## 2019 - 2020 Major Map

**Biological Sciences (Neurobiology, Physiology and Behavior), BS**

**School/College:** The College of Liberal Arts and Sciences  
**Location:** Tempe campus  

### LABSCABS

#### Term 1 - 0 - 15 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
</table>
| LIA 101: Student Success in the College of Liberal Arts and Sciences | 1 | | • Mathematics Placement Assessment score determines placement in mathematics and science courses  
| BIO 281: Conceptual Approaches to Biology for Majors I (SQ) | 4 | C | • LIA 101, ASU 101, or other First Year Seminar required of all freshman students.  
| CHM 113: General Chemistry I (SQ) | 4 | C | • An SAT, ACT, Accuplacer, IELTS, or TOEFL score determines placement into first-year composition courses  
| ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition | 3 | C | • Students transferring General Biology I (BIO 181) will fulfill BIO 281 requirement  
| STP 231: Statistics for Life Science (CS) | 3 | C | • Students transferring General Statistics (STP 226 or PSY 230) will fulfill STP 231 requirement  

**Term hours subtotal:** 15

---

#### Term 2 - 15 - 32 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
</table>
| BIO 282: Conceptual Approaches to Biology for Majors II | 4 | C | • Join a student organization  
| CHM 116: General Chemistry II (SQ) | 4 | C | • Create a resume & [Handshake](#) account with the Career & Professional Development Center  
| ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition | 3 | C | • Attend a Pre-Health 101 Session  
| MAT 251: Calculus for Life Sciences (MA) | 3 | C | • Explore extracurriculars (i.e. service learning, community service, internships, research, student involvement, shadowing, etc.)  
| Social-Behavioral Sciences (SB) AND Global Awareness (G) | 3 | | • Students transferring General Biology II (BIO 182) will fulfill BIO 282 requirement  
| Complete BIO 281 AND BIO 282 course(s). | | | • Students transferring Calculus (MAT 270 or MAT 210) will fulfill MAT 251 requirement  

**Complete ENG 101 OR ENG 105 OR ENG 107 course(s).**  

**Term hours subtotal:** 17

---

#### Term 3 - 32 - 46 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
</table>
| BIO 340: General Genetics | 4 | C | • Pre-health students should take CHM 233 and CHM 237 instead of CHM 231 and 235 this term. See pre-health [website](#) for more information  
| CHM 231: Elementary Organic Chemistry (SQ) AND CHM 235: Elementary Organic Chemistry Laboratory (SQ) | 4 | C | • If CHM 233 and 237 are taken, then CHM 234 and 238 must be taken the following semester  
| CLAS Science and Society Elective | 3 | C | • Explore extracurriculars (i.e. service learning, community service, internships, research, student involvement, shadowing, etc.)  
| Humanities, Arts and Design (HU) AND Cultural Diversity in the U.S. (C) | 3 | | • Attend a Study Abroad 101 Session  
| Complete First-Year Composition requirement. | | | • Explore minors or certificates  
| Complete Mathematics (MA) requirement. | | | |

