### 1st Semester Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommended Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Information Competence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written English Proficiency</td>
<td>ENG 114</td>
<td>3</td>
</tr>
<tr>
<td>GE 1 Quantitative Reasoning also satisfies Major Lower Division</td>
<td>MATH 226</td>
<td>4</td>
</tr>
<tr>
<td>GE 2 Physical and Biological Sciences, Category A also satisfies Major Lower Division</td>
<td>CHEM 113</td>
<td>5</td>
</tr>
<tr>
<td>GE 2 Physical and Biological Sciences, Category B also satisfies Major Lower Division</td>
<td>BIOL 230</td>
<td>5</td>
</tr>
</tbody>
</table>

**Note:** Review the Bulletin for GE II requirements in the following areas:
- LLD-Lifelong Development;
- AERM-American Ethnic and Racial Minorities;
- L/F-Laboratory or Fieldwork.

**Totals:** 17

### 2nd Semester Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommended Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE 1 Oral Communication</td>
<td>COMM 130</td>
<td>3</td>
</tr>
<tr>
<td>GE 1 Critical Thinking</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Major Lower Division</td>
<td>BIOL 240</td>
<td>5</td>
</tr>
<tr>
<td>Major Lower Division</td>
<td>CHEM 130</td>
<td>3</td>
</tr>
<tr>
<td>Major Lower Division</td>
<td>MATH 227 or PHYS 111 &amp; PHYS 112</td>
<td>4 to 5</td>
</tr>
</tbody>
</table>

**Totals:** 18 to 19

### 3rd Semester Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommended Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE 1 Written Communication also satisfies University Written English Proficiency</td>
<td>ENG 214</td>
<td>3</td>
</tr>
<tr>
<td>GE 2 Behavioral and Social Sciences</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Major Lower Division</td>
<td>CHEM 215 &amp; CHEM 216 or MATH 227 or PHYS 111 &amp; PHYS 112 or PHYS 121 &amp; PHYS 122</td>
<td>4</td>
</tr>
<tr>
<td>Major Upper Division</td>
<td>BIOL 355</td>
<td>3</td>
</tr>
<tr>
<td>Major Upper Division</td>
<td>BIOL 500 or BIOL 505</td>
<td>4</td>
</tr>
</tbody>
</table>

**Totals:** 17

### 4th Semester Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommended Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE 2 Humanities and Creative Arts</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Major Lower Division</td>
<td>CHEM 215 &amp; CHEM 216 or MATH 227 or PHYS 111 &amp; PHYS 112 or PHYS 121 &amp; PHYS 122</td>
<td>4 to 5</td>
</tr>
<tr>
<td>Major Upper Division</td>
<td>BIOL 337</td>
<td>4</td>
</tr>
<tr>
<td>Major Upper Division</td>
<td>BIOL 514</td>
<td>5</td>
</tr>
</tbody>
</table>

**Totals:** 16 to 17

### 5th Semester Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommended Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>US History</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE 2 Humanities and Creative Arts</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE 3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Major Upper Division</td>
<td>BIOL 529</td>
<td>4</td>
</tr>
<tr>
<td>Major Upper Division (Elective on Advisement)</td>
<td>BIOL 500 or BIOL 505</td>
<td>4</td>
</tr>
</tbody>
</table>

**Totals:** 17

### 6th Semester Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommended Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Written English Proficiency/GWAR (consult with Major advisor regarding GWAR) or University Elective</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE 2 Behavioral and Social Sciences</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Major Upper Division</td>
<td>BIOL 458</td>
<td>3</td>
</tr>
<tr>
<td>Major Upper Division</td>
<td>BIOL 525 &amp; BIOL 526</td>
<td>5</td>
</tr>
</tbody>
</table>

**Totals:** 14

### 7th Semester Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommended Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>GE 2 Behavioral and Social Sciences</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE 2 Humanities and Creative Arts</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE 3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Major Upper Division (Elective on Advisement)</td>
<td>BIOL 504 or BIOL 530 or BIOL 532</td>
<td>3 to 4</td>
</tr>
</tbody>
</table>

**Totals:** 12 to 13

### 8th Semester Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Recommended Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Government and California</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>GE 3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Major Upper Division (Elective on Advisement)</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>University Elective</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

**Totals:** 12
BS Degree in Biology - Botany (671107)

Minimum Number of Units in Major = 67

Note: A minimum of 40 upper division units must be completed for degree.

This roadmap is a recommendation only. Most upper division courses are taught no more than once a year.
Meet with a major advisor early to develop a customized course plan and to determine whether you can take a course earlier or later if desired.
Senior Botany majors may have an opportunity to undertake individual research projects - consult with your advisor for details.

Department Website:  http://www.sfsu.edu/~biology/