

Major: Biotechnology, B.S.: 120 units
2018-2019 Academic Year

	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
Year 1	BIO 1210 Foundations of Biology: Energy, Matter, and Information (B2)		3	BIO 1220 Foundations of Biology: Evolution, Ecology, and Biodiversity	Prereq: BIO 121, BIO 121L, and BIO 1210B, or BIO 1210 and BIO 1210L. Coreq: BIO 1220L.	3	
	BIO 1210L Foundations of Biology: Energy, Matter, and Information Laboratory (B3)		1	BIO 1220L Foundations of Biology: Evolution, Ecology, and Biodiversity Laboratory	Prereq: BIO 121, BIO 121L, and BIO 1210B, or BIO 1210 and BIO 1210L. Coreq: BIO 1220.	1	
	CHM 1210 General Chemistry I (B1)	Prereq: C or better in MAT 12, 105, 106, 112, 114, 115, 116, 120, 125, 130, 191, 214, 216, 224, MAT 1050, MAT 1052, MAT 1060, MAT 1140, MAT 1150, MAT 1200, MAT 1250, MAT 1300, MAT 1310, MAT 1910, MAT 2140, MAT 2240, MAT 2250, STA 120, or STA 1200; or C- or better Coreq: CHM 1210L.	3	CHM 1220 General Chemistry II (B1)	Prereq: C- or better in CHM 1210, CHM 122 or CHM 122B; and C- or better in CHM 1210L, CHM 122L or CHM122LB. Coreq: CHM 1220L.	3	
	CHM 1210L General Chemistry Laboratory I (B3)	Prereq: C or better in MAT 12, 105, 106, 112, 114, 115, 116, 120, 125, 130, 191, 214, 216, 224, MAT 1050, MAT 1052, MAT 1060, MAT 1140, MAT 1150, MAT 1200, MAT 1250, MAT 1300, MAT 1310, MAT 1910, MAT 2140, MAT 2240, MAT 2250, STA 120, or STA 1200; or C- or better Coreq: CHM 1210.	1	CHM 1220L General Chemistry Laboratory II (B3)	Prereq: C- or better in CHM 1210, CHM 122 or CHM 122B; and C- or better in CHM 1210L, CHM 122L or CHM122LB. Coreq: CHM 1220.	1	
	GE Area A2: Written Communication		3	MAT 1200 Calculus for Life Sciences (B4)	Prereq: MAT 105; MAT 1050; MAT 1052; MDTP Alg >=18 and MDTP Trig >=6; MDTP Alg >=22; or ALEKS Comp >=61.	3	
	GE Area E: Lifelong Learning and Self-Development		3	GE Area A3: Critical Thinking		3	
			0			0	
			0			0	
	Total Units	14		Total Units	14		

	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
Year 2	BIO 2060 Basic Microbiology	Prereq: BIO 123/BIO 123L, BIO 1220/BIO 1220L, BIO 122/BIO 122L/BIO 1220C, BIO 115/BIO 115L/BIO 115A, BIO 1150/BIO 1150L, BIO 110/BIO 111 or BIO 1110/BIO 1110L.	3	BIO 3220 Cell and Molecular Biology	Prereq: BIO 303 or BIO 2400.	3	
	BIO 2060L Basic Microbiology Laboratory	Prereq: BIO 123/BIO 123L, BIO 1220/BIO 1220L, BIO 122/BIO 122L/BIO 1220C, BIO 115/BIO 115L/BIO 115A, or BIO 1150/BIO 1150L. Coreq: BIO 2060.	1	CHM 3150 Organic Chemistry II	Prereq: C- or better in CHM 3140, CHM 315, or CHM 315B.	3	
	BIO 2400 Genetics	Prereq: BIO 123/BIO 123L, BIO 1220/BIO 1220L, BIO 122/BIO 122L/BIO 1220C, BIO 115/BIO 115L/BIO 115A, BIO 1150/BIO 1150L, BIO 110/BIO 111 or BIO 1110/BIO 1110L.	3	CHM 2210 Quantitative Analysis	Prereq: C- or better in CHM 123 or CHM 1220; and CHM 123L or CHM 1220L. Coreq: CHM 2210L.	2	
	CHM 3140 Organic Chemistry I	Prereq: C- or better in CHM 123 or CHM 1220; and C- or better in CHM 123L or CHM 1220L.	4	CHM 2210L Quantitative Analysis Laboratory	Prereq: C- or better in CHM 123 or CHM 1220; and CHM 123L or CHM 1220L. Coreq: CHM 2210.	2	
	CHM 3140L Organic Chemistry Laboratory I	Prereq: C- or better in CHM 3140 or CHM 315; CHM 3140 can be concurrent.	1	STA 1300 Biostatistics (B4)	Prereq: MAT 12, ESM 12, MAT 1060, MAT 106, MAT 1250, MAT 125, MAT 1910, MAT 191, MAT 1050, MAT 105, STA 1200, STA 120, or MAT 1051.	3	
	GE Area A1: Oral Communication		3	GE Area C1: Visual and Performing Arts		3	
			0			0	
			0			0	
		Semester Total Units	15		Semester Total Units	16	

