



# BIOLOGY MAJOR ADVISEMENT

COURSE	TITLE	CSUDH	CSUF	CSULB	CSULA
BIOL G104+104L	Marine Biology			BIOL 153 (3.3, 3.5)	
BIOL G180	Cell/Dev Biology	BIOL 120 + 121 + 122 + 123	BIOL 151	BIOL 211 + 212 + 213	
BIOL G182	Zoology				
BIOL G183	Botany				
BIOL G210	Microbiology			MICR 211 (3.4)	
CHEM G180	General Chemistry A	CHE 110 + 112	CHEM 120A	CHEM 111A	
CHEM G185	General Chemistry B		CHEM 120B	CHEM 111B	
CHEM G220	Organic Chemistry A		CHEM 301A + 301B + 302 (2.1)	CHEM 220A + 223A + 220B + 223B	
CHEM G225	Organic Chemistry B				
MATH G140	Survey of Calculus	MAT 171 (1.3)	MATH 130 (2.2)	MATH 119A (3.1)	
MATH G160	Statistics	MAT 131			
MATH G180	Calculus 1	MAT 191 (1.3)	MATH 150A + 150B (2.2)	MATH 122 (3.1)	
MATH G185	Calculus 2			MATH 123 (3.1)	
PHYS G120	Intro Physics: Mechanics	PHY 120 + 122 (1.1)	PHYS 211 + 211L	PHYS 100A (3.2; 3.3)	
PHYS G125	Intro Physics: Elect/Mag		PHYS 212 + 212L	PHYS 100B (3.2; 3.3)	
PHYS G185	Calc Physics: Mechanics	PHYS 130 + 132 (1.1)		PHYS 151 (3.2)	
PHYS G280	Calc Physics: Elect/Mag			PHYS 152 (3.2)	
PHYS G285	Calc Physics: Modern				
OTHER		1.2			4.1

**Most sciences are articulated as a sequence, unless noted as individual course. Must complete all courses in sequence for credit.**

**CSU DOMINGUEZ HILLS:** BA or BS Options available in Cell and Molecular Biology, Ecology and Environment, Microbiology.

- 1.1: For BA: Complete PHYS G120 + G125. For BS complete PHYS G185 + G280 + G285 or PHYS G120 + G125
- 1.2: CS G130 required for this major
- 1.3: For BS: Complete either MATH G140 or MATH G180

**CSU FULLERTON:** BS Degree. Options available in Ecology and Evolutionary Biology; Cell and Developmental; Marine; Molecular Biology and Biotechnology, and Plant Biology. Department is highly impacted and recommends completion of Biology sequence, one year of General Chemistry, and One semester of Calculus prior to transfer.

- 2.1: Students who complete CHEM G220 + G225 will be given subject credit for CHEM 301A+301B+302 at CSUF. No upper division credit granted.
- 2.2: Complete MATH G180 + G185, or MATH G140 + MATH 307 OR 338 at CSUF after transfer.

**CSU LONG BEACH:** All majors at this campus are impacted. Local admission requirements: 2.5 GPA plus completion of major preparation coursework. Please see counselor for admission and selection criteria for this major. BS in Marine Biology; Microbiology; General Biology with options in Biology Education; Organismal Biology; Molecular and Cell Biology and Physiology.

- 3.1: Complete MATH G180 or MATH G140
- 3.2: Physics Option: Complete PHYS G120 + G125 or PHYS G185 + G280 for all options
- 3.3 For Marine Biology: ADD BIOL G104+G104L; Complete either PHYS G120 or PHYS G185. Students will need to complete three additional courses from a list of lower and upper division coursework. Lower division courses included: MATH G185, PHYS G125 OR PHYS G280
- 3.4: Required for BS: Microbiology
- 3.5: For Biology Education: Add ASTR G100; GEOL G106 or GEOL G110; and select one additional from: BIOL G210 OR PHYS G120 + G125 OR PHYS G185 + G280

**CSU LOS ANGELES:** BS Degree. Articulation for this major is under review.

- 4.1: Students are encouraged to complete one year of foreign language for this major.

