

# CHEMISTRY, BS, CONCENTRATION IN MANAGEMENT AND MARKETING

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) (<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
<b>General Education Requirements</b>		
	First-Year Seminar (FYS)	2
	Lower Division Area A: Foundational Skills	9
	Lower Division Area B: Natural Sciences <sup>5</sup>	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) <sup>6</sup>	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) <sup>7</sup>	0
	Upper Division Thematic Area C and D	6
	General Education Capstone <sup>5</sup>	0
	<i>General Education Subtotal</i>	41
<b>Major Requirements</b>		
	<i>Lower Division</i> <sup>1</sup>	

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 <sup>2</sup>	2
<i>Upper Division</i> <sup>1</sup>		
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> <sup>1</sup>		
<i>Mathematics</i> <sup>3</sup>		
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> <sup>4</sup>		
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	
<b>Concentration in Management and Marketing</b>		
MGMT 3000	Organizational Behavior	3
MGMT 3100	Human Resource Management	3
MKTG 3000	Marketing Principles	3
<i>Elective Courses</i>		
Select one of the following focus areas (patterns are just suggestions):		6
<i>Management Focus</i>		
MGMT 3090	Career and Managerial Skills	
MGMT 4300	Negotiation, ADR, and Conflict Management	
<i>Logistics/Operations Focus</i>		
MGMT 3020	Introduction to Operations Management	
MKTG 4060	Marketing Channels	
<i>Marketing/Sales Focus:</i>		
MKTG 3010	Consumer Behavior	

MKTG 3020 Advertising & Public Relations

<i>Major Subtotal</i>	<i>77</i>
<b>Additional Units Needed Towards Graduation</b>	<b>1-2</b>
<b>Total Units</b>	<b>119-120</b>

<sup>1</sup> The minimum GPA for these 77-78 units is 2.0

<sup>2</sup> Satisfies Area B1

<sup>3</sup> Satisfies Area B4

<sup>4</sup> Satisfies Area B1/B3

<sup>5</sup> Satisfied in major or cognate

<sup>6</sup> The SELF requirement is met by completing a LD Area C, or D course with a SELF component.

<sup>7</sup> Can be satisfied by exam.