# Biology, B.S. - Marine Biology Option

## Major in Biology, BS

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td></td>
<td><strong>CORE COURSES</strong></td>
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<tr>
<td></td>
<td>Foundations of Biology - See Appendix 1</td>
<td></td>
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<tr>
<td>BIOL 211</td>
<td>Concepts of Zoology</td>
<td></td>
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<tr>
<td>BIOL 221</td>
<td>Concepts of Botany</td>
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<tr>
<td>BIOL 343</td>
<td>Principles of Ecology &amp; Evolution</td>
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<td>BIOL 362</td>
<td>Cell and Developmental Biology</td>
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<tr>
<td>BIOL 364</td>
<td>Foundations of Genetics &amp; Molecular Biology</td>
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<td><strong>Option in Marine Biology - See separate block</strong></td>
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<td></td>
<td><strong>Total Hours</strong></td>
<td>24</td>
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## Appendix 1. Foundations of Biology

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<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td></td>
<td>Foundations of Biology C- or Higher</td>
<td>4</td>
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<tr>
<td>BIOL 101</td>
<td>Foundations of Biology</td>
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## Concentration in Marine Biology

Students majoring in Marine Biology are encouraged to consider completing a minor in Oceanography and, in consultation with their advisor, to take further courses in mathematics.

### REQUIRED MARINE BIOLOGY COURSES

Required Marine Biology (4 credits) - Choose 1 of the following options 1-2:

1. **Option 1. Marine Biology**
   - BIOL 291 | Marine Biology |
2. **Option 2. Coastal Marine Biology and Problem Solving Marine Biol**
   - BIOL 290 | Coastal Marine Biology |
   - BIOL 292 | Problem Solving in Marine Biol |
   - BIOL 295 | Marine Invertebrates |
   - BIOL 375 | Biometry |
   - BIOL 396 | Ichthyology |
3. **Biological Oceanography - Choose 1 of the following:**
   - BIOL 495 | Biological Oceanography |
   - ESCI 465 | Biological Oceanography |
4. **Seminar in Marine Biology**
   - BIOL 472 | Seminar In Biology |

### ELECTIVES

Undefined - Choose 5 hours from:

- Any 3-level BIOL course(s)
- Any 4-level BIOL course(s)

Note: This requirement may not be satisfied with BIOL 340 or BIOL 390.

In consultation with your advisor, choose additional courses at the 300-level or higher and approved for Biology majors to bring total credits in major to the minimum 47.

### MARINE SCIENCE FIELD COURSES

Undefined - Choose 2 classes totaling at least 6 hours from:

- BIOL 293 | Coastal Ornithology |
- BIOL 294 | Coral Reef Ecology |
- BIOL 295 | Marine Invertebrates |
- BIOL 296 | Marine Ecology |
- BIOL 392 | Marine Mammals |
- BIOL 397 | Marine Botany |

At least 2 courses (6 credits) of a student’s biology courses (required marine biology or biology electives) must be taken at a marine field site.

### Total Hours

- **Core Courses**: 24 hours
- **Appendix 1**: 4 hours
- **Concentration in Marine Biology**: 4 hours
- **Electives & Field Courses**: 6 hours

### Req Related for Biology, BS

For Biology Majors the G2 block of the Liberal Arts Core will be fulfilled by your required related coursework.

### Chemistry and Earth Sciences

A C- or higher in CHEM 111 and 112 is a pre-requisite for CHEM 235. A C- or higher in CHEM 231 is a pre-requisite for CHEM 232. Students interested in graduate or professional school should take CHEM 231 and 232.

- Introduction to Oceanography: 4 hours
  - ESCI 261 | Introduction to Oceanography |
- Organic Chemistry - Choose 1 of the following options 1-2: 4-8 hours
  1. **Option 1. Organic Chemistry I and II**
     - CHEM 231 | Organic Chemistry 1 |
     - CHEM 232 | Organic Chemistry 2 |
  2. **Option 2. Short Course in Organic Chemistry**
     - CHEM 235 | Organic Chemistry |
- Environmental Chem or Chem Oceanography - Choose 1 of the following: 3-4 hours
  - CHEM 375 | Environmental Chemistry |
  - ESCI 363 | Chemical Oceanography |

### Mathematics for Marine Biology

Calculus for Mgt, Calculus I or Honors Calculus - Choose 1 of the following: 4-5 hours

- MATH 151 | Calculus for Management |
- MATH 161 | Calculus 1 |
- MATH 163H | Honors Calculus 1 |

### Physics

Undefined - Choose 1 of the following options 1-2: 8-10 hours

- **Option 1. Physics with Algebra**
  - PHYS 131 | Physics 1 with Algebra |
  - PHYS 132 | Physics 2 with Algebra |
- **Option 2. Physics with Calculus**
  - PHYS 231 | Physics 1 with Calculus |
  - PHYS 232 | Physics 2 with Calculus |

### Total Hours

- **Chemistry and Earth Sciences**: 16-19 hours
- **Mathematics for Marine Biology**: 4-5 hours
- **Physics**: 8-10 hours
- **Total Hours**: 31-39 hours