Bachelor of Science  
Major in Chemistry  
Student Worksheet

General Education Courses

I. Communication
   - SEGL 101 and SEGL 102
   - SSPH 201

II. Mathematics\(^1\)
   - SMTH 141 and SMTH 142

III. Information Technology
   - SCSC 138, 150; SIMS 101

IV. Natural Science\(^1\)
   - SCHM 111/L and SCHM 112/L

V. Arts and Humanities
   - One fine arts course:
     - SAAS 204; SATH 101, 105, 106;
     - SMUS 110, 140; STHE 161, 170
   - One course from the following:
     (no more than 3 credit hours from a specific discipline)
     - SAAS 204; SAMS 101, 102; SATH 101, 105, 106; SEGL 250, 252, 275,
     - 279, 280, 283, 289, 290, 291; SFLM 240; SMUS 110, 140; SPHL 102, 211;
     - SREL 103; STHE 161, 170

VI. Foreign Language and Culture
   - Foreign Language minimum 102 level
     - SCHI 102; SFRN 102; SGRM 102;
     - SSPN 102
     Placement in a 201 or higher level language course (Students placing into 201 or higher level of a language have satisfied this requirement but will have additional hours in electives, if hours are required in the major).

VII. History
   - SHST 101, 102, 105, or 106

VIII. Social and Behavioral Sciences
   - Two courses from the following with two disciplines represented:
     - SANT 102; SAAS 201; SECO 221,
     - 222; SLEG 101, 103; SGIS 101, 200
     - 320; SPSY 101; SSOC 101;
     - SWST 101

   - Major Requirements\(^{1,2}\)
     - Chemistry 331, 332: 6
     - Organic Chemistry
     - Chemistry 331L, 332L: 2
     - Organic Chemistry Laboratory
     - Chemistry 321: 3
     - Quantitative Analysis
     - Chemistry 321L: 1
     - Quantitative Analysis Laboratory
     - Chemistry 397: Junior Seminar 1
     - Chemistry 511: Inorganic Chemistry
     - Chemistry 541, 542: 6
     - Physical Chemistry
     - Chemistry 541L, 542L: 2
     - Physical Chemistry Laboratory
     - Chemistry 581: Biochemistry I 3
     - Chemistry 599: Senior Seminar 3
     - Four hours selected from the following:
       - Chemistry 522: Instrumental Analysis
       - Chemistry 530: Spectrometric Identification of Organic Compounds
       - Chemistry 582: Biochemistry II
       - Chemistry 583L: Biochemistry Laboratory
       - Chemistry 534: Introductory Polymer Chemistry

   - Supporting Courses
     - Mathematics 241 4
     - Mathematics 315 3
     - Physics 201 and 202 8
     - or Physics 211 and 212

\(^{1}\) A minimum grade of C is required.
\(^{2}\) To receive a chemistry degree, students must complete at least 15 hours of major course credit at USC Upstate.

College of Arts and Sciences  
2011-2012 USC Upstate Catalog  
107
Chemistry majors may select a cognate (12 hours) OR a minor (18-24 hours)

<table>
<thead>
<tr>
<th>Cognate¹</th>
<th>12</th>
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<tbody>
<tr>
<td>Upper division courses selected with advisor’s approval</td>
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<td>OR</td>
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<tr>
<td>Minor¹²</td>
<td>18-24</td>
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<tr>
<td>12 hours must be upper-division coursework</td>
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</tbody>
</table>

¹Minimum grade of C is required for all coursework.
²Up to 6 hours of General Education (less than 300 level) may be used to satisfy requirements of a minor.

### Minor in Chemistry

**Student Worksheet**

**Minor Requirements¹²³**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 111, 111L</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 112, 112L</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 331</td>
<td>3</td>
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<tr>
<td>Chemistry 332</td>
<td>3</td>
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</tbody>
</table>

Students must take a minimum of 10 hours from at least three of five fields below:

- **Organic Chemistry**
  - Chemistry 331L: Organic Chemistry I Lab 1
  - Chemistry 332L: Organic Chemistry II Lab 1
  - Chemistry 530: Spectroscopy 3
  - Chemistry 534: Polymer Chemistry 3

- **Biochemistry**
  - Chemistry 581: Biochemistry I 3
  - Chemistry 582: Biochemistry II 3
  - Chemistry 583L: Biochemistry Lab 1

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Analytical Chemistry</td>
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<tr>
<td>Chemistry 321:</td>
<td>3</td>
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<tr>
<td>Quantitative Analysis</td>
<td></td>
</tr>
<tr>
<td>Chemistry 321L:</td>
<td>1</td>
</tr>
<tr>
<td>Quantitative Analysis Lab</td>
<td></td>
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<tr>
<td>Chemistry 522 and 522L:</td>
<td>4</td>
</tr>
<tr>
<td>Instrumental Analysis</td>
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</tbody>
</table>

- **Physical Chemistry**
  - Chemistry 541: Physical Chemistry I 3
  - Chemistry 541L: Physical Chemistry I Lab 1
  - Chemistry 542: Physical Chemistry II 3
  - Chemistry 542L: Physical Chemistry II Lab 1

- **Inorganic Chemistry**
  - Chemistry 511: Inorganic Chemistry 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Hours Required</td>
<td>24</td>
</tr>
</tbody>
</table>

¹Up to 6 hours of General Education (less than 300 level) may be used to satisfy requirements of a minor.
²Minimum grade of C is required for all coursework.
³A minimum of 12 hours of upper-division coursework is required.