## MCD Biology BS Requirements

Course offerings are subject to change.

### Lower Division Requirements

<table>
<thead>
<tr>
<th>Subject</th>
<th>Courses</th>
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<tbody>
<tr>
<td>Calculus</td>
<td>MATH 16A or 15A or MATH 19A or MATH 16B or 11B or MATH 19B</td>
</tr>
<tr>
<td>General Chem.</td>
<td>CHEM 3A: General Chemistry (or) CHEM 4A&amp;4AL: Advanced General Chemistry: Molecular Structure and Reactivity wLab</td>
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<td>CHEM 3B&amp;3BL: General Chemistry wLab or CHEM 4B&amp;4BL: Advanced General Chemistry: Molecular Structure and Reactivity wLab</td>
</tr>
<tr>
<td>Biology</td>
<td>BIOL 20A: Cell and Molecular Bio (FWS) or BOE 20B: Development and Physiology (FWS) or BOE 20C: Ecology &amp; Evolution (FWS) or BIOL 20L: Experimental Bio Lab (FWS)</td>
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<tr>
<td>Organic Chem.</td>
<td>CHEM 8A: Organic Chemistry &amp; (or) CHEM 8B: Organic Chemistry (or) CHEM 8L: Organic Chem Lab (FWS)</td>
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<tr>
<td>Statistics</td>
<td>STAT 5: Statistics (or) STAT 7: Stats for the Biological, Environmental, and Health Sciences (FWS)</td>
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<td>STAT 7L: Stats Lab (FWS)</td>
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<tr>
<td>Physics</td>
<td>PHYS 6A: Introductory Physics I &amp; (or) PHYS 6B: Introductory Physics I Lab (FWS)</td>
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<td>PHYS 6L: Introductory Physics II (FWS) or PHYS 6L: Introductory Physics II Lab (FWS)</td>
</tr>
</tbody>
</table>

After passing the above qualification courses shaded green with a C or better, you can submit a Petition to Declare. All qualification courses must be completed by the end of the 5th quarter and students must petition to declare by the 6th quarter deadline.

### Upper Division Courses

Complete the major with the following:

**CORE COURSES:**

- BIOL 105: Genetics (FWS)
- BIOL 100: Biochemistry (WS)
- BIOL 101: Molecular Biology (FS)
- BIOL 104L: Coronavirus Bioinformatics Lab
- BIOL 110: Cell Biology (FWS)
- BIOL 120: Developmental Biology (S)

**ELECTIVES: 2 UPPER DIVISION ELECTIVES AT LEAST 1 MUST BE A BIOL COURSE**

- BOE 109: Evolution
- BOE 135L: Plant Physiologies/Lab
- BIOL 111A: Immunology
- BIOL 112: Virology
- BIOL 114: Cancer Cell Biology
- BIOL 115: Eukaryotic Molecular Biology
- BIOL 117: Global Health & Neglected Diseases
- BIOL 118: Principles of Human Genetics
- BIOL 124: Optical Imaging for Biological Research
- BIOL 125: Intro to Neuroscience
- BIOL 127: Mechanisms of Neurodegenerative Disease
- BIOL 130: Human Physiology
- BME 110: Computational Biology Tools
- BME 130: Genomes
- BME 160: Research Programming for Biologists & Biochemists
- BME 178: Stem Cell Biology
- METX 100: Introduction To Microbiology
- METX 133: Medical Microbiology
- METX 140: Molecular Biology And Microbial Genetics
- METX 150: Applied and Environmental Microbiology
- PHYS 180: Biophysics

**LAB, 1 LAB COURSE REQUIRED OR COREs Lab (SPRING QUARTER ONLY)**

- BIOL 100L: Biochemistry Lab
- BIOL 100L: Toxic RNA Lab
- BIOL 105L: Eukaryotic Genetics Lab
- BIOL 106L: Eukaryotic Genetic Engineering Lab
- BIOL 109L: Yeast Molecular Genetics Lab
- BIOL 115L: Eukaryotic Molecular Biology Lab
- BIOL 120L: Developmental Biology Lab
- BIOL 121L: Environmental Phage Biology Lab
- BIOL 186L: Undergraduate Research in MCD Biology

**DISCIPLINARY COMMUNICATION & COMPREHENSIVE REQUIREMENT ARE SATISFIED BY COMPLETING ONE 5-UNIT LAB COURSE OR COREs LAB FROM THE ABOVE LIST**

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