

## MCD Biology BS Requirements

Course offerings are subject to change.

### Lower Division Requirements

Calculus:	<input type="checkbox"/> MATH 11A (FWS) or MATH 19A (FWS)	&	<input type="checkbox"/> MATH 11B (FWS) or MATH 19B (FWS)	
General Chem:	<input type="checkbox"/> CHEM 3A: General Chemistry (FW) <input type="checkbox"/> CHEM 3B&3BL: General Chemistry w/Lab (FWS) <input type="checkbox"/> CHEM 3C&3CL: General Chemistry w/Lab (FS)	OR	<input type="checkbox"/> CHEM 4A&4AL: Advanced General Chemistry: Molecular Structure and Reactivity w/Lab <input type="checkbox"/> CHEM 4B&4BL: Advanced General Chemistry: Molecular Structure and Reactivity w/Lab	
Biology	<input type="checkbox"/> BIOL 20A: Cell and Molecular Bio (FWS)	&	<input type="checkbox"/> BIOE 20B: Development and Physiology (FWS)	& <input type="checkbox"/> BIOE 20C: Ecology & Evolution (FWS) & <input type="checkbox"/> BIOL 20L: Experimental Bio Lab (FWS)
Organic Chem:	<input type="checkbox"/> CHEM 8A: Organic Chemistry & (FW) <input type="checkbox"/> CHEM 8L: Organic Chem Lab (FW)	&	<input type="checkbox"/> CHEM 8B: Organic Chemistry (WS)	
Statistics:	<input type="checkbox"/> STAT 5: Statistics (FWS)	OR	<input type="checkbox"/> STAT 7: Stats for the Biological, Environmental, and Health Sciences (FWS) & <input type="checkbox"/> STAT 7L: Stats Lab (FWS)	
Physics:	<input type="checkbox"/> PHYS 6A: Introductory Physics I & (FWS) <input type="checkbox"/> PHYS 6L: Introductory Physics 1 Lab (FWS)	&	<input type="checkbox"/> PHYS 6B: Introductory Physics II (FWS)	& <input type="checkbox"/> PHYS 6C: Introductory Physics III (FW)

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.

Declared

### Upper Division Courses

Complete the major with the following:

#### CORE COURSES:

<input type="checkbox"/> BIOL 105: Genetics (FWS)				
<input type="checkbox"/> BIOL 100: Biochemistry (WS)	&	<input type="checkbox"/> BIOL 101: Molecular Biology (FS)		<b>* Note that you must apply to enroll in BIOC 100A and complete the entire series of one or the other: no mixing and matching</b>
<b>OR</b>				
<input type="checkbox"/> BIOC 100A: Biochemistry & Molecular Bio (F)	&	<input type="checkbox"/> BIOC 100B: Biochemistry & MB (W)	&	<input type="checkbox"/> BIOC 100C: Biochemistry & MB (S)
<input type="checkbox"/> BIOL 101L: Molecular Biology Lab (FWS)	OR	<input type="checkbox"/> CUREs Lab: BIOL 102L: Toxic RNA Lab /BIOL 107L: Synthetic Gene Regulation Lab/BIOL 122K: Phage Biology Lab (W)		
<input type="checkbox"/> BIOL 104L: Coronavirus Bioinformatics Lab				
<input type="checkbox"/> BIOL 110: Cell Biology (FWS)				
<input type="checkbox"/> BIOL 120: Developmental Biology (S)				

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

- BIOE 109: Evolution
- BIOE 135/L: Plant Physiology/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 CUREs Lab (SPRING QUARTER ONLY)

- |                                                                           |                                                                   |
|---------------------------------------------------------------------------|-------------------------------------------------------------------|
| <input type="checkbox"/> BIOL 100L: Biochemistry Lab                      | <input type="checkbox"/> BIOL 103L: Toxic RNA Lab                 |
| <input type="checkbox"/> BIOL 105L: Eukaryotic Genetics Lab               | <input type="checkbox"/> BIOL 108L: Synthetic Gene Regulation Lab |
| <input type="checkbox"/> BIOL 106L: Eukaryotic Genetic Engineering Lab    | <input type="checkbox"/> BIOL 122L: Phage Biology Lab             |
| <input type="checkbox"/> BIOL 109L: Yeast Molecular Genetics Lab          |                                                                   |
| <input type="checkbox"/> BIOL 115L: Eukaryotic Molecular Biology Lab      |                                                                   |
| <input type="checkbox"/> BIOL 120L: Developmental Biology Lab             |                                                                   |
| <input type="checkbox"/> BIOL 121L: Environmental Phage Biology Lab       |                                                                   |
| <input type="checkbox"/> BIOL 186L: Undergraduate Research in MCD Biology |                                                                   |
| <input type="checkbox"/> METX 100L: Microbiology Lab                      |                                                                   |

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

DC/SENIOR EXIT COMPLETE

Please refer to your [2023-24 UCSC General Catalog](#) for more information or clarification