Environmental Engineering, BSE

Program Description

The environmental engineering BSE degree program educates tomorrow's engineers to solve complex environmental problems and design systems at the human, urban and planetary scale. Environmental engineers are actively involved with:

- air quality monitoring and air pollution control technology
- analysis of 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
- water quality, water conservation and water reuse

In recognition of the interdisciplinary nature of environmental engineering challenges, the degree incorporates courses from other programs in the Fulton Schools of Engineering including chemical engineering and environmental resources management. Engineering courses build on strong foundation in chemistry, biology, geology, physics and mathematics. Courses cover fundamental engineering concepts applied to environmental processes and environmental engineering design as well as applied learning experiences including required internship or research experience and capstone design course.

At a Glance

- **College/School:** [Ira A. Fulton Schools of Engineering](https://fulton.asu.edu)
• **Location:** Tempe campus

• **Additional Program Fee:** Yes

• **Second Language Requirement:** No

• **First Required Math Course:** MAT 265 - Calculus for Engineers I

• **Math Intensity:** Substantial

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**Required Courses (Major Map)**

2019 - 2020 Major Map

Major Map (Archives)

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**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 will be advised by their academic departments to apply.

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**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 3.00 minimum ABOR GPA or class ranking in top 25 percent 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 3.00 minimum ABOR GPA, or class ranking in top 25 percent 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: https://engineering.asu.edu/admission-requirements/. Students should refer to 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 to outline a list of recommended courses to take prior to
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.

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/

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. In the public sector, municipalities and regulating agencies require a knowledgeable workforce to understand how public policy can improve human health and ecosystem services through environmental engineering processes.

The college seeks to accredit the Bachelor of Science in Engineering in environmental engineering to allow graduates to pursue professional licensure that enables environmental engineers to design and build drinking water and wastewater treatment facilities, contaminated soil and water remediation systems, and hazardous and solid waste confinement systems.

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>5.5%</td>
<td>$137,720</td>
</tr>
<tr>
<td>Environmental Engineer 🌟</td>
<td>8.3%</td>
<td>$86,800</td>
</tr>
<tr>
<td>Occupation</td>
<td>Change</td>
<td>Salary</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Fire Protection Engineer</td>
<td>8.6%</td>
<td>$88,510</td>
</tr>
<tr>
<td>Industrial Safety Engineer</td>
<td>8.6%</td>
<td>$88,510</td>
</tr>
<tr>
<td>Product Safety Engineer</td>
<td>8.6%</td>
<td>$88,510</td>
</tr>
<tr>
<td>Water/Wastewater Engineer</td>
<td>8.3%</td>
<td>$86,800</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

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