Civil Engineering (Sustainable Engineering), BSE

Program Description

Civil engineering majors have three options within the accredited BSE program: civil engineering; civil engineering with environmental engineering concentration; and civil engineering with sustainable engineering concentration.

The first option allows students to choose among design and technical elective courses in their senior year. The other options specify design and technical courses to students with minimal choices. Regardless of choice, the Bachelor of Science in Engineering in civil engineering is accredited by ABET.

The bachelor's degree in civil engineering with a concentration in sustainable engineering incorporates systems modeling and life cycle approaches to assessing the resiliency and material selection across all areas of urban infrastructure, or built environment, currently addressed within the civil engineering degree. The program is designed to provide students with exposure to material from several disciplines that comply with the principles of economic, social and ecological sustainability and apply them to traditional civil engineering areas.


At a Glance

- **College/School:** Ira A. Fulton Schools of Engineering
- **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)

2020 - 2021 Major Map
Major Map (Archives)

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, MSE
- Civil, Environmental, and Sustainable Engineering, MS
- Construction Engineering, MSE

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

Admission Requirements

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

Additional Requirements:

The admission standards for majors in the Ira A. Fulton Schools of Engineering are higher than minimum university standards. International students may have an additional English-language proficiency criterion. Foreign nationals must meet the same admission requirements shown below with the possible additional requirement of a minimum TOEFL score. If the university requires a TOEFL score from the applicant (see https://admission.asu.edu/international/undergrad-apply), then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 79 on iBT (internet-based) or a minimum IELTS score of 6.5.

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% 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% of high school class

Transfer students with 24 or more transferable college credit hours must meet EITHER the primary OR the secondary criteria (not both):

Primary Criteria

1. minimum transfer GPA of 3.00 for 24 or more transfer hours, and
2. no high school math or science competency deficiencies (if Admission 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 3.00 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://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 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
Students enhance their resumes and gain valuable experience through studying abroad. With over 250 programs available, study abroad allows students to tailor their experience to their unique interests and skillsets. Students in sustainable engineering are able to gain hands-on experience in countries ranging from Germany to Hong Kong. In a competitive field, they stand out with heightened cultural competency, leadership and critical thinking skills achieved from studying abroad. https://mystudyabroad.asu.edu/

Career Opportunities
Civil engineers with knowledge of sustainable engineering may find employment in many different types of companies: large corporations; small, private consulting firms; and governmental agencies.

Civil engineering is one of the best engineering professions from the viewpoint of international travel opportunities or for eventually establishing one's own consulting business.

The bachelor's degree in civil engineering prepares graduates for the fundamentals of engineering examination, the principles and practice of engineering examination, and for graduate degrees.

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>Civil Engineer</td>
<td>10.6%</td>
<td>$84,770</td>
</tr>
<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>Industrial 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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