

## MCD Biology BS Requirements (2022-23)

Course offerings are subject to change.

### Lower Division Requirements

<b>Calculus:</b>	<input type="checkbox"/> MATH 11A (FWS) or MATH 19A (FWS)	&	<input type="checkbox"/> MATH 11B (FWS) or MATH 19B (FWS)		
<b>General Chem:</b>	<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)
<b>Biology</b>	<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)
<b>Organic Chem:</b>	<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)		<b>OR</b> BIOL 102J: Toxic RNA Lab I (F) <b>OR</b> BIOL 107J: Synthetic Gene Regulation Lab I (F)
<b>Statistics:</b>	<input type="checkbox"/> STAT 5: Statistics (FWS)	<b>OR</b>	<input type="checkbox"/> STAT 7: Stats for the Biological, Environmental, and Health Sciences & (FWS) <input type="checkbox"/> STAT 7L: Stats Lab (FWS)		
<b>Physics:</b>	<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)	<b>OR</b>	<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**

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

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

BIOL 101L: Molecular Biology Lab (FWS) **OR**  BIOL 102L: Toxic RNA Lab II (W) **OR**  BIOL 107L: Synthetic Gene Regulation Lab II (W)

BIOL 110: Cell Biology (FWS)

BIOL 104L: Coronavirus Bioinformatics Lab (F)

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

- BIOE 109: Evolution
- BIOE 135/L: Plant Physiology/Lab
- BIOL 111A: Immunology
- BIOL 111B: Immunology II
- 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 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 100: Introduction To Microbiology **OR**  METX 119: Microbiology
- METX 140: Molecular Biology And Microbial Genetics
- 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 108L: Synthetic Gene Regulation Lab III
- 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 COMPLETE

Please refer to your <a href="#">2022-23 UCSC General Catalog</a> for more information or clarification																								
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