a compact display of courses and other curricular requirements. The Degree Progress Report must be used to track students' progress in all degree requirements, throughout their Cal Poly career.

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

MAJOR COURSES (70)	<i>Units</i>
BIO 160 Diversity and History of Life	4
BIO 161 Intro to Cell & Molecular Bio (B2&B4) ¹	4
BIO 263 Introductory Ecology and Evolution	4
BIO 351 Principles of Genetics	5
BIO 426 Immunology	4
BIO 452 Cell Biology	4
MCRO 224 General Microbiology I	5
MCRO 225 General Microbiology II	5
MCRO 402 General Virology	4
MCRO 423 Medical Microbiology	5
MCRO 424 Microbial Physiology	5
BIO 461 or BIO 462	2
^{2,3,4,6} Approved Electives (see reverse)	19

SUPPORT COURSES (46)

CHEM 127 General Chemistry I (B3&B4) ¹	4
CHEM 128 General Chemistry II	4
CHEM 129 General Chemistry III	4
CHEM 216 ⁴ Organic Chemistry for Life Sciences I	5
CHEM 217 ⁴ Organic Chemistry for Life Sciences II	4
CHEM 313 ⁵ or CHEM 371	5
MATH 161 Calculus for the Life Sciences I (B1) ¹	4
PHYS 121 College Physics I	4
PHYS 122 College Physics II	4
PHYS 123 College Physics III	4
STAT 218 Applied Statistics for the Life Sciences (B1) ¹	4

¹ Required in Major/Support; also satisfies GE.

² 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.

³ Limited to a total of 4 units from BIO 400, 450, 462, and 463. At least 14 units must be upper division (300-400 level).

⁴ Students planning to attend graduate or professional schools are strongly advised to meet with their advisors to ensure that they meet necessary prerequisites for entry into these programs. Additional courses in math and chemistry may be necessary.

⁵ CHEM 371 suggested for students who plan to pursue graduate school or a health professions career.

⁶ Care must be taken to ensure compliance with the "60 units of upper-division" requirement.

GENERAL EDUCATION (GE)**56**

72 units required, 16 of which are listed in Major and/or Support

Minimum of 12 units required at the 300 level.**Area A Communication****12**

A1 Expository Writing	4
A2 Oral Communication	4
A3 Reasoning, Argumentation & Writing	4

Area B Science and Mathematics**0**

B1 Math/Statistics (8 units in Support) ¹	
B2 Life Science (4 units in Major) ¹	
B3 Physical Science (4 units in Support) ¹	
B4 One lab with B2 or B3 course	

Area C Arts and Humanities**20**

C1 Literature	4
C2 Philosophy	4
C3 Fine/Performing Arts	4
C4 Upper-division elective	4
C1-C5 Elective	4

Area D/E Society and the Individual**20**

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 (upper div.)**4****FREE ELECTIVES****8^u****OTHER DEGREE REQUIREMENTS:**

- **Cal Poly, Higher Ed, and Major GPA must all be at least 2.00**

All students must complete:

- **United States Cultural Pluralism Requirement**
- **Graduation Writing Requirement**
- **60 units Upper Division (any 300-400 level classes)**
- **Upper Division units in the Major: 27**
- **Residency Requirements: See Degree Progress Report for details**

Approved Electives.....19

Limited to a total of 4 units from BIO 400, 450, 462, and 463.

At least 14 units must be upper division (300-400 level).

Biotechnology

ASCI 403;

BIO/CHEM 441, 475, 476;

BRAE 448;

CHEM 331, 372, 373, 474, 478;

MCRO 433;

SCM 201

Food Microbiology

DSCI 402, 434, 444;

FSN 230, 275, 335, 341, 364, 368, 374, 474;

MCRO 421;

MCRO/WVIT 301

Medical and Public Health Microbiology

ASCI 203, 312, 321, 438, 440;

BIO 162, 432, 433;

CHEM 331, 349, 377, 477;

KINE 301;

MCRO 320, 342;

ZOO 425, 428

Microbial Ecology and Evolution

BIO 325, 414, 443;

CHEM 341;

ENVE 434;

MCRO 436;

SS 422

Other electives for Microbiology Majors

BIO 361, 400, 434, 450, 462, 463;

BOT 323;

CHEM 218, 219, 419;

MATH 162;

PPSC 311, 441;

SCM 451;

STAT 313, 419, 421;

ZOO 335, 336