The BS in biology curriculum lays the groundwork for strong scientific training with basic coursework in mathematics, chemistry, and physics, relevant to biology. Students explore the organization and processes of life across broad areas of the field, from molecules and cells through organs and organ systems to populations, ecosystems, and evolution. Students can select advanced electives to specialize in a subdiscipline of biology such as developmental biology, stem cell biology, microbiology, or physiology.

Program Requirements
Complete all courses listed below unless otherwise indicated. Also complete any corequisite labs, recitations, clinicals, or tools courses where specified and complete any additional courses needed beyond specific college and major requirements to satisfy graduation credit requirements.

University-Wide Requirements
All undergraduate students are required to complete the University-Wide Requirements (http://catalog.northeastern.edu/undergraduate/university-academics/university-wide-requirements).

NUpath Requirements
All undergraduate students are required to complete the NUpath Requirements (http://catalog.northeastern.edu/undergraduate/university-academics/nupath).

Biology Major Requirements
Introduction to College
BIOL 1000 Biology at Northeastern 1

Experiential Learning Introduction
EESC 2000 Professional Development for Co-op 1

Required Biology
Foundations
BIOL 1107 and BIOL 1108 Foundations of Biology and Lab for BIOL 1107 5

Inquiries
BIOL 2299 Inquiries in Biological Sciences 4

Genetics
BIOL 2301 and BIOL 2302 Genetics and Molecular Biology and Lab for BIOL 2301 5

Techniques
BIOL 2309 Biology Project Lab 4

Biochemistry
BIOL 3611 and BIOL 3612 Biochemistry and Lab for BIOL 3611 5

Biology Capstone
BIOL 4701 Biology Capstone 4

Biology Major Electives
Organismal and Population Biology
Complete one of the following: 4-5
BIOL 2321 and BIOL 2322 Microbiology and Lab for BIOL 2321
BIOL 2327 Human Parasitology

EEMB 2302 Ecology and EEMB 2303 Lab for EEMB 2302
EEMB 2400 Introduction to Evolution
EEMB 2616 Invertebrate Zoology and EEMB 2617 Lab for EEMB 2616
EEMB 2618 Vertebrate Zoology and EEMB 2619 Lab for EEMB 2618
EEMB 2700 Marine Biology and EEMB 2701 Lab for EEMB 2700

Intermediate and Advanced Biology
Complete three additional 4- or 5-semester-hour courses from the following:
BIOL 2321 to BIOL 3999
BIOL 4705 Neurobiology of Cognitive Decline
BIOL 4707 Cell and Molecular Biology
BIOL 5000 to BIOL 5999
EEMB 2290 to EEMB 5515
EEMB 5520 to EEMB 5534
EEMB 5548 to EEMB 5569
ENVR 5242 Ancient Marine Life

One of the three intermediate/advanced electives can be a research course:
BIOL 4991 Research
BIOL 4994 Internship
BIOL 4970 Junior/Senior Honors Project 1
BIOL 4971 Junior/Senior Honors Project 2

Supporting Courses
Mathematics
MATH 1251 Calculus and Differential Equations for Biology 1 4

Statistics
ENVR 2500 and ENVR 2501 Biostatistics and Lab for ENVR 2500 5

Chemistry
General Chemistry
CHEM 1211 General Chemistry 1 and Lab for CHEM 1211 5
CHEM 1214 General Chemistry 2 and Lab for CHEM 1214 5

Organic Chemistry
CHEM 2311 Organic Chemistry 1 and Lab for CHEM 2311 5
CHEM 2313 Organic Chemistry 2 and Lab for CHEM 2313 5

Physics
Physics 1
Complete one of the following lecture/lab pairs. PHYS 1145/PHYS 1146 is recommended:
PHYS 1145 Physics for Life Sciences 1 and Lab for PHYS 1145
Biology, BS

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<tr>
<td>PHYS 1151</td>
<td>Physics for Engineering 1</td>
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<td>and PHYS 1152</td>
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<td>and PHYS 1153</td>
<td>and Interactive Learning Seminar for PHYS 1151</td>
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<tr>
<td>PHYS 1161</td>
<td>Physics 1</td>
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<td>and PHYS 1162</td>
<td>and Lab for PHYS 1161</td>
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Physics 2
Complete one of the following lecture/lab pairs. PHYS 1147/PHYS 1148 is recommended:

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<td>and PHYS 1148</td>
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<td>PHYS 1155</td>
<td>Physics for Engineering 2</td>
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<td>and PHYS 1166</td>
<td>and Lab for PHYS 1165</td>
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Biology Major Credit/GPA Requirement
Complete 81 semester hours in the major with a cumulative GPA of 2.000.

Due to overlap in course content, double majoring in biology and cell and molecular biology, biology and biochemistry, biology and behavioral neuroscience, or biology and marine biology is not permitted.

Program Requirement
136 total semester hours required