

CHEMISTRY, BS, CONCENTRATION IN OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT

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

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

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

Program Maps for Natural Sciences, Mathematics, and Engineering (<https://programmmap.csub.edu/academics/interest-clusters/4e942a6e-b8e4-4b60-a1ae-334235acc581/>)

Program Requirements Academic Regulations

A grade of "C" in chemistry, cognate, and all other major/minor courses is the minimal grade acceptable for progression into subsequent chemistry courses and for graduation. Students who fail to achieve at least a "C" may repeat the course. If a course is satisfactorily completed, the prior unsatisfactory grade will no longer bar a student from continuing in the Chemistry program. Credit, no-credit courses are not acceptable for the major or minor.

Code	Title	Units
General Education Requirements		
	First-Year Seminar (FYS)	2
	Lower Division Area A: Foundational Skills	9
	Lower Division Area B: Natural Sciences ¹	3
	Lower Division Area C: Arts and Humanities	6
	Lower Division Area D: Social and Behavioral Sciences	3
	Lower Division Area E: Student Enrichment and Lifelong Learning (SELF) ²	0
	Lower Division Area F: Ethnic Studies	3
	American Institutions: Government and History	6
	Junior Year Diversity & Reflection (JYDR)	3
	Graduation Writing Assessment Requirement (GWAR) ³	0
	Upper Division Thematic Area C and D	6
	General Education Capstone ¹	0
	<i>General Education Subtotal</i>	<i>41</i>
Major Requirements		
	<i>Lower Division</i> ⁴	

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 2110	Foundations of Quantitative Chemical Analysis	3
CHEM 2200 or CHEM 2240	Foundations of Inorganic Chemistry Foundations of Bioinorganic Chemistry	2
CHEM 2300	Foundations of Organic Chemistry	3
CHEM 2400	Foundations of Biochemistry	2
CHEM 2900	Research Methods in Chemistry ⁵	2
<i>Upper Division</i> ⁴		
CHEM 3110	Advanced Quantitative Chemical Analysis	3
CHEM 3300	Intermediate Organic Chemistry	3
CHEM 3301	Organic Chemistry Laboratory I	2
CHEM 3600	Physical Chemistry: Thermodynamics and Kinetics	3
CHEM 3610	Physical Chemistry: Quantum and Statistical Mechanics	3
CHEM 3908	Seminar in Chemical Literature	3
CHEM 4100	Chemical Separations	1
CHEM 4101	Chemical Separations Laboratory	1
CHEM 4200	Inorganic Chemistry	3
CHEM 4908	Senior Seminar in Chemistry	3
<i>Cognates</i> ⁴		
<i>Mathematics</i> ⁶		
Select one of the following:		8
MATH 2010 & MATH 2020 I	Calculus for the Biological and Chemical Sciences and Calculus for Biological & Chemical Sciences II	
MATH 2310 & MATH 2320	Single Variable Calculus I for Engineers and Single Variable Calculus II for Engineers	
MATH 2510 & MATH 2520	Single Variable Calculus I and Single Variable Calculus II	
<i>Physics</i> ⁷		
Select one of the following:		8
PHYS 2110 & PHYS 2120	College Physics I and College Physics II	
PHYS 2210 & PHYS 2220	Physics for Scientists and Engineers I and Physics for Scientists and Engineers II	
Concentration in Occupational Safety and Health Management		
ERM 3010	Introduction to Occupational Safety and Health Management	3
ERM 3020	Advanced Occupational Safety and Health Management	3
ERM 3100	Hazardous Materials Management	3
ERM 3200	Industrial Hygiene Fundamental	3
PPA 4620	Introduction to Emergency Management	3
<i>Major Subtotal</i>		<i>77</i>
Additional Units Needed Towards Graduation		1-2
Total Units		119-120

¹ Satisfied in major or cognate

² The SELF requirement is met by completing a LD Area C, or D course with a SELF component.

³ Can be satisfied by exam.

⁴ The minimum GPA for these 75 units is 2.0

⁵ Satisfies Area B1

⁶ Satisfies Area B4

⁷ Satisfies Area B1/B3