

Microbiology Option: Microbiology Track

Freshman Year	Credits
CHMY 141 - College Chemistry I & CHMY 142 - College Chemistry I Lab or CHMY 151 and CHMY 152	4
CHMY 143 - College Chemistry II & CHMY 144 - College Chemistry II Lab or CHMY 153 and CHMY 154	4
BIOB 160 - Principles of Living Systems or BIOB 260 - Cellular and Molecular Biology	4
Math Requirements*	6
University Core and Electives (see list below)	12
Year Total:	30
Sophomore Year	Credits
CHMY 321 - Organic Chemistry I & CHMY 322 - Organic Chemistry I Lab or CHMY 331 and CHMY 332	4
CHMY 323 - Organic Chemistry II & CHMY 324 - Organic Chemistry II Lab or CHMY 333 and CHMY 334	4
BIOM 360 - General Microbiology	5
PHSX 205 - College Physics I or PHSX 220 - Physics I with Calculus	4
PHSX 207 - College Physics II or PHSX 222 - Physics II with Calculus	4
Microbiology Electives**	5
University Core and Electives	4
Year Total:	30
Junior Year	Credits
BCH 380 - Biochemistry & BCH 381 - Biochemistry Lab or BCH 441 and BCH 442	5
BIOM 430 - Applied and Environmental Microbiology or BIOM 415 - Microbial Diversity, Ecology, and Evolution	3-4
Microbiology Electives**	10
University Core and Electives	11-12
Year Total:	30
Senior Year	Credits
BIOM 494 - Seminar/Workshop (take two semesters)	2
BIOM 450 - Microbial Physiology	3
BIOM 410 - Microbial Genetics	3
Microbiology Electives**	10
University Core and Electives	12
Year Total:	30
Total Program Credits:	120

Math Requirements*

Choose one of the following sequences of two courses:

M 161Q & BIOB 318	Survey of Calculus and Biometry (or STAT 216Q)
M 171Q & BIOB 318	Calculus I and Biometry (or STAT 216Q)
M 171Q & M 172	Calculus I and Calculus II

M 181Q & M 182	Honors Calculus I and Honors Calculus II
M 165Q & M 166	Calculus for Technology I and Calculus for Technology II

Microbiology Electives**

A minimum of 25 credits of additional Microbiology courses, some of which are listed below.

BIOM 101	Careers in Microbiology (1 cr)
BIOM 210RN	Environmental Health Science (3 cr)
BIOM 363	Eukaryotic Cell Biology (3 cr)
BIOM 365	Astrobiology (3 cr)
BIOM 400	Medical Microbiology (3 cr)
BIOM 405	Host-Associated Microbiomes (3 cr)
BIOM 415	Microbial Diversity, Ecology, and Evolution (3 cr) if not taken as a requirement
BIOM 419	Programming for Biologists (3 cr)
BIOM 421	Concepts of Plant Pathology (3 cr)
BIOM 423	Mycology (3 cr)
BIOM 425	Toxicology: Science of Poisons (3 cr)
BIOM 427	General Parasitology (4 cr)
BIOM 430	Applied and Environmental Microbiology (3 cr) if not taken as a requirement
BIOM 431	Medical Bacteriology (3 cr)
BIOM 432	Med Bacteriology Lab (2 cr)
BIOM 435	Virology (3 cr)
BIOM 441	Eukaryotic Pathogens (4 cr)
BIOM 455R	Research Mthds in Microbiology (4 cr)
BIOM 457R	Research Methods in Immunology (4 cr)
BIOM 490R	Undergraduate Research (4 cr max for MB electives)
BIOM 497	Educational Methods: Microbiology (2 cr)
BIOM 498R	Microbiology and Biotechnology Internships (max of 4 cr for major)
BIOB 375	General Genetics (3 cr)
BIOB 410	Immunology (3 cr)
BIOB 420	Evolution (3 cr)
BIOB 424	Ethical Practice of Science (3 cr)
BIOH 405	Hematology (3 cr)
BIOH 406	Hematology Laboratory (1 cr)
BIOH 458	Human Pathophysiology (3 cr)

Other suggested courses

One course may be used toward the 25 credits of Microbiology electives.

BIOH 201	Human Anatomy and Physiology I (5 cr)	5
BIOH 211	Human Anatomy and Physiology II (4 cr)	4

A minimum of 120 credits is required for graduation; 42 of those credits must be in courses numbered 300 and above.