## 2019 - 2020 Major Map
### Secondary Education (Biological Sciences), BAE

**School/College:** Mary Lou Fulton Teachers College  
**Location:** Polytechnic campus, Tempe campus, West campus  
TEBIOBAE

### Term 1 - 14 Credit Hours  
**Critical course signified by:**  
**Hours** | **Minimum Grade** | **Notes**
--- | --- | ---
BIO 181: General Biology 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  
MAT 170: Precalculus (MA) | 3 | C  
TEL 101: Professional Educator Series: The Student Experience | 1 |  
TEL 111: Exploration of Education (SB) | 3 | C  
**Term hours subtotal:** 14

- An SAT, ACT, Accuplacer, IELTS, or TOEFL score determines placement into first-year composition courses  
- Mathematics Placement Assessment score determines placement in mathematics course  
- ASU 101 or college-specific equivalent  
- First-Year Seminar required of all freshman students  
- Please note that by the end of term 4, you must have a minimum 2.50 cumulative GPA in order to progress into upper-division coursework.  
- Select your career interest area and play me3@ASU.

### Term 2 - 14 - 31 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  
TEL 102: Professional Educator Series: Community Contexts | 3 | C  
TEL 215: Introduction to Child and Adolescent Development (SB) | 3 | C  
**Complete ENG 101 OR ENG 105 OR ENG 107 course(s).**
**Term hours subtotal:** 17

- Join a student club or professional organization

### Term 3 - 31 - 47 Credit Hours  
**Critical course signified by:**  
**Hours** | **Minimum Grade** | **Notes**
--- | --- | ---
SPE 222: Orientation to Education of Exceptional Children (SB & C) | 3 | C  
TEL 203: Collaborating, Planning and Implementing Instruction in Diverse Contexts | 3 | C  
CHM 116: General Chemistry II (SQ) | 4 | C  
Humanities, Arts and Design (HU) AND Historical Awareness (H) (HST 109 recommended) | 3 |  
Elective OR Science Education Course | 3 |  
**Complete Mathematics (MA) requirement.**
**Term hours subtotal:** 16

### Term 4 - 47 - 63 Credit Hours  
**Critical course signified by:**  
**Hours** | **Minimum Grade** | **Notes**
--- | --- | ---
USL 216: Service Learning: For Educators (L & C) | 3 | C  
BIO 320: Fundamentals of Ecology | 3 | C  

- Apply for an identify verified print (IVP) fingerprint clearance card online.  
- Your IVP fingerprint card will be needed for clinical experience requirements.  
- Develop your skills.
EDT 180: Technology Literacy: Problem Solving using Digital Technology Applications (CS) 3 C

MIC 205: Microbiology (SG) AND MIC 206: Microbiology Laboratory (SG) OR MIC 220: Biology of Microorganisms AND MIC 206: Microbiology Laboratory (SG) 4 C

Elective OR Science Education Course 3

Milestone: Complete online Intent to Progress form (meet with advisor).

Milestone: Submit Identity Verified Print (IVP) DPS fingerprint clearance card.

Minimum 2.50 GPA ASU Cumulative.

Term hours subtotal: 16

Term 5 63 - 77 Credit Hours Necessary course signified by ★ | Hours | Minimum Grade | Notes
--- | --- | --- | ---
★ SED 396: Clinical Experience I | 1 | C | During your clinical experience internship, you will work alongside an intern mentor teacher, in a 6-12th grade classroom.
★ SED 464: Middle-School Curr/Org | 3 | C | Reliable transportation is required to get to school sites in terms 5-8.
★ TEL 311: Instruction and Management in the Inclusive Classroom | 3 | C | Complete an in person or virtual practice interview

Upper Division Humanities, Arts and Design (HU) AND Global Awareness (G) 3

Minimum 2.50 GPA ASU Cumulative.

Term hours subtotal: 14

Term 6 77 - 94 Credit Hours Necessary course signified by ★ | Hours | Minimum Grade | Notes
--- | --- | --- | ---
★ BIO 480: Methods of Teaching Biology OR SCN 494: Biology for Teachers | 3 | C | During your clinical experience internship, you will work alongside an intern mentor teacher, in a 6-12th grade classroom.
★ BLE 407: SEI for Secondary Students (L) | 3 | C |
★ SED 397: Clinical Experience II | 1 | C |
★ SPE 417: Inclusion Practices at the Secondary Level | 3 | C |
★ BIO 201: Human Anatomy and Physiology I (SG) OR BIO 360: Animal Physiology OR PLB 308: Plant Physiology | 4-3 | C |
★ BIO 345: Organic Evolution | 3 | C |
★ Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s). | |

Minimum 2.50 GPA ASU Cumulative.

Term hours subtotal: 17-16

Term 7 94 - 108 Credit Hours Necessary course signified by ★ | Hours | Minimum Grade | Notes
--- | --- | --- | ---
★ RDG 323: Literacy Processes in Content Areas | 3 | C | During your clinical experience internship, you will work alongside an intern mentor teacher, in a 6-12th grade classroom.
★ SED 322: Classroom Leadership in Secondary Schools (L) | 3 | C |
★ SED 482: Science Teaching Methods for Secondary Schools OR PHY 494: Teaching Physical Science | 3 | C |
★ SED 496: Clinical Experience III | 1 | C |
★ BIO 370: Vertebrate Zoology OR BIO 385: Comparative Invertebrate Zoology OR PLB 300: Plant Diversity and Evolution (L or SG) OR BIO 386: General Entomology | 4 | C |

During your clinical experience internship, you will work alongside an intern mentor teacher, in a 6-12th grade classroom.

Students seeking teacher certification must pass required educator exams. Please speak with your advisor to plan appropriately.
General Studies Awareness Requirements:

- Dynamic Society (DS)
- Global Awareness (GW)
- Sustainability Awareness (SA)
- Cultural and World Civilization (CW)
- Social and Cultural Awareness (SC)
- Interdisciplinary Awareness (ID)
- Civic Engagement (CE)
- Health and Wellness (HW)

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)

- 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

- Term hours subtotal: 14

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 478</td>
<td>Student Teaching: Secondary Education (Grades 6-12)</td>
<td>12</td>
<td>C</td>
<td>• Your student teaching practicum requires a full-time commitment in a 6-12th grade classroom for the semester.</td>
</tr>
</tbody>
</table>

Minimum 2.50 GPA ASU Cumulative.

- Term hours subtotal: 12

- **Science Education Electives**
  - SCN 205: Introduction to Tropical Ecology: A Cultural Exchange
  - SCN 209: Introduction to Environmental Education Project
  - SCN 250: Physical Science by Inquiry (SQ)
  - SCN 300: Foundations of Environmental Education
  - SCN 301: Ecology and Natural History of the Sonoran Desert (SG)
  - SCN 302: Environmental Education (L & G)
  - SCN 303: Environmental Education Internship
  - SCN 304: Sonoran Desert Flora
  - SCN 305: Tropical Ecology: A Cultural Exchange
  - SCN 307: Learning from Nature: Biomimicry and STEM
  - SCN 308: Urban Environmental Education
  - SCN 401: Sustainability Science, Technology, and Society

- **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

- Use Handshake to research employment opportunities.
• 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.