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

Inquiries
BIOL 2299 Inquiries in Biological Sciences 4

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

Techniques
BIOL 2309 Biology Project Lab 4

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

Biology Capstone
BIOL 4701 Biology Capstone 4

Biology Major Electives
Organismal and Population Biology
Complete one of the following: 4-5

BIOL 2321 Microbiology and Lab for BIOL 2321
and BIOL 2322
BIOL 2327 Human Parasitology

Intermediate and Advanced Biology
Complete three additional 4– or 5-semester-hour courses from the following: 12-15

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

Supporting Courses

Mathematics
MATH 1251 Calculus and Differential Equations for Biology 1 4

Statistics
ENVR 2500 Biostatistics and Lab for ENVR 2500 5

Chemistry
General Chemistry
CHEM 1211 General Chemistry 1 and CHEM 1212 Lab for CHEM 1211 5
CHEM 1214 General Chemistry 2 and CHEM 1215 Lab for CHEM 1214 5

Organic Chemistry
CHEM 2311 Organic Chemistry 1 and CHEM 2312 Lab for CHEM 2311 5
CHEM 2313 Organic Chemistry 2 and CHEM 2314 Lab for CHEM 2313 5

Physics

Physics 1
Complete one of the following lecture/lab pairs. PHYS 1145/PHYS 1146 is recommended: 5

PHYS 1145 Physics for Life Sciences 1 and Lab for PHYS 1145

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

Physics

Physics 1
Complete one of the following lecture/lab pairs. PHYS 1145/PHYS 1146 is recommended: 5

PHYS 1145 Physics for Life Sciences 1 and Lab for PHYS 1145
Biology, BS

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<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<td>Physics for Engineering 1 and Lab for PHYS 1151 and Interactive Learning Seminar for PHYS 1151</td>
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<td>PHYS 1161 and PHYS 1162</td>
<td>Physics 1 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>Physics for Life Sciences 2 and Lab for PHYS 1147</td>
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<tr>
<td>PHYS 1155 and PHYS 1156 and PHYS 1157</td>
<td>Physics for Engineering 2 and Lab for PHYS 1155 and Interactive Learning Seminar for PHYS 1155</td>
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<tr>
<td>PHYS 1165 and PHYS 1166</td>
<td>Physics 2 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