

MICROBIOLOGY UNDERGRADUATE PROGRAM
Program of Study
Degree: BS, Microbiology (Catalog: 2015-16)

I) Communications (13 credits)

- _____ Engl 150 (3) and _____ Engl 250 (3)
_____ Sp Com 212 (3)
_____ Engl 302 (3) or Engl 309 (3) or Engl 314 (3) or Engl 312 (3)
_____ Lib 160 (1)

II) Mathematical Sciences (11-12 credits)

- _____ Stat 101 (4) or _____ Stat 104 (3)

Basic Mathematics

2 semesters with at least one semester of calculus

Suggested options:

- _____ Math 143 (4) Pre-Calc or Math 145 (3) Trig & Math 160(4) Surv Calc
_____ Math 165(4) & Math 166 (4) Calc I&II
_____ Math 181(4) & Math 182 (4) Differential Equations for Life Sciences
_____ Math 165 (4) & Stat 301 (4)

III) Physical Sciences (23-31 credits)

General Chemistry (8 credits)

- _____ Chem 177(4), 177L(1), and Chem 178(3)

Physics (5 or 10 Credits)

- _____ Phys 111 (5) and Phys 112 (5) General (recommended)
_____ Phys 115 (5) Phys for Life Sci. (only if not doing further schooling)

Organic Chemistry (7 credits)

- _____ Chem 331 (3), 331L (1), and 332 (3)

Biochemistry Choose 1 of the following (3-6 credits)

- _____ BBMB 404 (3) and BBMB 405 (3)
_____ BBMB 301 (3)
_____ BBMB 316 (3)

IV) Personal Development, Human Relations, and Global Awareness (Total of 15 credits)

- _____ Three credits in [humanities](#)
_____ Three credits in [social sciences](#)
_____ Three credits in [ethics \(See list\)](#)
_____ Three credits in [international diversity \(See list\)](#)
_____ Three credits in [US diversity \(See list\)](#)

V) Biological Sciences (15 credits)

- _____ Biol 211 (3) and Biol 211L (1)
_____ Biol 212 (3) and Biol 212L (1)
_____ Biol 313 (3) and Biol 313L (1)
_____ Biol 314 (3) or Biol 328 (3)

VI) Microbiology (Total of 31 credits)*

Core Microbiology Courses (16) credits

- _____ F MICRO 110 (1) Orientation
_____ F/S MICRO 302 (3) Biology of Micro
_____ F MICRO 310 (3) Medical Microbiology
_____ S MICRO 320 (4) Molecular and Cellular Bact.
_____ S* MICRO 430 (3) Micro Diversity & Ecology
_____ or S* MICRO 477 (3) Bact-Plant Interactions or
_____ F Micro 456 (3) Mycology
_____ S MICRO 450 (2) Senior Seminar
_____ F MICRO 451 (R) Senior Survey

Core Laboratory Courses (6 Credits)

- _____ F/S MICRO 302L (1) General Micro Lab
_____ F MICRO 310L (1) Medical Micro Lab
_____ F/S MICRO 440 (4) Microbial Genetics & Physiology & Diversity & Ecology Lab

Microbiology Electives – (9 credits required) with no more than 3 credits from laboratory courses

Common Clinical Electives

- _____ S MICRO 353 (3) Intro Parasitology
_____ S MICRO 374 (3) Insects & Our Health
_____ F MICRO 408 (3) Virology
_____ S MICRO 475 (3) Immunology
_____ S MICRO 475L (1) Immunology Lab
_____ F Ent 478 (3) Global Protozoology
_____ F MICRO 586 (3) Medical Bacteriology

Common Environmental Electives

- _____ F* MICRO 410 (3) Insect-Virus Interactions
_____ S* MICRO 430 (3) Micro Diversity & Ecology
_____ F MICRO 456 (3) Mycology
_____ S MICRO 477 (3) Bacteria-Plant interactions
_____ F MICRO 485 (3) Soil Micro Ecology
_____ F MICRO 487 (3) Microbial Ecology

Common Physiology/Genetics Electives

- _____ F* MICRO 402 (3) Microbial Genetics
_____ S* BBMB 403 (3) Microbial Physiology
_____ F* MICRO 410 (3) Insect-Virus Interactions
_____ S* MICRO 430 (3) Micro Diversity & Ecology

Common Food Microbiology Electives

- _____ S MICRO 407 (3) Micro Food Safety
_____ S* MICRO 419 (3) Foodborne Hazards
_____ F MICRO 420 (3) Food Microbiology
_____ F MICRO 421 (3) Food Microbiology Lab
_____ F/S/SS MICRO 490 (1-3) Independent Study

Other courses upon written request & review by the Undergrad Micro Supervisory Committee.

VII) Electives (8-16 credits) Courses to obtain 128 total credit hours

- **Minor in Food Safety**
- **Minor in Emerging Global Diseases**

*F=offered fall semester, S=offered spring semester,
F*/S* = offered alternate fall or spring