# 2020 - 2021 Major Map

**Earth and Space Exploration (Geological Sciences), BS**

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

## Term 1 - 15 Credit Hours

<table>
<thead>
<tr>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Mathematics (MA)" /></td>
<td>3</td>
<td>C</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>
</tr>
<tr>
<td>LIA 101: Student Success in The College of Liberal Arts and Sciences</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SES 121: Earth, Solar System and Universe (SQ) AND SES 123: Earth, Solar System and Universe Laboratory (SQ)</td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td>SES 191: Exploring SESE</td>
<td>1</td>
<td>C</td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Term hours subtotal:** 15

- An SAT, ACT, Accuplacer, IELTS, or TOEFL score determines placement into first-year composition courses.
- Mathematics Placement Assessment score determines placement in mathematics course.
- LIA 101 is mandatory for all incoming first-year students.
- SESE will accept Calculus with Analytic Geometry I, II and III (MAT 270/271/272) in place of MAT 265/266/267.
- SESE requires first and second-year students to seek faculty mentoring at least once during the academic year. Each student will be assigned a SESE faculty mentor. Students can find their faculty mentor on the SESE advising website.
- Select your career interest area and play me3@ASU.

## Term 2 - 15 - 29 Credit Hours

<table>
<thead>
<tr>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="CHM 113: General Chemistry I (SQ)" /></td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td><img src="image" alt="MAT 265: Calculus for Engineers I (MA)" /></td>
<td>3</td>
<td>C</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>
</tr>
</tbody>
</table>

- Complete ENG 101 OR ENG 105 OR ENG 107 course(s).
- Milestone: Complete SESE faculty mentoring.

**Term hours subtotal:** 14

- SESE will accept Calculus with Analytic Geometry I, II and III (MAT 270/271/272) in place of MAT 265/266/267.
- SESE requires first and second-year students to seek faculty mentoring at least once during the academic year. Each student will be assigned a SESE faculty mentor. Students can find their faculty mentor on the SESE advising website.
- Join a student club or professional organization.

## Term 3 - 29 - 45 Credit Hours

<table>
<thead>
<tr>
<th>Critical course signified by</th>
<th>Hours</th>
<th>Minimum Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="CHM 116: General Chemistry II (SQ)" /></td>
<td>4</td>
<td>C</td>
</tr>
<tr>
<td><img src="image" alt="MAT 266: Calculus for Engineers II (MA)" /></td>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td><img src="image" alt="SES 230: Coding for Exploration (CS)" /></td>
<td>3</td>
<td>C</td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU) AND Historical Awareness (H)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

- Complete First-Year Composition requirement.
- Complete Mathematics (MA) requirement.

- SESE will accept Calculus with Analytic Geometry I, II and III (MAT 270/271/272) in place of MAT 265/266/267.
- SESE requires first and second-year students to seek faculty mentoring at least once during the academic year. Each student will be assigned a SESE faculty mentor. Students can find their faculty mentor on the SESE advising website.
- Develop your skills.
## Term 4 45 - 61 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 267: Calculus for Engineers III (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>PHY 121: University Physics I: Mechanics (SQ) AND PHY 122: University Physics Laboratory I (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Science and Society Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB) AND Global Awareness (G)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Milestone:** Complete SESE faculty mentoring.

**Term hours subtotal:** 16

## Term 5 61 - 77 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLG 310: Structural Geology</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>PHY 131: University Physics II: Electricity and Magnetism (SQ) AND PHY 132: University Physics Laboratory II (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Science and Society Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>GLG OR SES Upper Division Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Term hours subtotal:** 16

## Term 6 77 - 90 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLG 321: Mineralogy</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>GLG 451: Field Geology I (L)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SES 401: Earth and Space Exploration Colloquium</td>
<td>1</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>GLG OR SES Upper Division Elective</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Upper Division Elective OR SES 484: Internship OR SES 499: Individualized Instruction</td>
<td>3</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></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Term hours subtotal:** 13

## Summer 6 90 - 93 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLG 452: Field Geology II (L)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
</tbody>
</table>

**Term hours subtotal:** 3

### Notes
- SESE will accept Calculus with Analytic Geometry I, II and III (MAT 270/271/272) in place of MAT 265/266/267.
- SESE requires first and second-year students to seek faculty mentoring at least once during the academic year. Each student will be assigned a SESE faculty mentor. Students can find their faculty mentor on the SESE advising website.
- Students should note that upcoming capstone classes, GLG 451 (offered in spring) and GLG 452 (offered in summer), are field-based and have additional course fees.
- Students need two GLG branch courses (6 credits) and three upper division GLG or SES electives (9 credits). Electives may be chosen from the branch course list or students may take any other upper division GLG or SES courses offered by the School of Earth and Space Exploration.
- Students should meet with faculty advisor to discuss research opportunities.
- Students should note that upcoming capstone classes, GLG 451 (offered in spring) and GLG 452 (offered in summer), are field-based and have additional course fees.
- Explore a research or internship opportunity. In order to earn credits for research or an internship, students should work with their SESE advisor for approval. Students who hope to go to graduate school should consider getting involved in research. Students should talk to faculty mentors about how to find research opportunities.
- Students interested in graduate school should be researching programs and preparing application materials. Continue to meet with faculty advisor for input along the way.
- Research career opportunities.
### Term 7 93 - 108 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by ★</th>
<th>Hours</th>
<th>Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Division GLG Branch Courses</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>GLG OR SES Upper Division Elective</td>
<td>3</td>
<td>C</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>
</tr>
<tr>
<td>Complete 2 courses: Elective</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Term 8 108 - 120 Credit Hours

<table>
<thead>
<tr>
<th>Necessary course signified by ★</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Division GLG Branch Courses</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Complete 3 courses: Upper Division Elective</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term hours subtotal:</td>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Students interested in graduate school should be researching programs and preparing application materials. Continue to meet with faculty advisor for input along the way.
- Apply for career opportunities.

**Notes:**

- All students pursuing a BS or BSP degree in The College of Liberal Arts and Sciences must complete two courses from the Science and Society list found at [https://thecollege.asu.edu/resources/science-society](https://thecollege.asu.edu/resources/science-society). At least one of the two courses must be upper-division and students must earn a C or better in the courses. Both Science and Society courses (i.e., all six credits) may count towards any major, minor, related fields, and ASU General Studies requirements.

**Hide Course List(s)/Track Group(s)**

- GLG Branch Courses
  - GLG 362: Geomorphology
  - GLG 418: Geophysics
  - GLG 424: Petrology
  - GLG 430: Paleontology
  - GLG 435: Sedimentology and Stratigraphy
  - GLG 471: Hydrology
  - GLG 481: Geochemistry

**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

---

### General University Requirements Legend

- General Studies Core Requirements:
  - Literacy and Critical Inquiry (L)
  - Mathematical Studies (MA)
**General Studies designations listed on the major map are current for the 2020 - 2021 academic year.**

**Hrs Resident Credit for Academic Recognition:** 56 minimum

**Total Community College Hrs:** 64 maximum

**Total College Residency Hrs:** 12 minimum

- 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 2020 - 2021 academic year.