Earth and Space Exploration (Geological Sciences), BS

Explore earth by applying field and laboratory techniques to understand how rocks form, mountains are built, volcanoes erupt and earthquakes happen. You learn to solve scientific problems aimed at understanding the fundamental processes responsible for the evolution of our planet.

Program Description

Geological science is the study of earth and other planets with an emphasis on the processes that have shaped them since the origin of the solar system. Students explore topics such as the co-evolution of life, oceans, atmosphere and the earth's climate system, and the record of that evolution encoded in rocks, soil, ice and isotopes.

The BS program in earth and space exploration with a concentration in geological sciences educates students in the fundamentals of geological sciences, providing a solid background in chemistry, mathematics and physics as well as mineralogy, structural geology, field geology and a variety of geologic subdisciplines.

Students gain a strong understanding of field methods as well as modern computing, remote sensing and instrumentation to effectively study the natural environment and earth's resources. Graduates of the program can apply their knowledge for the benefit of Arizona, the nation and society in general.

Students currently enrolled in the Bachelor of Science in earth and space exploration (geological sciences) may not pursue a concurrent degree with the Bachelor of Science in earth and space exploration, the Bachelor of Science in earth and space exploration (astrophysics), the BA in earth and environmental studies, the Bachelor of Science in earth and space exploration (astrobiology and biogesciences) or the Bachelor of Science in earth and space exploration (exploration systems design) due to the high level of overlap in curriculum. Students should speak with their academic advisor for any further questions.
At a Glance

- **College/School:** The College of Liberal Arts and Sciences
- **Location:** Tempe campus
- **Additional Program Fee:** Yes
- **Second Language Requirement:** No
- **First Required Math Course:** MAT 265 - Calculus for Engineers I
- **Math Intensity:** Substantial

Required Courses (Major Map)

2021 - 2022 Major Map
Major Map (Archives)

Admission Requirements

**General University Admission Requirements:**
All students are required to meet general university admission requirements.

Freshman | Transfer | International | Readmission

Change of Major Requirements

A current ASU student has no additional requirements for changing majors.

Students should refer to [https://changemajor.apps.asu.edu](https://changemajor.apps.asu.edu) for information about how to change a major to this program.

Transfer Options

ASU is committed to helping students thrive by offering tools that allow personalization of the transfer path to ASU. Students may use [MyPath2ASU™](https://changemajor.apps.asu.edu) to outline a list of recommended courses to take prior to transfer.

ASU has transfer partnerships in Arizona and across the country to create a simplified transfer experience for students. These pathway programs include exclusive benefits, tools and resources, and help students save time and money in their college journey. Students may learn more about these programs by visiting the admission site: [https://admission.asu.edu/transfer/pathway-programs](https://admission.asu.edu/transfer/pathway-programs).

Global Opportunities
Global Experience
With over 250 programs available, study abroad allows students in the geological sciences concentration to gain hands-on experience in a variety of programs all over the world.

Graduates who possess the heightened cultural competency and leadership and critical thinking skills they acquired through study abroad may stand out in a competitive field. [https://goglobal.asu.edu/](https://goglobal.asu.edu/)

Career Opportunities
Graduates in geological sciences are prepared for employment in a variety of geoscience-related fields and for continued studies toward higher educational degrees. The geological science degree program provides broad training in the geosciences and supporting sciences, opening up diverse opportunities for employment in industry, government, education and other organizations. Geological science graduates understand how to approach diverse societal issues, such as water resources, mineral resources, geologic hazards, engineering geology and government regulations.

Sample careers include:

- environmental geologist
- geological engineer
- geologist
- government geologist
- mineral exploration geologist
- petroleum geologist
- science policy intern
- science writer
- water resources scientist

Sample career settings include:

- environmental industry
- federal, state, and local government agencies
- geotechnical industry
- museums
- petroleum industry
- publishers
- small exploration companies and large mining companies

Some of the listed careers may require advanced degrees or additional certifications.

Career examples include but are not limited to those shown in the following list. Advanced degrees or certifications may be required for academic or clinical positions.
<table>
<thead>
<tr>
<th>Career</th>
<th>*Growth</th>
<th>*Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Analyst</td>
<td>5.1%</td>
<td>$64,020</td>
</tr>
<tr>
<td>Forester</td>
<td>3.8%</td>
<td>$63,980</td>
</tr>
<tr>
<td>Geologist</td>
<td>4.9%</td>
<td>$93,580</td>
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<tr>
<td>Geology Professor</td>
<td>1.9%</td>
<td>$94,520</td>
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<tr>
<td>Hydrogeologist</td>
<td>4.8%</td>
<td>$137,940</td>
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<tr>
<td>Hydrologist</td>
<td>5.3%</td>
<td>$84,040</td>
</tr>
<tr>
<td>Park Ranger</td>
<td>5.1%</td>
<td>$64,020</td>
</tr>
</tbody>
</table>

* Data obtained from the Occupational Information Network (O*NET) under sponsorship of the U.S. Department of Labor/Employment and Training Administration (USDOL/ETA).

🌟 Bright Outlook  🌿 Green Occupation

**Contact Information**

[School of Earth and Space Exploration](mailto:sese-advising@asu.edu) | ISTB4 795  
[seese-advising@asu.edu](mailto:sese-advising@asu.edu) | 480-965-5081