# 2022 - 2023 Major Map

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

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

### Term 1 0 - 14 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ENG 101 or ENG 102: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ENG 105: Advanced First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>LIA 101: Student Success in The College of Liberal Arts and Sciences</td>
<td>1</td>
<td></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>
<td></td>
</tr>
<tr>
<td>Social-Behavioral Sciences (SB) AND Cultural Diversity in the U.S. (C)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Term hours subtotal:** 14

- Students who place into MAT 265 should take the course in term 1 to complete the MA requirement.  
- 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 14 - 28 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
<th>Minimum Grade</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 113: General Chemistry I (SQ)</td>
<td>4</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>MAT 265: Calculus for Engineers I (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ENG 101 or ENG 102: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ENG 105: Advanced First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>ENG 107 or ENG 108: First-Year Composition</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Complete ENG 101 OR ENG 105 OR ENG 107 course(s).</td>
<td></td>
<td></td>
<td>Milestone: Complete SESE faculty mentoring.</td>
</tr>
</tbody>
</table>

**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 28 - 44 Credit Hours

<table>
<thead>
<tr>
<th>Course</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>
</tr>
<tr>
<td>MAT 266: Calculus for Engineers II (MA)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>SES 230: Coding for Exploration (CS)</td>
<td>3</td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Humanities, Arts and Design (HU) AND Historical Awareness (H)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete First-Year Composition requirement.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 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
Complete Mathematics (MA) requirement.

Term hours subtotal: 16

### Term 4 - 44 - 60 Credit Hours

**Critical course signified by 🔴**

- **MAT 267: Calculus for Engineers III (MA)** 3  C
- **PHY 121: University Physics I: Mechanics (SQ) AND PHY 122: University Physics Laboratory I (SQ)** 4  C
- **Science and Society Elective** 3  C
- **Social-Behavioral Sciences (SB) AND Global Awareness (G)** 3
- **Elective** 3

Milestone: Complete SESE faculty mentoring.

Term hours subtotal: 16

### 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.

### Term 5 - 60 - 76 Credit Hours

**Necessary course signified by ⭐**

- **GLG 310: Structural Geology** 3  C
- **GLG 321: Mineralogy** 3  C
- **PHY 131: University Physics II: Electricity and Magnetism (SQ) AND PHY 132: University Physics Laboratory II (SQ)** 4  C
- **Upper Division Science and Society Elective** 3  C
- **GLG OR SES Upper Division Elective** 3  C

Term hours subtotal: 16

### Notes

- Students need two GLG branch courses (six credits) and three upper-division GLG or SES electives (nine 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 a 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.

### Term 6 - 76 - 89 Credit Hours

**Necessary course signified by ⭐**

- **GLG 451: Field Geology I (L)** 3  C
- **SES 401: Earth and Space Exploration Colloquium** 1  C
- **GLG OR SES Upper Division Elective** 3  C
- **Humanities, Arts and Design (HU)** 3
- **Upper Division Elective OR SES 484: Internship OR SES 499: Individualized Instruction** 3

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

Term hours subtotal: 13

### Notes

- 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.

### Summer 6 - 89 - 92 Credit Hours

**Necessary course signified by ⭐**

- **SES 484: Internship**
- **SES 499: Individualized Instruction**

Term hours subtotal: 13

### Notes

- Students can find their faculty mentor on the SESE advising website.
- Develop your skills.
**Notes:**

- First-Year Composition: All students are placed in ENG 101 unless submission of SAT, ACT, Accuplacer, IELTS, or TOEFL score, or college-level transfer credit or test credit equivalent to ASU's first-year composition course(s), determine otherwise. Students on Polytechnic, Downtown Phoenix and West Campuses are encouraged to complete the Directed Self-Placement survey to choose the first-year composition option they believe best suits their needs. Visit: https://cisa.asu.edu/DSP
- Mathematics Placement Assessment score determines placement in first mathematics course.
- 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.

### Upper Division GLG Branch Courses

- GLG 452: Field Geology II (L)  3  C

- **Term 7 92 - 107 Credit Hours Necessary course signified by ** | Hours | Minimum Grade | Notes

  | Upper Division GLG Branch Course | 3 | C |
  | GLG OR SES Upper Division Elective | 3 | C |
  | Upper Division Humanities, Arts and Design (HU) OR Upper Division Social-Behavioral Sciences (SB) | 3 |
  | Complete 2 courses: |
  | Elective | 6 |

  **Term hours subtotal:** 15

- **Term 8 107 - 120 Credit Hours Necessary course signified by ** | Hours | Minimum Grade | Notes

  | Upper Division GLG Branch Course | 3 | C |
  | Complete 3 courses: |
  | Upper Division Elective | 8 |
  | Elective | 2 |

  **Term hours subtotal:** 13

- 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/student-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.

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- 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.
General Studies designations listed on the major map are current for the 2022 - 2023 academic year.

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)

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
Total College Residency Hrs: 12 minimum

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 2022 - 2023 academic year.