Earth and Space Exploration (Astrophysics), BS

LASESABS

Do you want to be at the edge of exploration, making new discoveries about our planet, our solar system and our universe? As an astrophysics major you could be discovering new planets, exploring cosmology, designing and building space-flight hardware, and engineering new instruments for telescopes and satellites.

Program Description

The BS in earth and space exploration with a concentration in astrophysics is designed to offer students a fundamental grounding in astronomy and astrophysics, with exposure to the related fields of geology, planetary science and engineering. Students emerge from this program with the required skills for a career in astrophysics, physics or related fields.

The rigorous and quantitative coursework includes a combination of physics courses taught in the ASU School of Earth and Space Exploration and the Department of Physics. The tools of astronomical discovery are increasingly dependent on technological advances, and students are exposed to engineering principles and computer programming. Through the capstone project in the senior year, students gain valuable experience in translating science drivers into engineering solutions.

Students currently enrolled in the Bachelor of Science in earth and space exploration (astrophysics) may not pursue a concurrent degree with the BA in earth and environmental studies, the BS in earth and space exploration, the BS in earth and space exploration (astrobiology and biogesciences), the BS in earth and space exploration (exploration systems design), or the BS in earth and space exploration (geological sciences) 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 270 - Calculus w/Analytic Geometry I or MAT 265 Calculus for Engineers I  
• **Math Intensity:** Substantial

**Required Courses (Major Map)**

2020 - 2021 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://changingmajors.asu.edu/request](https://changingmajors.asu.edu/request) 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 the [Transfer Map search](https://admission.asu.edu/transfer/pathway-programs) 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 in more than 65 countries (ranging from one week to one year), study abroad is possible for all ASU students wishing to gain global skills and knowledge in preparation for a 21st-century career. Students earn ASU credit for completed courses, while staying on track for graduation, and may apply financial aid and scholarships toward program costs. [https://mystudyabroad.asu.edu/](https://mystudyabroad.asu.edu/)

Career Opportunities

Career opportunities include but are not limited to:

- aerospace engineer
- astrobiologist
- astronomer
- computer programmer
- data analyst
- instrumentation specialist
- planetary scientist
- science policy intern
- science writer
- teacher
- telescope operator

Career settings include:

- federal government
- K-12 schools
- manufacturing
- museums
- NASA facilities
- national laboratories
- NSF facilities
- observatories
- planetariums
- publishing
- space industries
- universities and colleges
Some of the listed careers may require advanced degrees or additional certifications. This program also provides suitable preparation for graduate study.

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>Aerospace Engineer</td>
<td>6.1%</td>
<td>$113,030</td>
</tr>
<tr>
<td>Astronomer</td>
<td>10.0%</td>
<td>$100,590</td>
</tr>
<tr>
<td>Electrical Engineering Professor</td>
<td>14.6%</td>
<td>$98,360</td>
</tr>
<tr>
<td>Engineering Manager</td>
<td>5.5%</td>
<td>$137,720</td>
</tr>
<tr>
<td>Geology Professor</td>
<td>9.5%</td>
<td>$87,380</td>
</tr>
<tr>
<td>Health Sciences Manager</td>
<td>9.9%</td>
<td>$118,970</td>
</tr>
<tr>
<td>Physicist</td>
<td>14.5%</td>
<td>$118,830</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**

Schedule an advisor appointment
School of Earth and Space Exploration | ISTB4 795
sese-advising@asu.edu | 480-965-5081