Microbiology Option: Microbiology Track

Freshman Year

**Credits**
BIOB 160 - Principles of Living Systems or BIOB 260 - Cellular and Molecular Biology 4
CHMY 141 - College Chemistry I or CHMY 151 - Honors College Chemistry I 4
CHMY 143 - College Chemistry II or CHMY 153 - Honors College Chemistry II 4
Math Requirements 6
University Core and Electives (see list below) 12
Year Total: 30

Sophomore Year

**Credits**
CHMY 321 - Organic Chemistry I or CHMY 331 - Honors Organic Chemistry I 4
CHMY 323 - Organic Chemistry II or CHMY 333 - Honors Organic Chemistry II 4
BIOM 360 - General Microbiology 5
PHSX 205 - College Physics I or PHSX 220 - Physics I (w/ calculus) 4
PHSX 207 - College Physics II or PHSX 222 - Physics II (w/ calculus) 4
Microbiology Electives ** 5
University Core and Electives 4
Year Total: 30

Junior Year

**Credits**
BCH 380 - Biochemistry 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:
- M 161Q & BIOB 318 or STAT 216
  - Survey of Calculus and Biometry
  - Introduction to Statistics
- M 171Q & M 172Q
  - Calculus I and Calculus II
- M 181Q & M 182Q
  - Honors Calculus I and Honors Calculus II
- M 165Q & M 166Q
  - 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 400 Medical Microbiology (3 cr)
- BIOM 405 Host-Associated Microbiomes (4 cr)
- BIOM 425 Toxicology: Science of Poisons (3 cr)
- BIOM 427 General Parasitology (4 cr)
- 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 460 Infectious Diseases Ecology and Spillover
- BIOM 490R Undergraduate Research (4 cr max for MB electives)
- BIOM 497 Educational Methods: Microbiology (2 cr)
- BIOM 498 Microbiology Internship
- BIOB 410 Immunology (3 cr)
- BIOB 412 Hybridomas (2 cr)
- BIOB 413 Flow Cytometry (1 cr)
- BIOB 414 Advanced Microscopy (1 cr)
- BIOB 415 Adv Immunology Methods (1 cr)
- BIOB 428 Molecular Evolution (3 cr)
- BIOH 405 Hematology (3 cr)
- BIOH 406 Hematology Laboratory (1 cr)
- EMEC 424 Cellular Mechanotransduction

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

- BIOH 201 Human Anatomy and Physiology I 5
- BIOH 211 Human Anatomy and Physiology II 4
- BIOB 375 General Genetics 3
- BIOB 424 Ethical Practice of Science 3
- WRIT 221 Intermediate Tech Writing 3

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

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.