### Lower Division Requirements

#### Calculus:
- MATH 16A or 11A or MATH 19A
- MATH 16B or 11B or MATH 19B

#### General Chem:
- CHEM 3A: General Chemistry
- CHEM 4A & 4AL: General Chemistry w/ Lab
- CHEM 3B & 3BL: General Chemistry w/ Lab

#### Biology:
- BIOL 20A: Cell and Molecular Bio (FWS)
- BIOL 20B: Development and Physiology (FWS)
- BIOL 20C: Ecology & Evolution (FWS)
- BIOL 20L: Experimental Bio Lab (FWS)

#### Organic Chem:
- CHEM 8A: Organic Chemistry (FW)
- CHEM 8B: Organic Chemistry (WS)
- CHEM 8L: Organic Chemistry Lab (FW)

#### Statistics:
- STAT 5: Statistics (FWS)
- STAT 7: Stats for the Biological, Environmental, and Health Sciences (FWS)

#### Physics:
- PHYS 6A: Introductory Physics I (FW)
- PHYS 6B: Introductory Physics II (FW)
- PHYS 6L: Introductory Physics I Lab (FWS)

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### Upper Division Requirements

**CORE COURSES:**

- BIOL 105: Genetics (FWS)

**UPPER DIVISION ELECTIVES:**

- BIOL 100: Biochemistry (WS)
- BIOL 101: Molecular Biology (FS)

- BIOL 100A: Biochemistry & Molecular Bio (F)
- BIOL 100B: Biochemistry & MB (W)
- BIOL 100C: Biochemistry & MB (S)

- BIOL 101L: Molecular Biology Lab (FWS)

**CUREs Lab:**

- BIOL 102L: Toxic RNA Lab II
- BIOL 107L: Synthetic Gene Regulation Lab
- BIOL 122K: Phage Biology Lab
- BIOL 160K: Biochemistry Research Laboratory
- BIOL 161K: Chemical Biology Research Laboratory

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Notes:
- After passing the above qualification courses shaded green with a C or better, you can submit your request to declare your major via your my.ucsc.edu portal. All qualification courses must be completed by the end of the 5th quarter and students must petition to declare by the 6th quarter deadline.
- Declared

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Course offerings are subject to change.
**DC Requirement:** 2 OF THE FOLLOWING BIOE COURSES: OR 1 OF THE FOLLOWING 5-UNIT LABS: OR CUREs Lab (SPRING QUARTER ONLY)

<table>
<thead>
<tr>
<th>BIOE 108: Marine Ecology*</th>
<th>BIOL 105L: Eukaryotic Genetics Lab</th>
<th>BIOE 108L: Marine Ecology Field Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOE 114L: Herpetology/Lab**</td>
<td>BIOL 106L: Eukaryotic Genetic Engineering Lab</td>
<td>BIOL 106L: Yeast Molecular Genetics Lab</td>
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<tr>
<td>BIOE 117: Systematic Botany**</td>
<td>BIOL 109L: Yeast Molecular Genetics Lab</td>
<td>BIOE 109L: Marine Botany/Lab**</td>
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<tr>
<td>BIOE 120L: Marine Botany/Lab**</td>
<td>BIOL 110L: Eukaryotic Molecular Biology Lab</td>
<td>BIOL 110L: Large Marine Vertebrae Field Course</td>
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<tr>
<td>BIOE 122L: Invertebrate Zoology/Lab**</td>
<td>BIOL 112L: Developmental Biology Lab</td>
<td>CUREs Lab (SPRING QUARTER ONLY)</td>
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<tr>
<td>BIOE 122L: Ichthyology/Lab**</td>
<td>BIOL 112L: Environmental Phage Biology Lab</td>
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<tr>
<td>BIOE 126: Marine Mammals*</td>
<td>BIOL 112L: Large Marine Vertebrates Field Course</td>
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<tr>
<td>BIOE 137: Molecular Ecology**</td>
<td>BIOL 115L: Eukaryotic Molecular Biology Lab</td>
<td>BIOL 115L: Large Marine Vertebrates Field Course</td>
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<tr>
<td>BIOE 141L: Behavioral Ecology Field Course</td>
<td>BIOL 116L: Yeast Molecular Genetics Lab</td>
<td>BIOL 117L: Systematic Botany</td>
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<tr>
<td>BIOE 145: Plant Ecology</td>
<td>CHEM 160L: Biochemistry Research Laboratory</td>
<td>BIOL 117L: Systematic Botany</td>
</tr>
<tr>
<td>BIOE 145L: Field Methods in Plant Ecology</td>
<td>CHEM 161L: Chemical Biology Research Laboratory</td>
<td>BIOE 117L: Systematic Botany</td>
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<tr>
<td>BIOE 150L: Ecological Field Methods</td>
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<td>BIOE 117L: Systematic Botany</td>
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<tr>
<td>BIOE 151B/ENV 109B: Ecology and Conservation in Practice Supercourse: Ecological Field Methods Lab</td>
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<td>BIOE 117L: Systematic Botany</td>
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<tr>
<td>BIOE 153C: Disciplinary Communication for Biologists</td>
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<td>BIOE 117L: Systematic Botany</td>
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<tr>
<td>BIOE 155L: Marine Ecology Lab</td>
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<td>BIOE 117L: Systematic Botany</td>
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<tr>
<td>BIOE 159A: Marine Ecology Field Quarter: Marine Ecology with Lab</td>
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<td>BIOE 117L: Systematic Botany</td>
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<tr>
<td>BIOE 161L: Kelp Forest Ecology Lab</td>
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<td>BIOE 117L: Systematic Botany</td>
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<tr>
<td>BIOE 171: Disciplinary Communication for Biologists</td>
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<td>BIOE 117L: Systematic Botany</td>
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<tr>
<td>BIOE 172: Population Genetics*</td>
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<td>BIOE 117L: Systematic Botany</td>
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</tbody>
</table>

*For 2-credit BIOE lab courses listed above that are taken concurrently with 5-credit lectures, both courses must be passed to receive one half of the DC requirement. BIOE 117 and BIOE 137 require concurrent enrollment in 2-credit labs, BIOE 117L and BIOE 137L, but these are not part of the DC requirement.

*Shaded courses below count for both the DC and Upper Div Elective requirements

**COMPREHENSIVE REQUIREMENT IS SATISFIED BY COMPLETING TWO UPPER-DIVISION LAB OR FIELD COURSES (BIOL or BIOE course identified with an “L”).**

<table>
<thead>
<tr>
<th>BIOL 101L OR BIOL 102L OR BIOL 107L OR BIOL 122L OR CHEM 160K OR CHEM 161K</th>
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</table>

One upper-division BIOE lab/field course (from above DC lists only)

Please refer to your 2024-25 UCSC General Catalog for more information or clarification.