# 2019 - 2020 Major Map

**Secondary Education (Physics), BAE**

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

<table>
<thead>
<tr>
<th>Term 1 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>MAT 270: Calculus with Analytic Geometry I (MA)</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDT 180: Technology Literacy: Problem Solving using Digital Technology Applications (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 101: First-Year Composition or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107: First-Year Composition or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEL 101: Professional Educator Series: The Student Experience</td>
<td>1</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>TEL 111: Exploration of Education (SB)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Term hours subtotal:</strong></td>
<td><strong>14</strong></td>
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</tbody>
</table>

- An SAT, ACT, Accuplacer, IELTS, or TOEFL score determines placement into first-year composition courses  
- Mathematics Placement Assessment score determines placement into mathematics courses  
- 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 communities and play me3@ASU.

<table>
<thead>
<tr>
<th>Term 2 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>MAT 271: Calculus with Analytic Geometry II (MA)</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHY 121: University Physics I: Mechanics (SQ) AND PHY 122: University Physics Laboratory I (SQ) OR PHY 150: Physics I (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 101: First-Year Composition or ENG 102: First-Year Composition OR ENG 105: Advanced First-Year Composition OR ENG 107: First-Year Composition or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEL 102: Professional Educator Series: Community Contexts</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEL 215: Introduction to Child and Adolescent Development (SB)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete ENG 101 OR ENG 105 OR ENG 107 course(s).</td>
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<tr>
<td><strong>Term hours subtotal:</strong></td>
<td><strong>17</strong></td>
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</tbody>
</table>

- Join a student club or professional organization

<table>
<thead>
<tr>
<th>Term 3 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>MAT 272: Calculus with Analytic Geometry III (MA)</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHY 131: University Physics II: Electricity and Magnetism (SQ) AND PHY 132: University Physics Laboratory II (SQ) OR PHY 151: Physics II (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPE 222: Orientation to Education of Exceptional Children (SB &amp; C)</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEL 203: Collaborating, Planning and Implementing Instruction in Diverse Contexts</td>
<td>3</td>
<td>C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Mathematics (MA) requirement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Term hours subtotal:</strong></td>
<td><strong>14</strong></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Term 4 45 - 60 Credit Hours</th>
<th>Critical course signified by 🌟</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

- Apply for your identity verified print (IVP) fingerprint clearance card online.  
- Your IVP fingerprint card will be needed for clinical experience requirements.  
- Develop your skills.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 201:</td>
<td>Mathematical Methods in Physics I (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>PHY 252:</td>
<td>Physics III (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>USL 216:</td>
<td>Service Learning: For Educators (L &amp; C)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>HST 109</td>
<td>Recommended</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective OR Science Education Course</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milestone:</td>
<td>Complete online Intent to Progress form (meet with advisor).</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Milestone:</td>
<td>Submit Identity Verified Print (IVP) DPS fingerprint clearance card.</td>
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</tr>
<tr>
<td>Minimum 2.50 GPA ASU Cumulative.</td>
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</table>

Term hours subtotal: 15

**Term 5 60 - 76 Credit Hours Necessary course signified by ⭐**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 302:</td>
<td>Mathematical Methods in Physics II</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>PHY 310:</td>
<td>Classical Particles, Fields, and Matter I</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>PHY 314:</td>
<td>Quantum Physics I OR PHY 361: Introductory Modern Physics</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SED 396:</td>
<td>Clinical Experience I</td>
<td>1</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SED 464:</td>
<td>Middle-School Curr/Org</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>TEL 311:</td>
<td>Instruction and Management in the Inclusive Classroom</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Minimum 2.50 GPA ASU Cumulative.</td>
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</table>

Term hours subtotal: 16

**Term 6 76 - 92 Credit Hours Necessary course signified by ⭐**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLE 407:</td>
<td>SEI for Secondary Students (L)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>PHY 333:</td>
<td>Electronic Circuits and Measurements</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>PHY 480:</td>
<td>Methods of Teaching Physics</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SED 397:</td>
<td>Clinical Experience II</td>
<td>1</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SPE 417:</td>
<td>Inclusion Practices at the Secondary Level</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Humanities, Arts and Design (HU) AND Global Awareness (G)</td>
<td></td>
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</tr>
<tr>
<td>Complete Cultural Diversity in the U.S. (C) AND Global Awareness (G) AND Historical Awareness (H) course(s).</td>
<td></td>
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</tr>
<tr>
<td>Minimum 2.50 GPA ASU Cumulative.</td>
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</tbody>
</table>

Term hours subtotal: 16

**Term 7 92 - 108 Credit Hours Necessary course signified by ⭐**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDG 323:</td>
<td>Literacy Processes in Content Areas</td>
<td>3</td>
<td>C</td>
<td></td>
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<tr>
<td>SED 322:</td>
<td>Classroom Leadership in Secondary Schools (L)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SED 482:</td>
<td>Science Teaching Methods for Secondary Schools OR PHY 494: Teaching Physical Science</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SED 496:</td>
<td>Clinical Experience III</td>
<td>1</td>
<td>C</td>
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</tr>
<tr>
<td>PHY Upper Division Elective</td>
<td></td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Minimum 2.50 GPA ASU Cumulative.</td>
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</tbody>
</table>

**Notes**

- Must complete at least 60 credits, including foundational coursework, to progress into upper-division education coursework.
- Meet with your advisor to submit intent to progress early in Term 4.
- Attendance is required at an orientation prior to registration for Term 5.
- Develop your professional online presence.
- During your clinical experience internship, you will work alongside an intern mentor teacher in a 6-12th grade classroom.
- Reliable transportation is required to get to school sites in terms 5-8.
- During your clinical experience internship, you will work alongside an intern mentor teacher in a 6-12th grade classroom.
- Complete an in person or virtual practice interview.
- 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.
- Use Handshake to research employment opportunities.
**General Studies Awareness Requirements:**

<table>
<thead>
<tr>
<th>Science Education Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCN 205: Introduction to Tropical Ecology: A Cultural Exchange</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCN 209: Introduction to Environmental Education Project</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCN 250: Physical Science by Inquiry (SQ)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCN 300: Foundations of Environmental Education</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>SCN 301: Ecology and Natural History of the Sonoran Desert (SG)</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>SCN 302: Environmental Education (L &amp; G)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCN 303: Environmental Education Internship</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCN 304: Sonoran Desert Flora</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCN 305: Tropical Ecology: A Cultural Exchange</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCN 307: Learning from Nature: Biomimicry and STEM</td>
<td>3</td>
<td></td>
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</tr>
<tr>
<td>SCN 308: Urban Environmental Education</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCN 401: Sustainability Science, Technology, and Society</td>
<td>3</td>
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</table>

**Term 8 108 - 120 Credit Hours**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SED 478: 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

**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

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**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.