# MCD Biology BS Requirements (2021-22)

Course offerings are subject to change.

## Lower Division Requirements

### Calculus:
- MATH 11A (FWS) or MATH 1BA (FWS)
- MATH 11B (FWS) or MATH 1BB (FWS)

### General Chem:
- CHEM 1A: General Chemistry (FWS)
- CHEM 1B: General Chemistry (FWS)
- CHEM 1C: General Chemistry & (FWS)

### Biology:
- BIOL 20A: Cell and Molecular Bio (FWS)
- BIOE 20B: Development and Physiology (FWS)
- BIOL 20C: Ecology & Evolution (FWS)
- BIOL 20L: Experimental Bio Lab (FWS)

### Organic Chem:
- CHEM 8A: Organic Chemistry & (FW)
- CHEM 8B: Organic Chemistry (WS)
- BIOL 102J: Toxic RNA Lab I (F)
- CHEM 8L: Organic Chem Lab (FW)
- BIOL 107J: Synthetic Gene Regulation Lab I (F)

### Statistics:
- STAT 5: Statistics (FWS)
- STAT 7: Stats for the Biological, Environmental, and Health Sciences & (FWS)
- STAT 7L: Stats Lab (FWS)

### Physics:
- PHYS 6A: Introductory Physics I & (FWS)
- PHYS 6B: Introductory Physics II (WS)
- PHYS 6C: Introductory Physics III (FS)
- PHYS 6L: Introductory Physics I Lab (FWS)

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)
- BIOL 108: Molecular Biology Lab (FWS)
- BIOL 110: Cell Biology (FW)
- BIOL 102L: Toxic RNA Lab II (W)
- BIOL 107L: Synthetic Gene Regulation Lab II (W)

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

- BIOL 100C: Biochemistry
- BIOL 109: Evolution
- BIOL 105L: Eukaryotic Genetics Lab
- BIOL 106L: Eukaryotic Genetic Engineering Lab
- BIOL 108L: Synthetic Gene Regulation Lab III
- BIOL 112: Virology
- 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 Neurosciences
- BIOL 130: Human Physiology
- BIOL 140: The RNA World
- EHE 110: Computational Biology Tools
- BHE 130: Genomes
- BHE 160: Research Programming for Biologists & Biochemists
- BHE 178: Stem Cell Biology
- METX 100: Introduction To Microbiology
- METX 140: Molecular Biology And Microbial Genetics
- PHYS 180: Biophysics

### LAB: 1 LAB COURSE REQUIRED

- BIOL 103L: Biochemistry Lab
- BIOL 103S: Toxic RNA Lab II
- BIOL 105L: Eukaryotic Genetics Lab
- BIOL 106L: Eukaryotic Genetic Engineering Lab
- BIOL 108L: Synthetic Gene Regulation Lab III
- BIOL 112L: Virology Lab
- BIOL 115L: Eukaryotic Molecular Biology Lab
- BIOL 116L: Advanced Topics in Cell Biology Lab
- BIOL 117L: Global Health & Neglected Diseases Lab
- BIOL 118: Principles of Human Genetics Lab
- BIOL 120L: Developmental Biology Lab
- METX 100L: Introduction To Microbiology
- METX 119L: Microbiology

**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 2021-22 UCSC General Catalog for more information or clarification.