CHEMISTRY MAJOR - SECONDARY EDUCATION

Acceptance to Major Requirements

Course Requirements:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 125</td>
<td>Introduction to Chemical Structure and Properties</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 201</td>
<td>Purification and Separation Lab I</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 202</td>
<td>Purification and Chromatography Lab II</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 250</td>
<td>Reactions of Nucleophiles and Electrophiles (Reactivity 1)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 251</td>
<td>Intermediate Reactions of Nucleophiles and Electrophiles (Reactivity 2)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 255</td>
<td>Macroscopic Chemical Analysis</td>
<td>4</td>
</tr>
</tbody>
</table>

Other Requirements: Courses must be either completed or in progress

48-53 credits required

59-63 credits required with ACS

1 additional required courses for Secondary Education (see education website)

ACS Certification

Students taking any of the options above (no concentration or any of the concentrations) can be certified by the ACS with additional courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 318</td>
<td>Microscopic Chemical Analysis</td>
<td>4</td>
</tr>
<tr>
<td>MATH 120</td>
<td>Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 306</td>
<td>Advanced Laboratory Topics</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 330</td>
<td>Chemistry Lab Research</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Hours 11

Additional Requirements:

General Education Requirements:
All undergraduate students must complete the requirements of the Integrations Curriculum (IC) which is designed to ensure all of our students receive a liberal arts education. Please review details of the Integrations Curriculum here (https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/integrations-curriculum/).

Graduation Requirements:
In addition to the Integrations Curriculum, all undergraduate students must meet the following minimum degree requirements to earn their degree from CSB and SJU.

Credits: 124 total credits, 40 of which must be from upper division coursework
GPA: 2.0 or higher*
Residency: At least 24 of your last 32 credits must be completed at CSB/SJU

Please visit Graduation (https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/graduation/) under the Academic Policies and Regulations (https://catalog.csbsju.edu/catalog/academic-programs-policies-regulations/) portion of the catalog for additional details regarding degree requirements.

* Cumulative GPA as well as major(s)/minor(s) GPA. Please note some majors/minors may require a higher GPA to earn their degree.

Chemistry Major with a Minor in Secondary Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 125 &amp; CHEM 201</td>
<td>Introduction to Chemical Structure and Properties and Separation Lab I</td>
<td>4</td>
</tr>
<tr>
<td>EDUC 111</td>
<td>Introduction to Teaching and Learning in a Diverse World</td>
<td>4</td>
</tr>
<tr>
<td>INTG 100</td>
<td>Foundations</td>
<td>4</td>
</tr>
<tr>
<td>MATH 119 &amp; CHEM 202</td>
<td>Calculus I and Reactions of Nucleophiles Electrophiles (Reactivity 1)</td>
<td>4</td>
</tr>
<tr>
<td>INTG 105</td>
<td>College Success</td>
<td>1</td>
</tr>
<tr>
<td>LANG 111</td>
<td>Distinguished Thesis Essay, Research or Creative Project</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Hours 41

Chemistry Major with a Minor in Secondary Education
MATH 120     Calculus II     4
PHYS 105     Physics for the Life Sciences I     4

Hours     16

Second Year

Fall
EDUC 203     Development, Learning, and Mental Health in Childhood and Adolescence     4
LANG 112     4
CHEM 251 & CHEM 203     Intermediate Reactions of Nucleophiles and Electrophiles (Reactivity 2) and Synthesis Lab     4
THEO 100     Theological Explorations     4
EDUC 352     Teaching Reading in the Middle/Secondary Classroom     2

Hours     18

Spring
CHEM 255 & CHEM 205     Macroscopic Chemical Analysis and Chemical Measurement Lab     4
INTG REQ     4
EDUC 379A & EDUC 305     Educational Psychology: Myths Versus Science and Human Exceptionalities: School, Home, and Community     5
LANG 211     4
CHEM 349     Chemistry in Experience and Practice     0
EDUC 213     Clinical Experience for K-12/5-12 Majors     1

Hours     18

Third Year

Fall
EDUC 355     Pedagogy in Grades 9-12 (fall only)     4
CHEM 305     Integrated Laboratory     4
CHEM 318     Microscopic Chemical Analysis     4
CHEM 315     Advanced Reactions (Reactivity 3)     4
Select 2 credit in depth CHEM     2

Hours     18

Spring
THEO Integrations     4
INTG REQ     4
CHEM Elective (2nd of 2 electives)     4
EDUC 390     Ethics in Human Relations     4
CHEM 304     Analytical Method Development and Validation Laboratory     1
CHEM 306     Advanced Laboratory Topics     1

Hours     18

Fourth Year

Fall
PHYS 106     Physics for the Life Sciences II     4
INTG 300     Learning Integrations     4
CHEM XXX (1 of 2 electives)     4
Select 2 credit in depth CHEM or capstone     2
Select 2 credit in depth CHEM     2
EDUC 359A     Issues in Education K-6 or K-8     1

Hours     17

Spring
EDUC 36X     Student Teaching     16

Hours     16

Total Hours     138