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

Department Chair: Jesse Bergkamp

Office: Science Building II, 276

Phone: (661) 654-2030

Email: chemistry@csub.edu

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

Program Maps for Natural Sciences, Mathematics, and Engineering (https://programmap.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		
Subject Area 1A: English Composition		3
Subject Area 1B: Critical Thinking		3
Subject Area 1C: Oral Communication		3
Subject Area 2: Mathematical Concepts & Quantitative Reasoning [1]		0
Subject Area 3A: Arts		3
Subject Area 3B: Humanities		3
Upper Division 3 Arts or Humanities: (3UD)		3
Subject Area 4: Social and Behavioral Sciences		3
Upper Division 4 Social and Behavioral Sciences: (4UD)		3
Subject Area 5A: Physical Science [1]		0
Subject Area 5B: Biological Sciences		3
Subject Area 5C: Laboratory [1]		0
Upper Division 5 Science: (5UD) [1]		0
Subject Area 6: Ethnic Studies		3
General Education Subtotal		*30*
Campus Requirements		
First-Year Seminar (FYS)		2
American Institutions: Government [2]		3
American Institutions: History		3
Junior Year Diversity & Reflection (JYDR)		3
Graduation Writing Assessment Requirement (GWAR) [3]		0
Capstone [1]		0
Campus Requirement Subtotal		*11*
Major Requirements [4]		
Lower Division [5]		
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	Foundations of Inorganic Chemistry [6]	2
or CHEM 2240	Foundations of Bioinorganic Chemistry	
CHEM 2300	Foundations of Organic Chemistry	3
CHEM 2400	Foundations of Biochemistry	2
CHEM 2900	Research Methods in Chemistry	2
Upper Division		
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 3908	Seminar in Chemical Literature	3
CHEM 4130	Chemical Separations and Instrumental Analysis	3
CHEM 4131	Chemical Separations and Instrumental Analysis Laboratory	2
CHEM 4200	Inorganic Chemistry	3
CHEM 4908	Senior Seminar in Chemistry	3
Cognates [1]		
Mathematics [7]		
Select one of the following:		8
MATH 2010 & MATH 2020	Calculus for the Biological and Chemical Sciences I 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	
Physics [8]		
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	
Major Subtotal		*62*
Additional Requirements for the B.S. in Chemistry with a Concentration in Occupational Safety and Health Management		
Upper Division		
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
Additional Requirements for the B.S. in Chemistry with a Concentration in Occupational Safety and Health Management Subtotal		*15*
Additional Units Needed Towards Graduation		**2**
Total Units		**120**

1 Satisfied in major or cognate
2 American Institution - Government (American & Constitutional Ideals) satisfies one course of the two required in Subject Area 4.
3 CHEM 3908 Seminar in Chemical Literature or CHEM 3948 Seminar in Biochemical Literature satisfies GWAR
4 The minimum GPA for these 77-78 units is 2.0
5 CHEM 1000 Foundations of Chemistry satisfies Area 5A
6 The unit range is 2-3 in this area
7 MATH 2010 Calculus for the Biological and Chemical Sciences I, or MATH 2310 Single Variable Calculus I for Engineers, or MATH 2510 Single Variable Calculus I satisfies Area 2
8 PHYS 2110 College Physics I, or PHYS 2210 Physics for Scientists and Engineers I satisfies Area 5A/5C