Environmental Engineering, BSE

Program Description

The BSE program in environmental engineering educates students to become tomorrow's engineers who solve complex environmental problems and design systems at the human, urban and planetary scale.

Environmental engineers are actively involved with the following topics and activities: air quality monitoring and air pollution control technology; analysis of the fate and transport of pollutants; application of sustainable design principles; design and operation of water and wastewater treatment systems; design of hazardous waste containment systems; design of solid waste management systems; remediation of contaminated soil, sediment and water; and water quality, water conservation and water reuse.

In recognition of the interdisciplinary nature of environmental engineering challenges, the degree program incorporates courses from humanities, social sciences, natural sciences, mathematics, and engineering. Environmental engineering courses build on strong foundations in chemistry, microbiology, geology, physics and mathematics. Courses cover fundamental engineering concepts applied to environmental processes and environmental engineering design as well as applied learning experiences, including a required internship or research experience and a capstone design course.

At a Glance

- **College/School:** Ira A. Fulton Schools of Engineering
- **Location:** Tempe campus or Online
  - **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)

2022 - 2023 Major Map
Major Map (Archives)

Concurrent Program Options

Students pursuing concurrent degrees (also known as a "double major") earn two distinct degrees and receive two diplomas. Working with their academic advisors, students can create their own concurrent degree combination. Some combinations are not possible due to high levels of overlap in curriculum.

Accelerated Program Options

This program allows students to obtain both a bachelor's and master's degree in as little as five years. It is offered as an accelerated bachelor's and master's degree with:

Civil, Environmental, and Sustainable Engineering, MS

Acceptance to the graduate program requires a separate application. During their junior year, eligible students are advised by their academic departments to apply.

Admission Requirements

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

Freshman | Transfer | International | Readmission

Additional Requirements:

Freshman Admission:

1. minimum 1210 SAT combined evidence-based reading and writing plus math score or minimum 24 ACT combined score or minimum ABOR GPA of 3.00 or class ranking in top 25% of high school class, and
2. no high school math or science competency deficiencies

Transfer Admission Requirements:

Transfer students with fewer than 24 transferable college credit hours:

1. minimum transfer GPA of 3.00 for less than 24 transfer hours, and
2. no high school math or science competency deficiencies, and
3. minimum 1210 SAT combined evidence-based reading and writing plus math score (or 1140 if taken prior to March 5, 2016) or minimum 24 ACT combined score, or minimum ABOR GPA of 3.00, or class ranking in top 25% of high school class

Transfer students with more than 24 transferable college credit hours:

Primary

1. minimum transfer GPA of 3.00 for 24 or more transfer hours, and
2. no high school math or science competency deficiencies (if Admissions Services requires submission of a high school transcript)

Secondary Criteria

1. minimum transfer GPA of 2.75 for 24 or more transfer hours, and
2. minimum GPA of 2.75 in all critical courses for Terms 1 and 2 (see major map for critical courses)

Change of Major Requirements

Admission requirements for many majors in the Ira A. Fulton Schools of Engineering are higher than university admission standards. Students can find out more on the Engineering website: https://engineering.asu.edu/admission-requirements/.

Students should refer to 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™ 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 they 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/MyPath2ASU.

Global Opportunities
Global Experience

Study abroad programs in countries such as Japan, Sweden and Germany allow students to further their understanding of the impact the industrial world has on the environment. An open mind and international understanding of these concepts further students’ studies and understanding of the various environmental conditions around the globe. Students earn ASU credit for completed courses, while staying on track for graduation, and they may apply financial aid and scholarships toward program costs. More information is available on the Global Education website: [https://goglobal.asu.edu/](https://goglobal.asu.edu/).

Career Opportunities

Graduates from the environmental engineering program have career opportunities in both the private and public sectors.

The private sector consulting industry in environmental engineering is growing as greater environmental awareness and emerging novel pollutants require continual refinement of regulations and environmental system design standards. The private sector consulting industry in environmental engineering is growing as greater environmental awareness and emerging novel pollutants require continual refinement of regulations and environmental system design standards. The private sector manufacturing industry employs environmental engineers to aid in environmental compliance and eco-efficiency. In the public sector, municipalities and regulatory agencies require a knowledgeable workforce that understands how public policy can improve human health and ecosystem services through environmental engineering processes.

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>Engineering Manager</td>
<td>2.6%</td>
<td>$149,530</td>
</tr>
<tr>
<td>Environmental Engineer</td>
<td>3.1%</td>
<td>$92,120</td>
</tr>
<tr>
<td>Fire Protection Engineer</td>
<td>3.9%</td>
<td>$94,240</td>
</tr>
<tr>
<td>Health and Safety Engineer</td>
<td>3.9%</td>
<td>$94,240</td>
</tr>
<tr>
<td>Water/Wastewater Engineer</td>
<td>1.7%</td>
<td>$88,570</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