# Academic Plan for a B.A. in Biochemistry

## 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><strong>Total</strong></td>
<td>13-15</td>
<td><strong>Total</strong></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 241A/243A</td>
<td>4</td>
<td>CHEM 241B/243B</td>
<td>4</td>
</tr>
<tr>
<td>MCB 181 R/L</td>
<td>4</td>
<td>ECOL 182 R/L</td>
<td>4</td>
</tr>
<tr>
<td>TIER 1</td>
<td>3</td>
<td>TIER 1/2</td>
<td>3</td>
</tr>
<tr>
<td>Second Language</td>
<td>4</td>
<td>Second Language</td>
<td>4</td>
</tr>
<tr>
<td>BIOC 296B (or spring)*</td>
<td>1</td>
<td>BIOC 296B (or fall)*</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15-16</td>
<td><strong>Total</strong></td>
<td>15-16</td>
</tr>
</tbody>
</table>

## Junior Year

<table>
<thead>
<tr>
<th>Fall</th>
<th></th>
<th>Spring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC 462A</td>
<td>4</td>
<td>BIOC 462B</td>
<td>4</td>
</tr>
<tr>
<td>TIER 2</td>
<td>3</td>
<td>BIOC 466 (or Senior year)</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 102, 140 or 141</td>
<td>3/3/4</td>
<td>PHYS 103, 240 or 241</td>
<td>3/3/4</td>
</tr>
<tr>
<td>Second Language</td>
<td>4</td>
<td>Second Language</td>
<td>4</td>
</tr>
<tr>
<td>TIER 2/Elective</td>
<td>3</td>
<td>TIER 2</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>14-18</td>
<td><strong>Total</strong></td>
<td>15-19</td>
</tr>
</tbody>
</table>

## Senior Year

<table>
<thead>
<tr>
<th>Fall</th>
<th></th>
<th>Spring</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Elective</td>
<td>1 -3</td>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Science Elective</td>
<td>3</td>
<td>Science Elective</td>
<td>3</td>
</tr>
<tr>
<td>TIER 2/Electives</td>
<td>6-12</td>
<td>General Electives</td>
<td>6-12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13-18</td>
<td><strong>Total</strong></td>
<td>12-18</td>
</tr>
</tbody>
</table>

**Total Units Needed:** 120
**Upper Division Units Needed:** 42

* Denotes grade of C or better required.
~Denotes department consent required to enroll.

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

Please note that this checklist indicates BIOCBA requirements.

Additional coursework not listed on this page is required in order to graduate.

3/23/2017
GENERAL EDUCATION COURSES:

i. Freshman Composition (Complete one sequence)
   ENGL 101 (3) _____ and ENGL 102 (3) _____ or
   (ENGL 106 (3) _____)*
   ENGL 107 (3) _____ and ENGL 108 (3) _____ or
   ENGL 109H (3) _____

ii. Mathematics: Satisfied by math pre-major courses

iii. Second Language (Fourth 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.

*Some students may be required to take ENGL 106 prior to taking ENGL 107. If not, ENGL 107 and ENGL 108 will complete foundation composition requirements.

FOUNDATION COURSES: (28-32 units)

Introductory Biology
   MCB 181R and L (4) _____
   ECOL 182R and L (4) _____

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

Mathematics
   MATH 122A/B (5) or 125 (3) _____
   MATH 129 (3) or MATH 263 (3) _____

Physics
   PHYS 102 (3), 140 (3) or 141 (4) _____
   PHYS 103 (3), 240 (3) or 241 (4) _____

MAJOR COURSES: (28-33 units)

Organic Chemistry
   CHEM 241A (3) _____ CHEM 243A (1) _____
   CHEM 241B (3) _____ CHEM 243B (1) _____

Biochemistry
   BIOC 296B Intro to Biochemical Research (1) _____
   BIOC 462A Biochemistry (4; F) _____
   BIOC 462B Biochemistry (4; S) _____
   BIOC 466 Biochemistry of Nucleic Acids (4; S) _____

Science Electives (Complete six units of 300-400 level courses from the list below or as preapproved by a CBC advisor.)

   BIOC 462B, 466 _____
   BME 486 _____
   CHEE 477R _____
   CHEM 450 _____
   ECOL 320, 326, 474 _____
   MATH 363 _____
   MCB 302, 304, 325, 340, 360, 410, 411,480 _____
   MCB 302, 304, 325, 340, 360, 410, 411,480 _____
   MIC 328R, 428R _____
   NROS 307,310 _____
   NSC 408 _____
   PHCL 412 _____
   PLS 312, 359, 360, 448A _____
   PSIO 380, 420, 431, 484 _____

Total units completed: _____
Total upper division units completed: _____