Earth and Space Exploration (Astrophysics), BS

Earth and space exploration majors are at the edge of exploration, making new discoveries about our planet, our solar system and our universe. Our astrophysics students are 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 skills to pursue a career in astrophysics, physics or related fields.

The rigorous coursework includes a combination of physics courses taught in the School of Earth and Space Exploration and the Department of Physics. Students should graduate from the program with the ability to compete at the national level on standardized physics exams. The tools of astronomical discovery are increasingly dependent on technological advances so students will be exposed to engineering principles. Through the capstone project in the senior year, students gain valuable experience in translating science drivers into engineering solutions.

At a Glance

- **College/School:** 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)

2018 - 2019 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://students.asu.edu/changingmajors](https://students.asu.edu/changingmajors) for information about how to change a major to this program.

### Transfer Options

ASU is committed to helping you thrive by offering tools that allow you to personalize your transfer path to ASU. Students may use the Transfer Map search 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. Learn more about these programs by visiting the [Admissions site](https://students.asu.edu/changingmajors).

### 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 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  
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