		Degree: Biochemistry, B.S.		
Requirement Arc	ea Course	Course Title	Prerequisites	Units
_		First Semester	Frerequisites	
E A1	GS 101A	Foundations of Success I		3
B1/LD Major	CHEM 111	General Chemistry I	following	5
			following: Satisfactory	
			score of 78 or higher on	
			Mathematics	
			Placement Exam, MATH	
			120 or MATH 125 (either	
			course with	
B4/LD Major D1/CODE 1	MATH 130	Calculus I	grade C- or	4 3
			Total:	16
		Second Semester		
E	GS 101B	Foundations of Success II		1
A2				3
C1			MATH 130 with	3
			grade C- or	
LD Major LD Major	MATH 131 CHEM 112	Calculus II General Chemistry II	better.	<u>3</u>
			Total:	15
		Third Semester	I otal.	
E				1
A3	PHIL 100	Workshop in Critical Thinking	CUEM 112	3
			CHEM 112 with grade C- or	
UD Major B2/LD Major	CHEM 331 BIOL 140A	Organic Chemistry I Principles of Cell and Molecular Biology	better.	<u>5</u>
22, 23 Major	5.62 2 1671	Trinoipies of Cell and Morecular Biology	MATH 131 with	
LD Major	MATH 230	Calculus III	grade C- or better.	3
			Total:	17
Writing II	ENGL 200 or PHYS 2	Fourth Semester		3
			BIOL 140A with	
LD Major	BIOL 140B	Principles of Organismal Biology	grade C- or better.	5
			CHEM 112 with grade C- or	
LD Major	CHEM 220	Quantitative Analysis	better.	4
UD Major			CHEM 331 with grade C- or	
	CHEM 332	Organic Chemistry II	better.	5
		Fifth Semester	Total:	17
C2 D2				3
02			CHEM 332 with	
UD Major	CHEM 441	Biochemistry I	grade C- or better.	4
B3/LD Major	PHYS 135	Physics for Scientists and Engineers I	Total:	<u>4</u> 14
		Sixth Semester		- 1
			CHEM 441 with grade C- or	
UD Major	CHEM 442	Biochemistry II	better. Completion of	4
			GE areas A1, A2,	
B6/Overlay	PHYS 136	Physics for Scientists and Engineers I	A3 and B4.	<u>3</u>
ILD Maior		,		3
LD Major Add'l C1 or C2*	11113 130		T - 4 - 1.	4.4
Add'l C1 or C2*	11113 130	Seventh Semester	Total:	14
		Seventh Semester	Total:  CHEM 443 with	
Add'l C1 or C2*  Code 2			CHEM 443 with grade C- or	3
Add'l C1 or C2*	CHEM 443	Biochemistry Laboratory I Biochemistry Elective	CHEM 443 with	3 3 3
Add'l C1 or C2*  Code 2  UD Major		Biochemistry Laboratory I	CHEM 443 with grade C- or better.	3
Add'l C1 or C2*  Code 2  UD Major		Biochemistry Laboratory I	CHEM 443 with grade C- or better.  CHEM 332, MATH 230,	3
Add'l C1 or C2*  Code 2  UD Major		Biochemistry Laboratory I	CHEM 443 with grade C- or better.  CHEM 332,	3
Add'l C1 or C2*  Code 2  UD Major  UD Major		Biochemistry Laboratory I	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all	3 3
Add'l C1 or C2*  Code 2  UD Major  UD Major	CHEM 443	Biochemistry Laboratory I Biochemistry Elective  Physical Chemistry I	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all with grade C- or	3 3 3 3
Add'l C1 or C2*  Code 2  UD Major  UD Major	CHEM 443	Biochemistry Laboratory I Biochemistry Elective	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all with grade C- or better.	3 3 3 3
Add'l C1 or C2*  Code 2  UD Major  UD Major  UD Major  D3	CHEM 443  CHEM 351	Biochemistry Laboratory I Biochemistry Elective  Physical Chemistry I  Eighth Semester	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all with grade C- or better.  Total:  CHEM 351 with grade C- or	3 3 3 3 15
Add'l C1 or C2*  Code 2  UD Major  UD Major	CHEM 443	Biochemistry Laboratory I Biochemistry Elective  Physical Chemistry I	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all with grade C- or better.  Total:  CHEM 351 with grade C- or better.	3 3 3 3 15
