

MCD Biology BS Requirements		Course offerings are subject to change.									
Lower Division Requirements											
Calculus:	☐ MATH 11A or 16A or MATH 19A	&	☐ MATH 11B or 16B or MATH 19B								
General Chem:	☐ CHEM 3A: General Chemistry (FW) ☐ CHEM 3B&3BL: General Chemistry w/Lab (WS) ☐ CHEM 3C&3CL: General Chemistry w/Lab (FS)	OR	☐ CHEM 4A&4AL: Advanced General Chemistry: Molecular Structure and Reactivity w/Lab (F) ☐ CHEM 4B&4BL: Advanced General Chemistry: Molecular Structure and Reactivity w/Lab (W)								
Biology	☐ BIOL 20A: Cell and Molecular Bio (FWS)	&	☐ BIOE 20B: Development and Physiology (FWS)	&	☐ BIOE 20C: Ecology & Evolution (FWS)	&	☐ BIOL 20L: Experimental Bio Lab (FWS)				
Organic Chem:	☐ CHEM 8A: Organic Chemistry & (FW) ☐ CHEM 8L: Organic Chem Lab (FW)	&	☐ CHEM 8B: Organic Chemistry (WS)								
Statistics:	☐ STAT 5: Statistics (FWS)	OR	☐ 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 (FWS)	&	☐ PHYS 6C: Introductory Physics III (FW)						
Physics Lab: Choose 1	☐ PHYS 6L: Introductory Physics I Lab	OR	☐ PHYS 6M: Introductory Physics II Lab	OR	☐ PHYS 6N: Introductory Physics III Lab						
	☐ 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 101L: Molecular Biology Lab (FWS)		OR	☐ CUREs Lab: BIOL 102L: Toxic RNA Lab II /BIOL 107L: Synthetic Gene Regulation Lab/BIOL 122K: Phage Biology Lab (W)/CHEM 160K: Biochemistry Research Laboratory (W)/CHEM 161K: Chemical Biology Research Laboratory (W)								
☐ BIOL 104L: Bioinformatics Lab		OR	☐ BIOL 104A: Human Genetic Variation Laboratory I	OR	☐ BME 110: Computational Biology Tools						
☐ BIOL 110: Cell Biology (FWS) ☐ BIOL 120: Developmental Biology (S)											
ELECTIVES: 2 UPPER DIVISION ELECTIVES - AT LEAST 1 MUST BE A BIOL COURSE											
☐ BIOE 109: Evolution ☐ BIOL 111A: Immunology I ☐ BIOL 111B: Immunology II ☐ 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 130: Genomes ☐ BME 160: Research Programming for Biologists & Biochemists ☐ BME 178: Stem Cell Biology ☐ PHYS 180: Biophysics											
LAB: 1 LAB COURSE REQUIRED		OR	CUREs Lab (SPRING QUARTER ONLY)								
☐ BIOL 100L: Biochemistry Lab			☐ BIOL 103L: Toxic RNA Lab II								
☐ BIOL 105L: Eukaryotic Genetics Lab			☐ BIOL 104B: Human Genetic Variation Laboratory II								
☐ BIOL 106L: Eukaryotic Genetic Engineering Lab			☐ BIOL 108L: Synthetic Gene Regulation Lab III								
☐ BIOL 109L: Yeast Molecular Genetics Lab			☐ BIOL 122L: Phage Biology Lab III								
☐ BIOL 115L: Eukaryotic Molecular Biology Lab			☐ CHEM 160L: Biochemistry Research Laboratory								
☐ BIOL 120L: Developmental Biology Lab			☐ CHEM 161L: Chemical Biology Research Laboratory								
☐ BIOL 121L: Environmental Phage Biology Lab											
☐ BIOL 129L: Neurobiology Lab											
☐ BIOL 186L: Undergraduate Research in MCD Biology											
DISCIPLINARY COMMUNICATION & COMPREHENSIVE REQUIREMENT ARE SATISFIED BY COMPLETING ONE 5-UNIT LAB COURSE OR CUREs LAB FROM THE ABOVE LIST.											
☐ Comprehensive Requirement/DC Lab											
Please refer to the UCSC General Catalog for more information or clarification											