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/)

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/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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td></td>
<td><strong>General Education Requirements</strong></td>
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<tr>
<td></td>
<td>First-Year Seminar (FYS)</td>
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<tr>
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<td>Lower Division Area A: Foundational Skills</td>
<td>9</td>
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<tr>
<td></td>
<td>Lower Division Area B: Natural Sciences</td>
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<tr>
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<td>Lower Division Area C: Arts and Humanities</td>
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<td>Lower Division Area D: Social and Behavioral Sciences</td>
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<td></td>
<td>Lower Division Area E: Student Enrichment and Lifelong Learning (SELF)</td>
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<td>Lower Division Area F: Ethnic Studies</td>
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<td>American Institutions: Government and History</td>
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<td>Junior Year Diversity &amp; Reflection (JYDR)</td>
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<td>Graduation Writing Assessment Requirement (GWAR)</td>
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<td>Upper Division Thematic Area C and D</td>
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<td>General Education Capstone</td>
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<td><strong>General Education Subtotal</strong></td>
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<td><strong>Major Requirements</strong></td>
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<td><strong>Lower Division</strong></td>
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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  2
or CHEM 2240  Foundations of Bioinorganic Chemistry  2
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  3
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

**Cognates**

Mathematics 3
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 4
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 Management and Marketing**

MGMT 3000  Organizational Behavior  3
MGMT 3100  Human Resource Management  3
MKTG 3000  Marketing Principles  3

**Elective Courses**

Select one of the following focus areas (patterns are just suggestions): 6
Management Focus
MGMT 3090  Career and Managerial Skills
MGMT 4300  Negotiation, ADR, and Conflict Management

Logistics/Operations Focus
MKTG 3020  Introduction to Operations Management
MKTG 4060  Marketing Channels

Marketing/Sales Focus:
MKTG 3010  Consumer Behavior
MKTG 3020   Advertising & Public Relations

<table>
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<th>Major Subtotal</th>
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<tr>
<td>Additional Units Needed Towards Graduation</td>
<td>1-2</td>
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<tr>
<td><strong>Total Units</strong></td>
<td><strong>119-120</strong></td>
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</table>

1. The minimum GPA for these 77-78 units is 2.0
2. Satisfies Area B1
3. Satisfies Area B4
4. Satisfies Area B1/B3
5. Satisfied in major or cognate
6. The SELF requirement is met by completing a LD Area C, or D course with a SELF component.
7. Can be satisfied by exam.