## MCD Biology BS Requirements (2022-23)

Course offerings are subject to change.

### Lower Division Requirements

<table>
<thead>
<tr>
<th>Category</th>
<th>Course Offerings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus</td>
<td>MATH 11A (FWS) or MATH 19A (FWS) &amp; MATH 11B (FWS) or MATH 19B (FWS)</td>
</tr>
<tr>
<td>General Chem</td>
<td>CHEM 1A: General Chemistry (FWS) &amp; CHEM 1B: General Chemistry (FWS) &amp; CHEM 1C: General Chemistry (FWS) &amp; CHEM 1N: General Chem Lab (FWS)</td>
</tr>
<tr>
<td>Biology</td>
<td>BIOD 20A: Cell and Molecular Bio (FWS) &amp; BIOC 20B: Development and Physiology (FWS) &amp; BIOC 20C: Ecology &amp; Evolution (FWS) &amp; BOD 20L: Experimental Bio Lab (FWS)</td>
</tr>
<tr>
<td>Statistics</td>
<td>STAT 5: Statistics (FWS) or STAT 7: Stats for the Biological, Environmental, and Health Sciences (FWS) &amp; STAT 7L: Stats Lab (FWS)</td>
</tr>
<tr>
<td>Physics</td>
<td>PHYS 6A: Introductory Physics I (FWS) or PHYS 6B: Introductory Physics II (WS) or PHYS 6C: Introductory Physics III (FS)</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:

- BIOD 105: Genetics (FWS)
- BIOD 100: Biochemistry (WS) & BIOD 101: Molecular Biology (FS)

**Note that you must complete the entire series of one or the other:** no mixing and matching

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

- BIOD 101L: Molecular Biology Lab (FWS)
- BIOD 102L: Toxic RNA Lab II (W)
- BIOD 107L: Synthetic Gene Regulation Lab II (W)

- BIOD 110: Cell Biology (FWS)
- BIOD 104L: Coronavirus Bioinformatics Lab (F)

#### ELECTIVES: 3 UPPER DIVISION ELECTIVES (ONLY ONE OF WHICH MAY BE A 3-UNIT COURSE: BIOD 112, 116 OR 117)

- BIOD 110: Evolution
- BIOD 115L: Plant Physiology/Lab
- BIOD 111A: Immunology
- BIOD 111B: Immunology II
- BIOD 112: Virology
- BIOD 114: Cancer Cell Biology
- BIOD 115: Eukaryotic Molecular Biology
- BIOD 116: Advanced Topics in Cell Biology
- BIOD 117: Global Health & Neglected Diseases
- BIOD 118: Principles of Human Genetics
- BIOD 120: Developmental Biology
- BIOD 125: Intro to Neuroscience
- BIOD 130: Human Physiology
- BIOD 140: The RNA World
- BME 110: Computational Biology Tools
- BME 150: Genomics
- BME 160: Research Programming for Biologists & Biochemists
- BME 178: Stem Cell Biology
- METX 100: Introduction To Microbiology OR METX 119: Microbiology
- METX 140: Molecular Biology And Microbial Genetics
- PHYS 180: Biophysics

### LAB: 1 LAB COURSE REQUIRED

- BIOD 100L: Biochemistry Lab
- BIOD 103L: Toxic RNA Lab II
- BIOD 105L: Eukaryotic Genetics Lab
- BIOD 106L: Eukaryotic Genetics Engineering Lab
- BIOD 108L: Synthetic Gene Regulation Lab III
- BIOD 109L: Yeast Molecular Genetics Lab
- BIOD 115L: Eukaryotic Molecular Biology Lab
- BIOD 120L: Developmental Biology Lab
- BIOD 121L: Environmental Phage Biology Lab
- BIOD 186L: Undergraduate Research in MCD Biology
- METX 119L: Microbiology Lab

DISCIPLINARY COMMUNICATION & SENIOR EXIT REQUIREMENTS ARE SATISFIED BY COMPLETING ONE 5-UNIT LAB COURSE FROM THE ABOVE LIST.

- DC/SENIOR EXIT COMPLETE
Please refer to your 2022-23 UCSC General Catalog for more information or clarification.