# 2019 - 2020 Major Map

## Biophysics, BS

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

### Term 1 - 0 - 15 Credit Hours Critical course signified by ☀

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 270: Calculus with Analytic Geometry I (MA)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>BIO 181: General Biology I (SQ)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>BIO 182: General Biology II (SG)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>LIA 101: Student Success in the College of Liberal Arts and Sciences</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**  
- Maintain 2.50 GPA in Critical Tracking Courses.

**Term hours subtotal:** 15

### Term 2 - 15 - 30 Credit Hours Critical course signified by ☀

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 271: Calculus with Analytic Geometry II (MA)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>PHY 150: Physics I (SQ)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>PHY 151: Physics II (SQ)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>ENG 101 or ENG 105: First-Year Composition OR ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
</tr>
</tbody>
</table>

**Notes:**  
- Complete ENG 101 OR ENG 105 OR ENG 107 course(s).
- Maintain 2.50 GPA in Critical Tracking Courses.

**Term hours subtotal:** 15

### Term 3 - 30 - 45 Credit Hours Critical course signified by ☀

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 272: Calculus with Analytic Geometry III (MA)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>PHY 151: Physics II (SQ)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>CHM 117: General Chemistry for Majors I (SQ) AND CHM 111: General Chemistry Laboratory for Majors I (SQ)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>CLAS Science and Society Elective</td>
<td>3</td>
<td>C</td>
</tr>
</tbody>
</table>

**Notes:**  
- Complete Mathematics (MA) requirement.
- Maintain 2.50 GPA in Critical Tracking Courses.

**Term hours subtotal:** 15

### Term 4 - 45 - 62 Credit Hours Critical course signified by ☀

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 201: Mathematical Methods in Physics I (CS)</td>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>PHY 252: Physics III (SQ)</td>
<td>4</td>
<td>C</td>
</tr>
</tbody>
</table>

**Notes:**  
- CHM 116 may be used in place of CHM 118 and CHM 112, and students who took CHM 113 must take this course instead of the CHM 118 and CHM 112.
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. At least one of the two courses must be maintained 2.50 GPA in Critical Tracking Courses.

<table>
<thead>
<tr>
<th>Term 5 62 - 77 Credit Hours</th>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 345: Physical Chemistry I</td>
<td>3</td>
<td>C</td>
<td></td>
<td>• Gain research experience</td>
</tr>
<tr>
<td>BIO 360: Animal Physiology OR BIO 353: Cell Biology</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division CLAS Science and Society Elective</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literacy and Critical Inquiry (L)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
<td>15</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Term 6 77 - 92 Credit Hours</th>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 346: Physical Chemistry II</td>
<td>3</td>
<td>C</td>
<td></td>
<td>• Use Handshake to research employment opportunities</td>
</tr>
<tr>
<td>PHY 312: Mechanics and Electromagnetism</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
<td>15</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Term 7 92 - 107 Credit Hours</th>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 371: Driving Forces in Biology</td>
<td>3</td>
<td>C</td>
<td></td>
<td>• Develop your professional online presence</td>
</tr>
<tr>
<td>PHY 472: Advanced Biophysics Lab</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Literacy and Critical Inquiry (L)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Elective OR PHY 484: Internship</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Term 8 107 - 120 Credit Hours</th>
<th>Necessary course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 473: From Molecules to Cells</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete 3 courses:</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Elective</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
<td>13</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- MAT 275 (Modern Differential Equations) AND MAT 342 (Linear Algebra) may be taken in place of PHY 201. The combination MAT 275 + MAT 342 is sufficient, but PHY 201 is recommended.
- Explore research fields within physics.
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.

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 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)

**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.