# Academic Plan for a B.S. in Chemistry

## FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Fall</th>
<th></th>
<th>Spring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 151*</td>
<td>4</td>
<td>CHEM 152*</td>
<td>4</td>
</tr>
<tr>
<td>MATH 122A/B (or 125)</td>
<td>5 (3)</td>
<td>MATH 129</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 101</td>
<td>3</td>
<td>ENGL 102</td>
<td>3</td>
</tr>
<tr>
<td>TIER 1</td>
<td>3</td>
<td>TIER 1</td>
<td>3 (or 6)</td>
</tr>
<tr>
<td>Total</td>
<td>13-15</td>
<td>Total</td>
<td>13-16</td>
</tr>
</tbody>
</table>

## SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>Fall</th>
<th></th>
<th>Spring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 380 or MATH 223</td>
<td>3/4</td>
<td>CHEM 395A</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 141</td>
<td>4</td>
<td>PHYS 241</td>
<td>4</td>
</tr>
<tr>
<td>Second Language</td>
<td>4</td>
<td>Second Language</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>16-17</td>
<td>TIER 1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>14-17</td>
<td>Total</td>
<td>14-17</td>
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</table>

## JUNIOR YEAR

<table>
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<tr>
<th>Fall</th>
<th></th>
<th>Spring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 325*</td>
<td>2</td>
<td>CHEM 401A*</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 326*</td>
<td>2</td>
<td>CHEM 404A*</td>
<td>3</td>
</tr>
<tr>
<td>BIOC 462A*~</td>
<td>4</td>
<td>CHEM Elective</td>
<td>3/2</td>
</tr>
<tr>
<td>TIER 1/2</td>
<td>6</td>
<td>TIER 2/Electives</td>
<td>3-9</td>
</tr>
<tr>
<td>Optional Elective</td>
<td>3</td>
<td>Total</td>
<td>12-18</td>
</tr>
<tr>
<td>Total</td>
<td>14-17</td>
<td>Total</td>
<td>12-18</td>
</tr>
</tbody>
</table>

## SENIOR YEAR

<table>
<thead>
<tr>
<th>Fall</th>
<th></th>
<th>Spring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 480A*</td>
<td>3</td>
<td>CHEM 480B* or 481*</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 400A*</td>
<td>3</td>
<td>CHEM 412*</td>
<td>3</td>
</tr>
<tr>
<td>CHEM Elective</td>
<td>3/2</td>
<td>CHEM 400B*</td>
<td>3</td>
</tr>
<tr>
<td>TIER 2/Electives</td>
<td>3-9</td>
<td>Total</td>
<td>12-15</td>
</tr>
<tr>
<td>Total</td>
<td>12-18</td>
<td>Optional Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL UNITS NEEDED: 120**

* Denotes grade of C or better grade required

~Denotes department consent required to enroll-contact CBC advisor

Classes in bold are only offered in the fall or spring semester as shown.

10/5/16
B.S. Chemistry  
Catalog Year 2016–2017

NAME _______________________________  SID _______________  Date______________

FOUNDATION COURSES:

i. Freshman Composition (Complete one sequence)
ENGL 101 (3) _____ ENGL 102 (3) _____ or
ENGL 107 (3) _____ ENGL 108 (3) _____ or
ENGL 109H (3) ______  MCWA____

ii. Mathematics: Satisfied by math pre-major courses

iii. Second Language (Second Semester Proficiency)
______________________________________

TIER ONE COURSES:

i. Individuals and Societies 150 (6 units)*
 __________________________________________
 __________________________________________

ii. Traditions and Cultures 160 (6 units)*
 __________________________________________
 __________________________________________

TIER TWO COURSES:

i. Arts (3 units)
 __________________________________________

ii. Humanities (3 units)
 __________________________________________

iii. Individuals and Societies (3 units)
 __________________________________________

iv. Diversity Emphasis Requirement: One course must meet this requirement. Can be double-dipped with Tier One or Tier Two course
 __________________________________________

Note: Honors options (H) are available to substitute for a number of the listed pre-major and major courses. Courses offered only in the fall or spring semesters are labeled with F or S.
 __________________________________________

PRE-MAJOR COURSES: (17–20 units)

Mathematics
MATH 122A/B (5) or 125 (3) _____
MATH 129 (3) _____
CHEM 380 (3; F) or MATH 223 (4) _____

Physics
PHYS 141 (4) _____
PHYS 241 (4) _____

MAJOR COURSES: (56 units); must earn a C or better in all major courses

General Chemistry
CHEM 151 (4) _____ CHEM 152 (4) _____

Organic Chemistry
CHEM 246A (3; F) _____ CHEM 247A (2; F) _____
CHEM 246B (3; S) _____ CHEM 247B (2; S) _____

Majors Colloquium
CHEM 395A (1; S) _____

Quantitative Analysis (Analytical Chemistry)
CHEM 325 (2) _____ CHEM 326 (2) _____

Instrumental Analysis
CHEM 401A (3; S) _____ CHEM 400A (3; F) _____

Inorganic Chemistry
CHEM 404A (3; S) _____ CHEM 412 (3) _____

Biochemistry
BIOC 462A (4; F) _____

Physical Chemistry
CHEM 480A (3) _____ CHEM 400B (3; S) _____
CHEM 480B (3) or 481 (3; S)

Core Electives (A list of options is available in the advisement report or course catalog. Additional courses should be preapproved with a CBC Advisor before enrollment. A maximum of 3 units in research or preceptor will apply to the Chemistry major.)
Course or Lab (3) _________________     _____
Course or Lab (3) _________________     _____
Course, Lab, Research or Preceptorship (2) ____

10/5/16