

**MCD Biology BS (2020-21)**

\*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 1A: General Chemistry (FWS)	&	<input type="checkbox"/> CHEM 1B: General Chemistry (FWS)	&	<input type="checkbox"/> CHEM 1C: General Chemistry & (FWS) <input type="checkbox"/> CHEM 1N: General Chem Lab (FWS)		
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) OR BIOL 102L: Toxic RNA Lab I
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 I Lab (FWS)	&	<input type="checkbox"/> PHYS 6B: Introductory Physics II (WS)	OR	<input type="checkbox"/> PHYS 6C: Introductory Physics III (FS)		

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:** BIOL 105: Genetics (FWS) BIOL 100: Biochemistry (WS) &  BIOL 101: Molecular Biology (FS)

OR

 BIOE 100A: Biochemistry & Molecular Bio (F) &  BIOE 100B: Biochemistry & MB (W) &  BIOE 100C: Biochemistry & MB (S) BIOL 101L: Molecular Biology Lab (FWS) OR  BIOL 102L: Toxic RNA Lab I BIOL 110: Cell Biology (FW)**ELECTIVES: 3 UPPER DIVISION ELECTIVES (ONLY ONE OF WHICH MAY BE A 3-UNIT COURSE: BIOL 112, 116 OR 117)**

- BIOE 100C: Biochemistry
- BIOE 109: Evolution
- BIOE 135/L: Plant Physiology/Lab
- BIOL 111A: Immunology
- BIOL 111B: Immunology
- BIOL 112: Virology
- BIOL 114: Cancer Cell Biology
- BIOL 115: Eukaryotic Molecular Biology
- BIOL 116: Advanced Topics in Cell Biology
- BIOL 117: Global Health & Neglected Diseases
- BIOL 118: Principles of Human Genetics
- BIOL 120: Developmental Biology
- BIOL 125: Intro to Neuroscience
- BIOL 126: Advanced Molecular Neuroscience
- BIOL 127: Mechanisms of Neurodegenerative Diseases
- BIOL 128: Developmental Neurobiology
- BIOL 130: Human Physiology
- BIOL 140: The RNA World
- BME 110: Computational Biology Tools
- BME 130: Genomes
- BME 160: Research Programming for Biologists & Biochemists
- BME 178: Stem Cell Biology
- METX 119: Microbiology
- PHYS 180: Biophysics

**LAB: 1 LAB COURSE REQUIRED**

- BIOL 100L: Biochemistry Lab
- BIOL 103L: Toxic RNA Lab II
- 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
- 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 COMPLETEPlease refer to your [2020-21 UCSC General Catalog](#) for more information or clarification