MICROBIOLOGY UNDERGRADUATE PROGRAM
Program of Study: Micro & Genetics Major
Degree: BS, Microbiology (Catalog: 2017-2018)

I) Communications (3 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)
_____ Math 160 (4) or Math 165 (4) or Math 181 (4)
_____ Stat 301 (4) or Math 166 (4) or Math 182 (4)

III) Physical Sciences (32 credits)
General Chemistry (8 credits)
_____ Chem 177(4), 177L(1) Gen. Chem I
_____ Chem 178 (3), 178L (1) Gen Chem II

Physics (10 Credits)
_____ Phys 111 (5) Gen. Physics I
_____ Phys 112 (5) Gen. Physics II

Organic Chemistry (8 credits)
_____ Chem 331 (3), 331L (1) Organic Chem I
_____ Chem 332 (3), 332L (1) Organic Chem II

Biochemistry (6 credits)
_____ BBMB 404 (3) Biochemistry I
_____ BBMB 405 (3) Biochemistry II

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)

List available:
http://www.ag.iastate.edu/student/curriculum/

V) Biological Sciences (18 credits)
_____ Biol 211 (3) & Biol 211L (1) Principles of Bio I
_____ Biol 212 (3) & Biol 212L (1) Principles of Bio II
_____ Biol 313 (3) & Biol 313L (1) General Genetics
_____ Biol 315 (3) Evolution

VI) Microbiology (Total of 31 credits)\(\times\)
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) Microb 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 374 (3) Insects & Our Health
_____ F MICRO 408 (3) Virology
_____ S MICRO 475 (3) Immunology
_____ S MICRO 475L (1) Immunology Lab
_____ F MICRO 586 (3) Medical Bacteriology

Common Environmental Electives
_____ F* MICRO 410 (2) Insect-Virus Interactions
_____ S* MICRO 430 (3) Microb Diversity & Ecology
_____ F MICRO 456 (3) Mycology
_____ S MICRO 477 (3) Bacteria-Plant interactions
_____ S MICRO 485 (3) Soil Micro Ecology
_____ S MICRO 487 (3) Microbial Ecology

Common Physiology/Genetics Electives
_____ F* MICRO 402 (3) Microbial Genetics
_____ F* MICRO 410 (2) Insect-Virus Interactions
_____ S* MICRO 430 (3) Microb 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

VII) Courses for Genetics Major (12-13)
_____ F/S GEN 409 (3) Molecular Genetics
_____ F/S GEN 410 (3) Analytical Genetics
_____ F GEN 462 (3) Evol Genetics or
S* EEOB 563 (3) Molec. Phylogenetics
_____ F GEN 322 or GEN 444 or S GEN 349
_____ F GEN 491 (1) Senior Seminar or
MICRO 451 (R) Senior Survey

\(\times\)F=offered fall semester, S=offered spring semester,
F*/S* = offered alternate fall or spring
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