### 2018 - 2019 Major Map

**Applied Biological Sciences (Secondary Education in Biology), BS**

**School/College:** College of Integrative Sciences and Arts  
**Location:** Polytechnic campus  
**TSABSSBS**

<table>
<thead>
<tr>
<th>Term</th>
<th>0 - 14 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Term 1</td>
<td>0 - 14 Credit Hours</td>
<td>Critical course signified by</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 181: General Biology I (SQ)</td>
<td>4</td>
<td>C</td>
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<tr>
<td>ASU 101-UC: The ASU Experience</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAT 210: Brief Calculus (MA) OR MAT 251: Calculus for Life Sciences (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB)</td>
<td>3</td>
<td></td>
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</tbody>
</table>

Term hours subtotal: 14

- An SAT, ACT, Accuplacer, IELTS or TOEFL score determines placement into first-year composition courses
- ASU Mathematics Placement Assessment score determines placement in mathematics course
- ASU 101 or college-specific equivalent First-Year Seminar required of all freshman students
- Select your career interest area and play me3@ASU.

### Term 2 14 - 31 Credit Hours

<table>
<thead>
<tr>
<th>Term</th>
<th>14 - 31 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 182: General Biology II (SG)</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHM 113: General Chemistry I (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 101 or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cultural Diversity in the U.S. (C)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU)</td>
<td>3</td>
<td></td>
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</tbody>
</table>

Complete ENG 101 OR ENG 105 OR ENG 107 course(s).  
Milestone: DPS Fingerprint Clearance Card.

Term hours subtotal: 17

- Join a student club or professional organization.

### Term 3 31 - 45 Credit Hours

<table>
<thead>
<tr>
<th>Term</th>
<th>31 - 45 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 116: General Chemistry II (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MIC 205: Microbiology (SG) AND MIC 206: Microbiology Laboratory (SG)</td>
<td>4</td>
<td>C</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Historical Awareness (H)</td>
<td>3</td>
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</tbody>
</table>

Complete Mathematics (MA) requirement.  
Elective  
Milestone: Intent to Progress Online Form.

Term hours subtotal: 14

- Secure a part-time job or volunteer experience.

### Term 4 45 - 61 Credit Hours

<table>
<thead>
<tr>
<th>Term</th>
<th>45 - 61 Credit Hours</th>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 101: Introduction to Physics (SQ) OR PHY 111: General Physics (SQ) AND PHY 113: General Physics Laboratory (SQ)</td>
<td>4</td>
<td>C</td>
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<tr>
<td>Global Awareness (G)</td>
<td>3</td>
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<td></td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU)</td>
<td>3</td>
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</tbody>
</table>

- Students considering Graduate school or health professions should complete the PHY
<table>
<thead>
<tr>
<th>Term 5 61 - 77 Credit Hours Necessary course signified by ★</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>★ ABS 350: Applied Statistics (CS)</td>
<td>3</td>
<td>C</td>
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</tr>
<tr>
<td>★ ABS 370: Ecology</td>
<td>3</td>
<td>C</td>
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</tr>
<tr>
<td>CHM 231: Elementary Organic Chemistry (SQ) AND CHM 235:</td>
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<tr>
<td>★ Elementary Organic Chemistry Laboratory (SQ) OR CHM 233:</td>
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<tr>
<td>★ General Organic Chemistry I AND CHM 237: General Organic</td>
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<tr>
<td>Chemistry Laboratory I</td>
<td></td>
<td></td>
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<tr>
<td>Upper Division Social-Behavioral Sciences (SB) OR Upper</td>
<td>3</td>
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</tr>
<tr>
<td>Division Humanities, Arts and Design (HU)</td>
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<td></td>
</tr>
<tr>
<td>★ Elective</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>Term hours subtotal:</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Term 6 77 - 94 Credit Hours Necessary course signified by ★**

- **3**
- **BIO 340: General Genetics**
- **4 C**
- **BIO 360: Animal Physiology OR ABS 314: Applied Plant Physiology OR ABS 311: Molecular and Cellular Biology**
- **3 C**
- **BIO 480: Methods of Teaching Biology OR SED 403: Secondary Principles, Curriculum and Methods**
- **3 C**
- **SED 398: Clinical Experience**
- **1 C**
- **SPE 417: Inclusion Practices at the Secondary Level**
- **3 C**

Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).

**Term hours subtotal:** 17

**Term 7 94 - 108 Credit Hours Necessary course signified by ★**

- **ABS 490: Applied Biological Sciences Seminar**
- **1 C**
- **RDG 323: Literacy Processes in Content Areas**
- **3 C**
- **SED 322: Classroom Leadership in Secondary Schools (L)**
- **3 C**
- **SED 496: Clinical Experience III**
- **1 C**
- **TEL 311: Instruction and Management in the Inclusive Classroom**
- **3 C**
- **BLE 407: SEI for Secondary Students**
- **3 C**

**Term hours subtotal:** 14

**Term 8 108 - 120 Credit Hours Necessary course signified by ★**

- **SED 478: Student Teaching: Secondary Education (Grades 6-12)**
- **12 C**

**Term hours subtotal:** 12

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111/113 and PHY 112/114 sequence, using PHY 112/114 in place of electives. All other students will complete PHY 101.

**Notes**
- Students considering Graduate school or health professions should complete the Organic Chemistry Sequence of both CHM 233/237 and CHM 234/238 sequence, using CHM 234/238 in place of electives. All other students will complete CHM 231/235.
- Network in your career interest area.
- Acceptance to Mary Lou Fulton Teacher's College Secondary Education professional program must be completed.

**Notes**
- Use Handshake to research employment opportunities.
- Gather professional references.
- Apply for full-time career opportunities.
Notes:

- Students must complete a minimum of 12 credit hours of science courses offered by the College of Integrative Sciences and Arts.
  Select from ABS, CHM, BIO, PHY, and MIC prefixes.

**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

**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 2018 - 2019 academic year.