

2011-13 Cal Poly Catalog

Biological Sciences Department

BS MICROBIOLOGY

- ☐ 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

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

MAJOR COURSES

| | |
|--|----|
| BIO 160 Diversity & the History of Life | 4 |
| BIO 161 Introduction to Cellular & Molecular Biology (B2&B4)* | 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 Senior Project – Research Proposal <i>or</i> BIO 462 Senior Project - Research..... | 2 |
| ¹ Approved electives..... | 18 |
| Limited to a total of 4 units from BIO 400, 450, 462, and 463. At least 10 units must be upper division (300-400 level). | |
| <i>Biotechnology</i> | |
| MCRO 433; | |
| ASCI 403; | |
| BIO/CHEM 375, 441, 476; | |
| BOT/HCS 450; | |
| BRAE 448; | |
| CHEM 331, 372, 373, 474, 478; | |
| SCM 201 | |
| <i>Food Microbiology</i> | |
| MCRO 421; | |
| DSCI 402, 434, 444; | |
| FSN 230, 275, 335, 341, 364, 368, 374, 474 | |
| <i>Medical and Public Health Microbiology</i> | |
| MCRO 320, 342; | |
| ASCI 203, 312, 321, 438, 440; | |
| BIO 162, 432, 433; | |
| CHEM 331, 349, 377, 406, 407, 408, 409, 410, 477;(12/28/15) | |
| KINE 301; | |
| ZOO 425, 428 | |
| <i>Microbial Ecology and Evolution</i> | |
| MCRO 436; BIO 325, 414, 443; | |
| CHEM 341; | |
| ENVE 434; | |
| SS 422 | |
| <i>Other electives for Microbiology Majors</i> | |
| BIO 361, 400, 434, 450, 462, 463; | |
| BOT 323; | |

CHEM 223, 318, 319, 419, 472;(12/28/15)
MATH 151, 162; PPSC 311, 441;
SCM 302, 451; (3/13/13)
STAT 313, 419, 421; ZOO 335, 336, 436

Corrected (10/10/12)

69

² SUPPORT COURSES

| | |
|---|---------|
| CHEM 127 General Chemistry I (B3&B4)* | 4 |
| CHEM 128, 129 General Chemistry II, III | 4, 4 |
| CHEM 316 Organic Chemistry I..... | 5 |
| ⁴ CHEM 317 Organic Chemistry II <i>or</i> CHEM 217 (3) <i>and</i> CHEM 220 (1) (7/27/15)..... | 5 |
| ³ CHEM 371 Biochemical Principles | 5 |
| MATH 161 Calculus for the Life Sciences I (B1)* | 4 |
| PHYS 121, 122, 123 College Physics I, II, III..... | 4, 4, 4 |
| STAT 218 Applied Statistics-Life Sciences (B1)* | 4 |
| | 47 |

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 add'l units req'd)

| | |
|---|---|
| B1 Mathematics/Statistics * 8 units in Support..... | 0 |
| B2 Life Science * 4 units in Major..... | 0 |
| B3 Physical Science * 4 units in Support | 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

FREE ELECTIVES..... 8

180

¹ 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.

² 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.

³ CHEM 313 may be substituted, ~~with advisor approval~~, for students not planning to pursue graduate school, or a health professions career. (11/5/13)

⁴ If CHEM 217 and CHEM 220 are taken for 4 units than 1 additional unit of Free Electives is required. (7/27/15)