# B.S. Bioinformatics (Ecology & Evolutionary Biology Track)

*Catalog Year 2019-2020*

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<th>NAME ______________________________</th>
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## GENERAL EDUCATION COURSES:

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

ii. Mathematics: Satisfied by math foundation 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. It can be double-dipped with any Tier One or Tier Two course.*  
________________________________________

## FOUNDATION COURSES *(38-40 units):*

### General Chemistry
CHEM 151 (4) ______ CHEM 152 (4) ______  
or  
CHEM 141 & 143 (4) ______ CHEM 142 & 144 (4) ______

### Organic Chemistry
CHEM 241A & 243A (4) ______  
CHEM 241B & 243B (4) ______

### Biology
ECOL 182 R & L (4) ______  
MCB 181R & L (4) ______

### Mathematics
MATH 122A/B (5) or MATH 125 (3) ______  
MATH 129 (3) ______

### Computer Science
CSC 110 (4) or ISTA 130 (4) ______  
CSC 120 (4) ______

### BIOINFORMATICS MAJOR CORE COURSES *(18 units):*
ECOL 296B (F; 1) ______ CSC 250 (S; 3) ______  
CSC 345 (4) ______ ECOL 346 (S; 4) ______  
CSC 245 (3) or MATH 243 (3) ______  
MATH 263 (3) or ECOL 379 (3; S) ______

### ECOLOGY & EVOLUTIONARY BIOLOGY FOCUS *(24 units):*
ECOL 320 (F; SS; 3) ______ ECOL 335 (S; 4) ______  
ECOL 302 (F; 3) ______ ECOL 326 (F; SS 3) ______

### Electives *(At least 11 units of upper division Bioinformatics electives are required.)*
________________________________________(  )  
________________________________________(  )  
________________________________________(  )  
________________________________________(  )  

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**Note:** Courses offered only in the fall, spring, or summer semesters are labeled with F, S, or SS.

*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.*
# Academic Plan for a B.S. in Bioinformatics  
(Ecology & Evolutionary Biology Track)

<table>
<thead>
<tr>
<th>SEMESTER 1</th>
<th>Units</th>
<th>SEMESTER 2</th>
<th>Units</th>
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<tbody>
<tr>
<td>CHEM 151 or 141 + 143</td>
<td>4</td>
<td>CHEM 152 or 142 + 144</td>
<td>4</td>
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<tr>
<td>MATH 122A/B or MATH 125</td>
<td>3 – 5</td>
<td>CSC 110 or ISTA 130</td>
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<tr>
<td>ENGL 101</td>
<td>3</td>
<td>MATH 129</td>
<td>3</td>
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<tr>
<td>Tier 1</td>
<td>3</td>
<td>ENGL 102</td>
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<tr>
<td>ECOL 296B</td>
<td>1</td>
<td>Tier 1</td>
<td>3</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td><strong>14 - 16</strong></td>
<td><strong>TOTALS</strong></td>
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<tr>
<td>CHEM 241A + 243A</td>
<td>4</td>
<td>CHEM 241B + 243B</td>
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<tr>
<td>MCB 181R + 181L</td>
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<td>ECOL 182R + 182L</td>
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<td>MATH 263 (or ECOL 379 in Spring)</td>
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<td>CSC 245 or MATH 243</td>
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<tr>
<td>CSC 120</td>
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<td>Tier 2</td>
<td>3</td>
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<td>Major Elective</td>
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<tr>
<td>Tier 1</td>
<td>4</td>
<td>ECOL 346</td>
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<tr>
<td>CSC 345</td>
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<td>ECOL 335</td>
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<td>ECOL 320</td>
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<td>CSC 250</td>
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<tr>
<td>ECOL 302</td>
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<td>Major Elective</td>
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<tr>
<td>Second Language</td>
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<td>Major Elective</td>
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<tr>
<td>Tier 2</td>
<td>3</td>
<td>Tier 2</td>
<td>3</td>
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<tr>
<td>Major Elective</td>
<td>3</td>
<td>Second Language</td>
<td>4 – 5</td>
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<tr>
<td>ECOL 326</td>
<td>3</td>
<td><strong>TOTALS</strong></td>
<td><strong>15 - 16</strong></td>
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<td><strong>17 - 18</strong></td>
<td><strong>TOTALS</strong></td>
<td><strong>15 - 16</strong></td>
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**TOTAL UNITS NEEDED: 120**  
**UPPER DIVISION UNITS NEEDED: 42**

Please note that this checklist indicates BIOINBS: EEB requirements. Additional coursework not listed on this page is required in order to graduate.