# BIOLOGY, B.S. - MARINE BIOLOGY OPTION

## Major in Biology, BS

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE COURSES (C- or higher required)</td>
<td>0</td>
<td></td>
</tr>
<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>
<td></td>
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<tr>
<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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Option in Marine Biology - See separate block

| Total Hours | 0     |

## Appendix 1. Foundations of Biology

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL 101</td>
<td>Foundations of Biology</td>
<td>0</td>
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</tbody>
</table>

| Total Hours | 0     |

## 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:

- **Option 1. Marine Biology**
  - BIOL 291 | Marine Biology
  - BIOL 293 | Coastal Ornithology
  - BIOL 294 | Coral Reef Ecology
  - BIOL 295 | Marine Invertebrates
  - BIOL 296 | Marine Ecology
  - BIOL 297 | Marine Botany
  - BIOL 392 | Marine Mammals
  - BIOL 397 | Marine Vertebrates

- **Option 2. Coastal Marine Biology and Problem Solving Marine Biology**
  - BIOL 290 | Coastal Marine Biology
  - BIOL 292 | Problem Solving in Marine Biology
  - BIOL 295 | Marine Invertebrates
  - BIOL 375 | Biometry
  - BIOL 396 | Ichthyology
  - BIOL 397 | Marine Botany
  - BIOL 472 | Seminar in Marine Biology

### Biological Oceanography - Choose 1 of the following:

- BIOL 495 | Biological Oceanography
- ESCI 465 | Biological Oceanography

### Seminar in Marine Biology

- BIOL 472 | Seminar in Marine Biology

### ELECTIVES

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

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 297 | Marine Botany
- BIOL 392 | Marine Mammals
- BIOL 397 | Marine Vertebrates
- Any course(s) with DWLOCATION = W

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 | 25     |

## 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.

- ESCI 261 | Introduction to Oceanography
- CHEM 111 | Introductory Chemistry 1
- CHEM 112 | Introductory Chemistry 2

Organic Chemistry - Choose 1 of the following options 1-2:

- **Option 1. Organic Chemistry I and II**
  - CHEM 231 | Organic Chemistry 1
  - CHEM 232 | Organic Chemistry 2
  - CHEM 235 | Organic Chemistry

- **Option 2. Short Course in Organic Chemistry**
  - ESCI 363 | Chemical Oceanography

Environmental Chem or Chem Oceanography - Choose 1 of the following:

- 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:

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

### PHYSICS

Choose 1 of the following options 1-2:

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

Total Hours | 4-8     |