

BIOLOGY MAJOR

Biology B.A.

LOWER-DIVISION REQUIREMENTS

COURSE	TITLE	UNITS
<i>Biology:</i>		
BIO 210*	Cell Biology and Biochemistry	4
BIO 215*	Animal Biology	4
<i>Chemistry:</i>		
CHE 152*	General Chemistry I	4-5
CHE 153*	General Chemistry II	4
CHE 295*	Organic Chemistry	5
<i>Mathematics:</i>		
MTH 144*	Calculus with Applications	4
TOTAL		25-26

UPPER-DIVISION REQUIREMENTS

COURSE	TITLE	UNITS
MTH 362	Calculus Based Statistics	2
BIO 300*	Bioinformatics	2
BIO 310	General Botany	3
BIO 345*	Genetics	4
BIO 350	Advanced Cell Biology	3
BIO 360	Ecology	3
BIO 380	Molecular Biology	3
BIO 420	Vertebrate Physiology	3
BIO 497*	Biology Seminar	1
TOTAL		24

Complete one of the following three options.

Track I - Organismal Emphasis-

Take Track I electives to a minimum of 8 units.

Track II - Cell and Molecular Emphasis-

Take Track II electives to a minimum of 9 units.

Track III - Individualized Emphasis-

Take one elective from Track I or one elective from Track II (minimum 3 units) plus a combination of two upper-division, non-GE courses from inside or outside of Biology approved by the department chair.

Track I Electives

COURSE	TITLE	UNITS
BIO 315	Microbiology	3
BIO 320	Marine Zoology	3
BIO 325	Insect Biology	3
BIO 330	Marine Invertebrate Zoology (Quad)	2

BIO 340	Field Biology (Quad)	2
BIO 370	Marine Plant and Microbial Life (Quad)	2
BIO 410*	Vertebrate Biology	3
BIO 430	Animal Behavior	3

Track II Electives

COURSE	TITLE	UNITS
BIO 315	Microbiology	3
BIO 390	Immunology	3
BIO 400	Developmental Biology	3
BIO 450	Advanced Biochemistry	4
BIO 470	Neuroscience	3
	Upper-division Elective Total	8-9
	Bachelor of Arts Total	58-60

Note: Courses with "*" are required by the State of California for the teacher education concentration in Life Sciences.

Biology B.S.

LOWER-DIVISION REQUIREMENTS

COURSE	TITLE	UNITS
BIO 210*	Cell Biology and Biochemistry	4
BIO 215*	Animal Biology	4
CHE 152*	General Chemistry I	4-5
CHE 153*	General Chemistry II	4
CHE 295*	Organic Chemistry	5
MTH 144*	Calculus with Applications	4
PHY 141	General Physics I	4
PHY 142	General Physics II	4
	TOTAL	33-34

UPPER-DIVISION REQUIREMENTS

COURSE	TITLE	UNITS
MTH 362	Calculus Based Statistics	2
BIO 300*	Bioinformatics	2
BIO 310	General Botany	3
BIO 345*	Genetics	4
BIO 350	Advanced Cell Biology	3
BIO 360	Ecology	3
BIO 380	Molecular Biology	3
BIO 420	Vertebrate Physiology	3
BIO 497*	Biology Seminar	1
	TOTAL	24

Complete one of the following two options.

Track I: Organismal Emphasis -

Take three Track I electives and one Track II elective (minimum 10 units).

Track II: Cell and Molecular Emphasis -

Take three Track II electives and one Track I elective (minimum 11 units).

Track I Electives

COURSE	TITLE	UNITS
BIO 315	Microbiology	3
BIO 320	Marine Zoology	3
BIO 325	Insect Biology	3
BIO 330	Marine Invertebrate Zoology (Quad)	2
BIO 340	Field Biology (Quad)	2
BIO 370	Marine Plant and Microbial Life (Quad)	2
BIO 410*	Vertebrate Biology	3
BIO 430	Animal Behavior	3
	Approved off-campus+	1-4

Track II Electives

COURSE	TITLE	UNITS
BIO 315	Microbiology	3
BIO 390	Immunology	3
BIO 400	Developmental Biology	3
BIO 450	Advanced Biochemistry	4
BIO 470	Neuroscience	3
	Approved off-campus+	1-4
	Upper-division Elective Total	10-11
	Bachelor of Science Total	68-70

Note: Courses with "*" are required by the State of California for the teacher education concentration in Life Sciences. Units marked with a "+" must be approved by the department chair in advance.