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COURSE	TITLE	UCB	UCI	UCLA	UCR	UCSD
BIOL G180	Cell/Dev Biology	BIOL 1A + 1AL	BIO SCI 93	LIFESCI 2 + 23L (7.1)	BIOL 5A + 5LA	BILD 1 + 2 + 3 + 4 (9.1)
BIOL G182	Zoology		BIO SCI 94 (6.1)		BIOL 5B	
BIOL G183	Botany		BIO SCI 94 (6.1)			
BIOL G210	Microbiology					
BIOL G220	Human Anatomy			LIFESCI 2 + 23L (7.1)		
CHEM G180	General Chemistry A	CHEM 1A + 1AL	CHEM 1A + 1B + 1C + 1LC + 1LD	CHEM 20A + 20B + 20L + 30AL	CHEM 1A + 1LA + 1B + 1LB + 1C + 1LC	CHEM 6A + 6B + 6C + 7L
CHEM G185	General Chemistry B	CHEM 1B (5.2)				
CHEM G220	Organic Chemistry A	CHEM 3A + 3AL	CHEM 51A + 51B + 51LB + 51C + 51LC	CHEM 30A + 30B	CHEM 112A + 112B + 112C (8.2)	CHEM 140A + 140B
CHEM G225	Organic Chemistry B	CHEM 3A + 3BL				
MATH G140	Survey of Calculus					MATH 10A or 20A (9.2)
MATH G160	Statistics		STATS 7 (6.2)	STATS 13		
MATH G180	Calculus 1	MATH 1A	MATH 2A + 2B (6.2)	MATH 31A	MATH 9A + 9B (8.1)	MATH 10A or 20A (9.2)
MATH G185	Calculus 2	MATH 1B	6.2	MATH 31B		MATH 10B or 20B (9.2)
MATH G280	Calculus 3					MATH 10C or 20C (9.2)
PHYS G185	Calc Physics: Mechanics	PHYS 7A	PHYSICS 7C + 7LC + 7D + 7LD + 7E	PHYSICS 1A + 1B + 1C + 4AL + 4BL (7.2)	PHYS 40A + 40B + 40C	PHYS 2A + 2B + 2C + 2BL or 2CL or 2DL
PHYS G280	Calc Physics: Elect/Mag	PHYS 7B				
PHYS G285	Calc Physics: Modern					
OTHER		5.1			8.1	9.1

**Most sciences are articulated as a sequence, unless noted as individual course. Must complete all courses in sequence for credit.**

**UC BERKELEY:** Major is highly selective and the campus has several "Biology" majors. Integrative Biology, Molecular and Cell Biology in the College of Letters and Science; Genetics and Plant Biology, Microbial Biology in the College of Natural Resources. For all areas, completion of the year of Biology, General Chemistry, Organic Chemistry, and Calculus is required for consideration. Completion of Physics and Statistics highly recommended.

5.1: AP Scores will not satisfy Biology and Math requirements for Integrative Biology major. Use of AP is discouraged for Cell and Molecular Biology majors.

5.2: Although CHEM 1B is not a requirement for this major, CHEM G185 is a required prerequisite for CHEM G220 at Golden West College.

**UC IRVINE:** BS Degree. **Minimum 3.0 GPA required for this major.** Students must complete 1 year general chemistry, 1 year of organic chemistry, and 1 year biology prior to transfer. Degrees in Biological Sciences; Biochemistry and Molecular Biology; Biology Education; Developmental and Cell; Ecology and Evolutionary Biology; Genetics; Microbiology and Immunology; and Neurobiology.

6.1: Complete either BIOL G182 or BIOL G183

6.2: Complete either MATH G180 + G185 OR MATH G180 + G160

**UCLA:** Options available in Biology; Ecology; Behavior and Evolution; Human Biology; **Major is highly selective.** At minimum, must complete 1 year biology, chemistry, and calculus. The first semester of organic chemistry or one year of calculus-based physics is highly recommended. Completion of the entire organic chemistry sequence prior to transfer is advised.

7.1: Complete BIOL G180 + G220

7.2: Recommended that students complete PHYS 6ABC at UCLA after transfer in lieu of PHYS G185 + G280 + G285

**UC RIVERSIDE:** BA or BS options available, BA or BS in Biochemistry. Minimum 2.70 GPA required. Students must complete at least three of the following sequences: 1 year of general chemistry (mandatory), 1 year of calculus (mandatory), and 1 year of either biology; physics, or organic chemistry. IGEC not accepted for this major in the College of Natural and Agricultural Sciences. Students pursuing a B.A. degree in Biology will also need to complete the equivalent of 4th quarter proficiency (generally third semester) in a language other than English, as part of the breadth requirements for this degree.

8.1: Score of 3, 4, 5 on the Calculus AB exam will credit MATH 9A. Scores of 3, 4, 5 on the Calculus BC Exam will credit MATH 9A+9B.

8.2: Students completing CHEM G220+G225 will receive subject credit for CHEM 112ABC. No upper division unit credit granted.

**UC SAN DIEGO:** BS Degree. Options available in General Biology; Biochemistry and Cell Biology Ecology, Behavior and Evolution Human Biology; Microbiology; Molecular Biology; and Physiology and Neuroscience. **The Division of Biological Sciences expects transfer students to have completed lower-division requirements in biology, general chemistry, and calculus prior to transfer.**

9.2: Complete either MATH G180 or MATH G140. Note that MATH G180 is a prerequisite for MATH G185. Starting Fall 2018, Calculus 3 will be replaced with MATH 11/11L (Calculus Based Probability and Statistics) taken @UCSD after transfer.