BIOLOGY BS Requirements (2021-22)

Course offerings are subject to change.

Lower Division Courses

Calculus: ☐ MATH 11A (FWS) **or** MATH 19A (FWS) & ☐ MATH 11B (FWS) **or** MATH 19B (FWS)

General Chem: ☐ CHEM 1A: General Chemistry (FWS) & ☐ CHEM 1B: General Chemistry (FWS) & ☐ CHEM 1C: General Chemistry & (FWS)
☐ CHEM 1N: General Chem Lab (FWS)

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)
OR
☐ BIOL 102J: Toxic RNA Lab I (F)
OR
☐ BIOL 107J: Synthetic Gene Regulation Lab I (F)

Organic Chem: ☐ CHEM 8A: Organic Chemistry (FW) & ☐ CHEM 8B: Organic Chemistry (WS)
☐ CHEM 8L: Organic Chemistry Lab (FW)

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 (WS) **OR** ☐ PHYS 6C: Introductory Physics III (FS)
☐ PHYS 6L: Introductory Physics 1 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)
OR
☐ BIOC 100A: Biochemistry & Molecular Bio (F) & ☐ BIOC 100B: Biochemistry & MB (W) & ☐ BIOC 100C: Biochemistry & MB (S)

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

☐ BIOE 107: Ecology (FWS)
☐ BIOE 109: Evolution (FWS)
☐ BIOL 110: Cell Biology (FWS)

ELECTIVES: 3 UPPER DIVISION ELECTIVES (classes shaded below count towards the elective and DC requirements)

☐ BIOC 100C: Biochemistry
☐ BIOE 108: Marine Ecology
☐ BIOE 112/L: Ornithology/Lab
☐ BIOE 114/L: Herpetology/Lab
☐ BIOE 117/L: Systematic Botany/Lab (lab optional)*
☐ BIOE 120/L: Marine Botany/Lab
☐ BIOE 122/L: Invertebrate Zoology/Lab
☐ BIOE 124/L: Mammalogy/Lab
☐ BIOE 127/L: Ichthyology/Lab
☐ BIOE 129/L: Marine Mammals/Lab
☐ BIOE 131/L: Animal Physiology (lab optional)
☐ BIOE 133/L: Exercise Physiology/Lab
☐ BIOE 134/L: Comparative Vertebrate Anatomy/Lab
☐ BIOE 135/L: Plant Physiology/Lab
☐ BIOE 137/L: Molecular Ecology/Lab (lab optional)*
☐ BIOE 139: Mathematical Modeling and Data Science In Ecology and Evolution
☐ BIOE 140: Behavioral Ecology
☐ BIOE 145: Plant Ecology
☐ BIOE 147: Community Ecology
☐ BIOE 149: Disease Ecology
☐ BIOE 155: Freshwater Ecology
☐ BIOE 161: Kelp Forest Ecology
☐ BIOE 163/L: Ecology of Reefs, Mangroves & Seagrasses/Lab
☐ BIOE 165: Marine Conservation Biology
☐ BIOE 172 Population Genetics
☐ BIOL 111A: Immunology
☐ BIOL 114: Cancer Cell Biology
☐ BIOL 115: Eukaryotic Molecular Biology
☐ BIOL 118: Principles of Human Genetics
☐ BIOL 120: Developmental Biology
☐ BIOL 125: Intro to Neuroscience
☐ BIOL 130: Human Physiology
☐ BIOL 140: The RNA World
☐ METX 100: Introduction to Microbiology
☐ METX 119: Microbiology
☐ METX 135/L: Anatomy of the Human Body/Lab

DC Requirement: **2 OF THE FOLLOWING BIOE COURSES:** **OR** **1 OF THE FOLLOWING BIOL LABS:**

☐ BIOE 108: Marine Ecology — ☐ BIOL 103L: Toxic RNA Lab II
☐ BIOE 114/L: Herpetology/Lab — ☐ BIOL 105L: Eukaryotic Genetics Lab
☐ BIOE 117: Systematic Botany — ☐ BIOL 106L: Eukaryotic Genetic Engineering Lab
☐ BIOE 120/L: Marine Botany/Lab — ☐ BIOL 108L: Synthetic Gene Regulation Lab III

☐ BIOE 122/L: Invertebrate Zoology/Lab	☐ BIOL 109L: Yeast Molecular Genetics Lab
☐ BIOE 127/L: Ichthyology/Lab	☐ BIOL 115L: Eukaryotic Molecular Biology Lab
☐ BIOE 128L: Large Marine Vertebrates Field Course	☐ BIOL 120L: Developmental Biology Lab
☐ BIOE 129 Marine Mammals	☐ BIOL 121L: Environmental Phage Biology Lab
☐ BIOE 137: Molecular Ecology	☐ BIOL 186L: Undergraduate Research in MCD Biology
☐ BIOE 141L: Behavioral Ecology Field Course	
☐ BIOE 145: Plant Ecology	
☐ BIOE 145L: Field Methods in Plant Ecology	
☐ BIOE 150L: Ecological Field Methods	
☐ BIOE 151B/ENVS 109B: Ecology and Conservation in Practice Supercourse: Ecological Field Methods Lab	
☐ BIOE 153C: Disciplinary Communication for Biologists	
☐ BIOE 158L: Marine Ecology Lab	
☐ BIOE 159A: Marine Ecology Field Quarter: Marine Ecology with Lab	
☐ BIOE 161L: Kelp Forest Ecology Lab	
☐ BIOE 171: Disciplinary Communication for Biologists	
☐ BIOE 172: Population Genetics	

***For 2-credit BIOE lab courses listed above that are taken concurrently with 5-credit lectures, both courses must be passed to receive one half of the DC requirement. BIOE 117 and BIOE 137 require concurrent enrollment in 2-credit labs, BIOE 117L and BIOE 137L, but these are not part of the DC requirement.**

SENIOR EXIT REQUIREMENT IS SATISFIED BY COMPLETING ONE ADDITIONAL LAB OR FIELD COURSE (BIOL or BIOE course identified with an "L").

☐ Senior Exit Completed

Please refer to your 2021-22 UCSC General Catalog for more information or clarification