	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
Year 3	Major Elective	Select from Curriculum Sheet	4	Major Elective	Select from Curriculum Sheet	4	<i>Graduation Writing Test must be taken before completion of 75 units.</i>
	CHM 3270 Biochemistry I	Prereq: C- or better in CHM 1220 or CHM123; C- or better in CHM 1220L or CHM123L; C- or better in CHM 316 or CHM 3150; C- or better in CHM 317L or CHM 3140L; and D or better in BIO 115, BIO 121, BIO 1150 or BIO 1210. Coreq: CHM 3270L.	3	BIO 2300 Horizons in Biotechnology	Prereq: Undergraduate standing.	1	
	CHM 3270L Biochemistry Laboratory I	Prereq: C- or better in CHM 1220, CHM 122 or CHM 123; C- or better in CHM 1220L, CHM 122L or CHM 123L; C- or better in CHM 321, CHM 327, CHM 3210 or CHM 3270; C- or better in CHM 250L, CHM 317L, CHM 2010L or CHM 3140L; D or better in BIO 115, BIO 121, BIO 1150 o	1	PHY 1220 Physics of Electromagnetism, Circuits, and Light	Prereq: C- or better in PHY 122, PHY 122B, PHY 1210, or PHY 1210B. Coreq: PHY 1220L.	3	
	PHY 1210 Physics of Motion, Fluids, and Heat (B1)	Prereq: C- or better in MAT 106, MAT 1060 , MAT 114, MAT 1140/MAT 1140A, or MAT 112. Coreq: PHY 1210L.	3	PHY 1220L Electromagnetism, Circuits, and Light Laboratory		1	
	PHY 1210L Physics of Motion, Fluids, and Heat Laboratory (B3)		1	GE Area C2a: Philosophy and Civilization		3	
	GE Area D1: U.S. History American Ideals		3	GE Area D2: U.S. Constitution and California Government		3	
			0			0	
			0			0	
	<i>Take the Graduation Writing Test</i>						
	Semester Total Units		15	Semester Total Units		15	

	Fall		Units	Spring		Units	Comments	
	Courses	Requirements/Comments		Courses	Requirements/Comments			
Year 4	BIO 4300 Concepts of Molecular Biology	Prereq: BIO 310 or BIO 3220.	3	Major Core	BIO 4320/L or BIO 4360/L	4		
	Major Elective	Select from Curriculum Sheet	4	Major Core	BIO 4410 or BIO 4610	1		
	GE Area B5: Science and Technology Synthesis	Select from Curriculum Sheet	3	Major Elective	Select from Curriculum Sheet	4		
	GE Area C2b: Literature and Language Other than English		3	GE Area C3: Arts and Humanities Synthesis		3		
	GE Area D3: Social Sciences: Principles, Methodologies, Value Systems, and Ethics		3	GE Area D4: Social Science Synthesis		3		
			0			0		
			0			0		
			0			0		
	<i>File an application to graduate</i>							
	Semester Total Units		16	Semester Total Units		15		
Total Units					120			