Graduation Requirements for Microbiology Majors at SEBS

- SEBS Core Requirements (39 credits)

- Microbiology Major

A. Introductory Life and Physical Sciences (46 credits)
  01:119:115-116 General Biology (4,4)
  01:119:117 Biological Research Laboratory (2)
  01:160:161-162 General Chemistry (4,4)
  01:160:171 Introduction to Experimentation (1)
  01:640:151 Calculus for Mathematics and Physical Sciences (4)
  01:960:401 Basic Stats for Research (3) (other calculus courses may be substituted)
  01:447:380 Genetics (4)
  01:750:193 - 194 Physics for the Sciences (4,4)* or equivalent

*Students intending to apply to medical school should be aware that many schools require laboratories in organic chemistry and physics.

B. Core Microbiology (44 Credits, including electives)

  11:680:480 Microbial Genetics and Genomics or 11:126:481 Molecular Genetics (3)
  11:680:481 Microbial Physiology (3)
  11:680:491 Microbial Ecology and Diversity (3)
  11:680:494 Applied Microbiology (4)
  11:680:401 Ethics and Issues in Microbiology (1)
  11:680:495 Seminar in Microbiology (1)
  11:115:403 - 404 General Biochemistry
  11:115:413 Experimental Biochemistry (3)

**Microbiology Electives (15) (Semesters Taught)**

*Please note that no more than one course with a grade of D may be used to fulfill the Core Microbiology requirements of the major.

  11:126:407 Comparative Virology (3) *(Fall every other year)*
  11:126:427 Methods in Applications in Molecular Biology (4) *(Fall)*
  11:126:482 Molecular Genetics Laboratory (3) *(Spring)*
  11:126:484 Tools for Bioinformatic Analysis (3) *(Spring)*
  11:126:485 Bioinformatics *(Fall)*
  01:146:328 Human Parasitology (3) *(Fall)*
  01:146:340 Virology (3) *(Fall, even years only)*
  01:146:474 Immunology (3) *(Fall)*
  01:146:475 Laboratory in Immunology (1) *(Spring)*
  11:216:405 Evolution in Infectious Diseases (3) *(Spring)*
11:375:302 Water and Wastewater Treatment (3) (Fall)
11:375:312 Environmental Microbiology Laboratory (2) (Fall)
11:375:411 Environmental Microbiology (3) (Spring)
11:375:453 Soil Ecology (3) (Fall)
11:400:423 Food Microbiology (3) (Spring)
01:447:392 Pathogenic Microbiology (3) (Fall)
01:447:480 Topics in Molecular Genetics (3) (Spring)
11:680:410 Microbiology and Culture of Cheese and Wine (3) (Summer)
11:680:486 Analytical Methods in Microbiology (3) (Spring, even years)
11:680:492 Microbial Ecology Laboratory (3) (Spring, odd years)
11:680:475 Microbiomes and Health (3) (Spring)
11:776:302 General Plant Pathology (3) (Fall)
11:776:400 Fungi in the Environment (3) (Fall)
11:680:497, 498 Research in Microbiology (Fall/Spring/Summer) - One to three credits of research may be substituted for an equal number of credits of elective courses, with the approval of the curriculum coordinator.

C. UNSPECIFIED ELECTIVES (up to 3)