Add'l C1 or C2*  Code 2  UD Major  UD Major  D3  UD Major	CHEM 351  CHEM 352	Biochemistry Laboratory I Biochemistry Elective  Physical Chemistry I  Eighth Semester  Physical Chemistry II	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all with grade C- or better.  Total:  CHEM 351 with grade C- or better.  CHEM 351 with grade C- or better.	3
Add'l C1 or C2*  Code 2  UD Major  UD Major  D3  UD Major	CHEM 351  CHEM 352	Biochemistry Laboratory I Biochemistry Elective  Physical Chemistry I  Eighth Semester  Physical Chemistry II	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all with grade C- or better.  Total:  CHEM 351 with grade C- or better.  COMPletion of GE areas A1, A2, A3 and B4.	3 3 3 15
Add'l C1 or C2*  Code 2  UD Major  UD Major  D3  UD Major  UD Major  C4/Overlay	CHEM 351  CHEM 352	Biochemistry Laboratory I Biochemistry Elective  Physical Chemistry I  Eighth Semester  Physical Chemistry II	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all with grade C- or better.  Total:  CHEM 351 with grade C- or better.  Completion of GE areas A1, A2, A3 and B4. Completion of GE areas A1, A2,	3 3 3 15
Add'l C1 or C2*  Code 2  UD Major  UD Major  D3  UD Major  UD Major  UD Major	CHEM 351  CHEM 352	Biochemistry Laboratory I Biochemistry Elective  Physical Chemistry I  Eighth Semester  Physical Chemistry II	CHEM 443 with grade C- or better.  CHEM 332, MATH 230, PHYS 136, all with grade C- or better.  CHEM 351 with grade C- or better.  CHEM 351 with grade C- or better.  Completion of GE areas A1, A2, A3 and B4. Completion of	3 3 3 3 15

## **General Education & University Requirements - Suggested Courses** Area A (9 units): Communication in the English Language & Critical Thinking (Must earn passing grade of C-/CR or better) ☐ A<u>1. COMM 100 or 104, MLL 111</u> ☐ A2. ENGL 101, 102, or 104 ☐ A3. PHIL 100 Area B (9 units): Scientific Inquiry & Quantitative Reasoning ☐ B1. Physical Science ☐ B2. Life Science ☐ B3. Laboratory Activity ☐ B4. Quantitative Reasoning (Must earn passing grade of C-/CR or better.) Area C (9 units): Arts & Humanities - Minimum of three different disciplines as designated by course prefix (e.g., ART, THEA, MUS) ☐ C1. Arts ☐ C2. Humanities ☐ \*Additional Lower-division Area C Course in Arts (C1) or Humanities (C2) Area D (9 units): Social Sciences - Minimum of three different disciplines as designated by course prefix (e.g., ANTH, ECON, POSC) □ D2. □ D3. Area E (3 units): Lifelong Learning and Self-Development Second Composition: Requires completion of GE A2 with a C-/CR or better. Must be completed before attaining junior standing. □ Writing II. University Writing Skills Requirement ☐ UWSR. Writing Skills Test (WST) or First and/or Second Tier Courses U.S. Code (American Institutions Requirement) - Two courses (6 units) covering three U.S. Code Requirements of US-1 (U.S. History), US-2 (U.S. Constitution), and US-3 (California State & Local Government). ☐ Code 1. ☐ Code 2. Upper Division GE Requirements (9 units): Should be taken after completion of A1, A2, A3, and B4 with a C- (CR) ☐ B6. Upper-division Science Inquiry and Quantitative Reasoning ☐ C4.Upper-division Arts OR Humanities ☐ D4. Upper-division Social Sciences Overlay Requirements (9 units): Courses may be upper or lower division, and GE or major ☐ Diversity (Div) ☐ Social Justice (SJ) ☐ Sustainability (S)