

CAL POLY BIOLOGICAL SCIENCES DEPARTMENT
MICROBIOLOGY MINOR REQUIREMENTS
 2026-2028 Catalog

The minor must be completed prior to, or at the same time as, the requirements for the bachelor's degree. A major and a minor may not be taken in the same degree program, and a minor is not required for a degree. Requirements for the minor include:

- At least half of the units must be from upper-division courses (3000-4000 level).
- At least half of the units must be taken at Cal Poly (in residence).
- No more than one-third of the units will be taken with credit-no credit grading (CR/NC), not counting courses with mandatory CR/NC. Departments may further limit CR/NC grading if desired.
- A minimum 2.0 GPA is required in all units counted for completion of the minor.

REQUIRED COURSES

COURSE #	COURSE TITLE	# OF UNITS
☐ MCRO 2221 (4) or ☐ MCRO 2224 (4)	Introduction to Microbiology General Microbiology I	4
☐ MCRO 2227 (4)	General Microbiology II	4
☐ Elective selection	Select 7-8 units from the Advanced Microbiology Electives list below.	7-8

TOTAL UNITS: 22

ADVANCED MICROBIOLOGY ELECTIVES

Select 7-8 units from the following:

- ☐ BIO 4456 Immunology (4)
- ☐ MCRO 3351 Microbial Genetics (3) or BIO 3351 Principles of Genetics (3)
- ☐ MCRO 4402 General Virology (3)
- ☐ MCRO 4423 Medical Microbiology (4)
- ☐ MCRO 4424 Microbial Physiology and Biochemistry (4)

APPROVED ELECTIVES

Select 6-7 units from the following. An advisor-approved course may be substituted; consultation with an advisor is recommended before selecting electives.

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| ☐ ASCI 3303 Animal Parasitology (3)
☐ ASCI 3312 Production Medicine (2)
☐ ASCI 3321 Zoonoses and Veterinary Public Health Concerns (3)
☐ ASCI 4403 Applied Biotechnology in Animal Science (3)
☐ ASCI 4440 Immunology and Diseases of Animals (3)
☐ BIO 2200 / BIO 3300 / BIO 4400 Special Problems or Research Experience (1-2)*
☐ BIO/CHEM 2252 Orientation to Biotechnology (2)
☐ BIO 4429 Parasitology (4)
☐ BIO 4456 Immunology (4)
☐ BIO 4458 Hematology (3)
☐ CHEM 2240 Organic Chemistry: Fundamentals and Applications (4) or CHEM 2242 Organic Chemistry I (5)
☐ CHEM 2244 Organic Chemistry II (4) | ☐ FSN 3316 Fermented Foods (3)
☐ FSN 3380 Brewing Science (3)
☐ MCRO/WVIT 3301 Wine Microbiology (3)
☐ MCRO 3320 Emerging Infectious Diseases (3)
☐ MCRO 3342 Public Health Microbiology (3)
☐ MCRO 3351 Microbial Genetics (3)
☐ MCRO 3352 Microbial Genetics Laboratory (2)
☐ MCRO 4402 General Virology (3)
☐ MCRO 4421 Food Microbiology (3)
☐ MCRO 4423 Medical Microbiology (4)
☐ MCRO 4424 Microbial Physiology and Biochemistry (4)
☐ MCRO 4433 Microbial Biotechnology (3) |
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- ☐ CHEM 3330 Foundations of Chemical Analysis (4)
- ☐ CHEM 3350 Biochemistry: Fundamentals and Applications (4) or CHEM 3352 Biochemistry (4)
- ☐ CHEM 3354 Metabolism (3)
- ☐ DATA 3301 Introduction to Data Science (4)
- ☐ DSCI 3344 Dairy Microbiology (3)
- ☐ ENVE 3438 Water and Wastewater Treatment Design (4)
- ☐ FSN 2245 Elements of Food Safety (3)
- ☐ MCRO 4436 Microbial Ecology (4)
- ☐ PLSC 3313 Agricultural Entomology (3)
- ☐ PLSC 3323 Plant Pathology (3)
- ☐ SS 4422 Soil Ecology (4)
- ☐ STAT 1110 Applied Statistical Concepts and Methods (3)
- ☐ STAT 3210 Engineering Statistics (3)

**A maximum of 2 units from BIO 2200, BIO 3300, or BIO 4400 may be applied toward Approved Electives.*

OPTIONAL WORKSHEET FOR ADVISING PURPOSES

COURSE #	# OF UNITS	SEMESTER & YEAR