**Term hours subtotal:** 14
### Term 4 46 - 62 Credit Hours

<table>
<thead>
<tr>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 345: Organic Evolution</td>
<td>3</td>
<td>C</td>
<td>• Pre-health students should take CHM 234 and CHM 238 instead of an elective this term. See pre-health website for more information</td>
</tr>
<tr>
<td>Literacy and Critical Inquiry (L)</td>
<td>3</td>
<td></td>
<td>• If CHM 233 and 237 are taken, then CHM 234 and 238 must be taken the following semester</td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB)</td>
<td>3</td>
<td></td>
<td>• Meet with the Career &amp; Professional Development Center to learn how to develop professional skills</td>
</tr>
<tr>
<td>Complete 2 courses:</td>
<td></td>
<td></td>
<td>• Explore extracurriculars (i.e. service learning, community service, internships, research, student involvement, shadowing, etc.)</td>
</tr>
<tr>
<td>Elective</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Term hours subtotal:</strong></td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Term 5 62 - 78 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 331: Animal Behavior OR BIO 360: Animal Physiology</td>
<td>3</td>
<td>C</td>
<td>• Pre-health students should take PHY 111 and PHY 113 instead of PHY 101 this term. See pre-health website for more information</td>
</tr>
<tr>
<td>PHY 101: Introduction to Physics (SQ)</td>
<td>4</td>
<td>C</td>
<td>• Meet with your advisor to discuss ways to maximize your remaining time at ASU (i.e. pre-health; 4+1 Masters Programs; study abroad)</td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU) AND Historical Awareness (H)</td>
<td>3</td>
<td></td>
<td>• Explore graduate school or full-time opportunities</td>
</tr>
<tr>
<td>Complete 2 courses:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Term hours subtotal:</strong></td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Term 6 78 - 93 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 331: Animal Behavior OR BIO 360: Animal Physiology</td>
<td>3</td>
<td>C</td>
<td>• Pre-health students should take PHY 112 and PHY 114 this term. See pre-health website for more information</td>
</tr>
<tr>
<td>BIO 436: Sociobiology and Behavioral Ecology OR BIO 461: Comparative Animal Physiology OR BIO 462: Endocrine Physiology</td>
<td></td>
<td></td>
<td>• Use Handshake to research employment opportunities</td>
</tr>
<tr>
<td>OR BIO 467: Neurobiology OR MIC 420: Immunology: Molecular and Cellular Foundations or BIO 420: Immunology: Molecular and Cellular Foundations</td>
<td>3</td>
<td>C</td>
<td>• Explore graduate school or full-time opportunities</td>
</tr>
<tr>
<td>Upper Division CLAS Science and Society Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Complete 2 courses:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Term hours subtotal:</strong></td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Term 7 93 - 107 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 436: Sociobiology and Behavioral Ecology OR BIO 461: Comparative Animal Physiology OR BIO 462: Endocrine Physiology</td>
<td></td>
<td></td>
<td>• Explore or apply for full-time career opportunities or graduate school</td>
</tr>
<tr>
<td>OR BIO 467: Neurobiology OR MIC 420: Immunology: Molecular and Cellular Foundations or BIO 420: Immunology: Molecular and Cellular Foundations</td>
<td>3</td>
<td>C</td>
<td>• Meet with your advisor to verify remaining degree requirements have been met prior to Term 8</td>
</tr>
<tr>
<td>BCH 361: Advanced Principles of Biochemistry</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Major Comparative Structure and Function Course</td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Literacy and Critical Inquiry (L)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Elective</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Term hours subtotal:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
• All students pursuing a B.S. or B.S.P. degree in the College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at [https://clas.asu.edu/resources/science-society](https://clas.asu.edu/resources/science-society). At least one of the two courses must be upper division. Students must earn a C or better in the courses, and no more than one of the two can also be used to simultaneously fill a requirement of the major, minor or related area. Science and Society courses cannot also be used to fill the general studies HU, SB, SQ or SG requirements.

### Term 8 107 - 120 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by 🌟</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Laboratory/Research Course</td>
<td>1-4</td>
<td>C</td>
<td>Continue to apply for full-time career opportunities or graduate school</td>
</tr>
<tr>
<td>Complete 2 courses:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Major Electives</td>
<td>6-8</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Social-Behavioral Sciences (SB) OR Upper Division Humanities, Arts and Design (HU)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Elective OR BIO 484: Internship OR MIC 484: Internship</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Term hours subtotal:** 14

<table>
<thead>
<tr>
<th>Hour</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>6-8</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Term hours subtotal:** 13-18

---

**Notes:**

- Please keep in mind that the applicability of a specific transfer course toward an ASU degree program depends on the requirements of the department, division, college or school in which you are enrolled at ASU. Transfer agreements that
guarantee the completion of university level requirements do not necessarily meet college and major requirements. Please consult with an advisor for more information.

**Total Hours:** 120  
**Upper Division Hours:** 45 minimum  
**Major GPA:** 2.00 minimum  
**Cumulative GPA:** 2.00 minimum  
**Total hrs at ASU:** 30 minimum  
**Hrs Resident Credit for Academic Recognition:** 56 minimum  
**Total Community College Hrs:** 64 maximum  
**Total College Residency Hrs:** 12 minimum

General Studies Awareness Requirements:
- Cultural Diversity in the U.S. (C)
- Global Awareness (G)
- Historical Awareness (H)

First-Year Composition

General Studies designations listed on the major map are current for the 2019 - 2020 academic year.

**General University Requirements Legend**

General Studies Core Requirements:
- Literacy and Critical Inquiry (L)
- Mathematical Studies (MA)
- Computer/Statistics/Quantitative Applications (CS)
- Humanities, Arts and Design (HU)
- Social-Behavioral Sciences (SB)
- Natural Science - Quantitative (SQ)
- Natural Science - General (SG)