

Requirements for the Biology Major

College and University Requirements

English _____ Ethics _____ Technology _____
 Western Culture _____ Ethnic Studies/ W & G studies _____ Fine Arts _____
 Social Science _____ Foreign Language _____ United States _____
 Religious Studies _____ World Cultures/Societies _____
 Area studies/regional global/thematic

Department Requirements

BIOL: 21, 22, 23, 24 & 25 CHEM: 11, 12, 13, 31 & 32 (CHEM 33 suggested)
 PHYS: 11, 12, 13 (or 31, 32, 33) MATH: 11 & 12 (Math 8 & 13 suggested)

Upper Division Courses: Biology majors must choose one of the three emphases listed below. Each student is required to take **FIVE** courses within the emphasis. **TWO** additional elective courses may be taken in any area of emphasis. Of the seven total upper division courses, at least **FIVE** must have a laboratory component. Only one area of emphasis will appear on transcripts. An overall GPA of 2.0 is required in all biology courses.

Alternatively Biology majors may declare that they will follow an *"Integrative Biology"* plan, in which they choose their upper division courses to create a logical and focused plan of study. This course plan must be developed in consultation with their Biology faculty advisor.

Biomedical Sciences	Cellular & Molecular Biology	Ecology & Evolution
104 110 111 112	110 113 114 122 128	131 134 144 150
113 114 115 120	145 "171 & 189" 173 174	151 156 157 158
122 124 126 145	175 176 177 178	160 165 173 180
160 "171 & 189" 174	CHEM 141 & 142	ANTH 197 ENV 134
179 CHEM 141		

Biology 171 counts as a 3rd religion
 Biology 187: Biology of Aging does NOT count toward a major or minor in Biology.

Students are personally responsible for knowing all the academic regulations affecting their program of study and for completing all degree requirements as set forth by the University, their College or School, and academic department (s). Failure to understand these regulations and requirements does not relieve a student of responsibility. (Undergraduate Bulletin)

* Courses 1-21 & 28 satisfy the Natural Science Requirement of the University Core Curriculum.

LOWER DIVISION*	BIO 133. Ecology of California Plant Communities L+L
BIO 2. Human Disease/Human Health	BIO 134. California Plant Diversity L+L
BIO 3. Fitness Physiology L+ L	BIO 145. Virology
BIO 4. Light & Life L+ L	BIO 144. Natural History of Baja ¹
BIO 5. Endangered Ecosystems L+ L	BIO 150. Conservation Biology L+ L
BIO 6. The Oceans L+ L	BIO 151. Restoration Ecology L+L
BIO 9. Cancer L+ L	BIO 156. General Ecology L+ L
BIO 15. The Human Embryo L+ L	BIO 157. Environmental Biology in the Tropics ²
BIO 18. Exploring Biotechnology L+L	BIO 158. Biology of Insects L+ L
BIO 19. Biology for Teachers L+ L	BIO 160 Biostatistics L+ L
BIO 21. Introduction to Physiology	BIO 165. Animal Behavior L+ L
BIO 22. Introduction to Evolution & Ecology	BIO 171. Ethical Issues in Biotechnology and Genetics ³
BIO 23. Investigations in Evolution & Ecology L+ L	BIO 173. Evolution
BIO 24. Introduction to Cellular and Molecular Biology	BIO 174. Cell Biology
BIO 25. Investigations in Cellular & Molecular Biology L+ L	BIO 175. Molecular Biology L+ L
BIO 28. Human Sexuality	BIO 176. Biotechnology Lab I: Recombinant DNA L+ L
UPPER DIVISION	BIO 177. Biotechnology Lab II: Gene Expression L+ L
BIO 100. Hot Topics in Biology	BIO 178. Bioinformatics
BIO 104. Human Anatomy L+ L	BIO 179. Cancer Biology
BIO 110. Genetics L+ L	BIO 180 Marine Physiological Ecology L+ L
BIO 111. Parasitology	
BIO 112. Pathogenic Microbiology L+ L	Special topic and seminar courses
BIO 113. Microbiology L+ L	BIO 189. Topics in Cell and Molecular Biology
BIO 114. Immunology L + L	BIO 191. Project Lab L+ L
BIO 115. Human Reproduction & Development	BIO 192. Topics in Conservation Biology
BIO 120. Animal Physiology L+ L	BIO 198. Internship and Undergraduate Research
BIO 122. Neurobiology L+ L	BIO 199. Directed Reading and Research
BIO 124. Human Physiology L+ L	
BIO 128. Plant Development L+ L	
BIO 131. Agroecology L+ L	

¹ Requires participation in spring break trip.

² Typically only taught during the summer session.

³ BIOL 171 and BIOL 189 must both be taken for BIOL 171 to count toward the 7 upper division biology courses required for the major.