BIOCHEMISTRY, BS, CONCENTRATION IN FOOD SCIENCE

Natural Sciences, Mathematics, and Engineering (nsme) (https:// catalog.csub.edu/general-information/csub-information/school-naturalsciences-mathematics-engineering/)

Department of Chemistry and Biochemistry (https://catalog.csub.edu/ general-information/csub-information/school-natural-sciencesmathematics-engineering/department-chemistry-biochemistry/)

Department Chair: Sarah Forester

Office: Science Building II, 273

Phone: (661) 654-2030

Email: chemistry@csub.edu

www.csub.edu/Chemistry (http://www.csub.edu/Chemistry/)

Program Maps for Natural Sciences, Mathematics, and Engineering (https://programmap.csub.edu/academics/interest-clusters/4e942a6eb8e4-4b60-a1ae-334235acc581/)

Program Requirements

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Code	Title	Units	
General Education Requirements			
First-Year Semina	ır (FYS)	2	
	ea A: Foundational Skills	9	
Lower Division Area B: Natural Sciences ²			
Lower Division Area C: Arts and Humanities			
Lower Division Ar	ea D: Social and Behavioral Sciences	6	
Lower Division Ar (SELF) ⁷	ea E: Student Enrichment and Lifelong Learning	0	
American Institut	ions: Government and History	6	
Junior Year Divers	sity & Reflection (JYDR)	3	
Graduation Writin	g Assessment Requirement (GWAR) ⁸	0	
Upper Division Th	ematic Area C and D	6	
General Education	n Capstone ²	0	
General Education Subtotal			
Major Requireme	nts ¹		
Lower Division ²			
CHEM 1000	Foundations of Chemistry	3	
CHEM 1001	Foundations of Chemistry Laboratory	2	
CHEM 1100	Foundations of Analytical Chemistry	2	
CHEM 1600	Foundations of Physical Chemistry	2	
CHEM 2200	Foundations of Inorganic Chemistry	2	
or CHEM 2240	Foundations of Bioinorganic Chemistry		
CHEM 2300	Foundations of Organic Chemistry	3	
CHEM 2400	Foundations of Biochemistry	2	
CHEM 2940	Research Methods in Biochemistry 3	2	
Upper Division ²			
CHEM 3110	Advanced Quantitative Chemical Analysis	3	

CHEM 3301Organic Chemistry Laboratory ICHEM 3400Biochemistry of Metabolic PathwaysCHEM 3401Biochemistry Laboratory ICHEM 3510Food ScienceCHEM 3600Physical Chemistry:Thermodynamics and KineticsCHEM 3600Physical Chemistry:Thermodynamics and KineticsCHEM 3401Biochemistry of Nucleic AcidsCHEM 4400Biochemistry of Nucleic AcidsCHEM 4500Food ChemistryCHEM 4500Food ChemistryCHEM 4500Food Industrial PracticumCHEM 4500Food Industrial PracticumCHEM 4850Food Industrial PracticumCognates 2Biology 4BIOL 2010Introductory Biology - CellsBIOL 2120Introductory Biology - Animals or BIOL 2120or BIOL 2120Introductory Biology - PlantsBIOL 2230Microbiology or BIOL 3410General Microbiology or BIOL 3420Food MicrobiologyMathematics 5Select one of the following: MATH 2200MATH 2201Calculus for the Biological and Chemical Sciences IIMATH 2310Single Variable Calculus I for Engineers & MATH 2320MATH 2310Single Variable Calculus I for EngineersMATH 2510Single Variable Calculus IMATH 2510Single Variable Calculus IMATH 2510Single Variable Calculus IMATH 2510Single Variable Calculus IPhysics 6Select one of the following:PHYS 2110College Physics IPHYS 2210Physics for Scientists and Engineers I<			
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Major Subtotal 76-7 Additional Units Needed Towards Graduation 4- Total Units 118-12			
Additional Units Needed Towards Graduation 4- Total Units 118-12			76-78
Total Units 118-12	•		4-6
¹ The minimum GPA for these 76-78 units is 2.0	Total Units	118	-122
 ² Satisfied in major or cognate ³ Satisfies Area B1 ⁴ Satisfies Area B2/B3 ⁵ Satisfies Area B4 ⁶ Satisfies Area B1/B3 ⁷ The SELF requirement is met by completing a LD Area C, or D course with a SELF component. ⁸ Can be satisfied by exam. 	 ² Satisfied in maj ³ Satisfies Area B ⁴ Satisfies Area B ⁵ Satisfies Area B ⁶ Satisfies Area B ⁷ The SELF require with a SELF cor 	or or cognate 81 82/B3 84 81/B3 rement is met by completing a LD Area C, or D cours nponent.	se

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