# 2019 - 2020 Major Map

**Applied Biological Sciences (Applied Biological Sciences), BS**

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

**Term 1** - 0 - 14 Credit Hours  
**Critical course signified by:**  
**Hours** | **Minimum Grade** | **Notes**  
--- | --- | ---  
BIO 181: General Biology I (SQ) | 4 | C  
ASU 101-UC: The ASU Experience | 1 |  
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  
MAT 210: Brief Calculus (MA) OR MAT 251: Calculus for Life Sciences (MA) | 3 | C  
Social-Behavioral Sciences (SB) | 3 |  
**Term hours subtotal:** 14

**Term 2** - 14 - 28 Credit Hours  
**Critical course signified by:**  
**Hours** | **Minimum Grade** | **Notes**  
--- | --- | ---  
BIO 182: General Biology II (SG) | 4 | C  
CHM 113: General Chemistry I (SQ) | 4 | C  
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  
Humanities, Arts and Design (HU) | 3 |  
Complete ENG 101 OR ENG 105 OR ENG 107 course(s). |  |  
**Term hours subtotal:** 14

**Term 3** - 28 - 42 Credit Hours  
**Critical course signified by:**  
**Hours** | **Minimum Grade** | **Notes**  
--- | --- | ---  
CHM 116: General Chemistry II (SQ) | 4 | C  
PHY 101: Introduction to Physics (SQ) OR PHY 111: General Physics (SQ) AND PHY 113: General Physics Laboratory (SQ) | 4 | C  
Applied Biological Sciences Track | 3 | C  
Humanities, Arts and Design (HU) | 3 |  
Complete Mathematics (MA) requirement. |  |  
**Term hours subtotal:** 14

**Term 4** - 42 - 58 Credit Hours  
**Critical course signified by:**  
**Hours** | **Minimum Grade** | **Notes**  
--- | --- | ---  
PHY 112: General Physics (SQ) AND PHY 114: General Physics Laboratory (SQ) OR Elective | 3-4 | C  
Literacy and Critical Inquiry (L) | 3 |  
**Students considering graduate school or health professions should complete the following:** CHM 233 and CHM 237, and CHM 234 and CHM 238 (instead of CHM 231 and CHM 235).  
**Students considering graduate school or health professions should complete the PHY 111/113 and PHY 112/114 sequence. All other students will complete PHY 101 and elective hours.**  
**Secure a part-time job or volunteer experience.**
Social-Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C) 3

Elective 3

Term hours subtotal: 16-17

<table>
<thead>
<tr>
<th>Term 5 58 - 74 Credit Hours</th>
<th>Necessary course signified by 🌟</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>ABS 370: Ecology</td>
<td></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>CHM 234: General Organic Chemistry II AND CHM 238: General Organic Chemistry Laboratory II OR Elective</td>
<td>4</td>
<td>C</td>
<td>* Build your professional connections -- join the ASU Mentor Network</td>
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<tr>
<td>Applied Biological Sciences Track</td>
<td></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Humanities, Arts and Design (HU) AND Historical Awareness (H) OR Upper Division Social-Behavioral Sciences (SB) AND Historical Awareness (H)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
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<tr>
<td>Elective</td>
<td></td>
<td>3</td>
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Term hours subtotal: 16

<table>
<thead>
<tr>
<th>Term 6 74 - 87 Credit Hours</th>
<th>Necessary course signified by 🌟</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 360: Animal Physiology OR ABS 314: Applied Plant Physiology OR ABS 311: Molecular and Cellular Biology</td>
<td>3</td>
<td>C</td>
<td>* Use Handshake to research employment opportunities.</td>
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<tr>
<td>Upper Division Applied Biological Sciences Track</td>
<td></td>
<td>3</td>
<td>C</td>
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<tr>
<td>Global Awareness (G)</td>
<td></td>
<td>3</td>
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<tr>
<td>Elective</td>
<td></td>
<td>4</td>
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Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).

Term hours subtotal: 13

<table>
<thead>
<tr>
<th>Term 7 87 - 104 Credit Hours</th>
<th>Necessary course signified by 🌟</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ABS 490: Applied Biological Sciences Seminar</td>
<td></td>
<td>1</td>
<td>C</td>
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<tr>
<td>BIO 340: General Genetics</td>
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<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Applied Biological Sciences Track</td>
<td></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Literacy and Critical Inquiry (L)</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Division Elective</td>
<td></td>
<td>3</td>
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Term hours subtotal: 17

<table>
<thead>
<tr>
<th>Term 8 104 - 120 Credit Hours</th>
<th>Necessary course signified by 🌟</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Complete 2 courses: Upper Division Applied Biological Sciences Track</td>
<td>6</td>
<td>C</td>
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<tr>
<td>Complete 3 courses: Upper Division Elective</td>
<td>10</td>
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Term hours subtotal: 16

* Students select one of two Applied Biological Sciences Tracks and complete 18 hours from within that track.
Applied Biological Sciences Health Track

ABS 302: Ethical and Policy Issues in Biology
ABS 312: Structure and Function
ABS 318: Unseen Life on Earth
ABS 355: Ecology and Adaptations of Vertebrates
ABS 394: Food and Human Health
ABS 494: Medicine and Culture
ABS 417: Comparative Immunology
ABS 494: Internship
ABS 494: Anatomy Practicum
ABS 494: Emerging Infections & Epidemics
ABS 494: Natural Products & Drug Discovery
BCH 361: Advanced Principles of Biochemistry AND BCH 367: Elementary Biochemistry Laboratory
BIO 201: Human Anatomy and Physiology I (SG)
BIO 202: Human Anatomy and Physiology II (SG)
BIO 351: Developmental Biology
MIC 205: Microbiology (SG) AND MIC 206: Microbiology Laboratory (SG)
SPA 294: Intermediate Spanish for Health Professionals

Applied Biological Sciences General Biology Track

ABS Elective
BIO Elective
BCH Elective
MIC Elective

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)
• 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.