Construction Engineering, BSE

ESCONBSE

Program Description

The BSE program in construction engineering is designed for students who wish to gain a professional engineering license while working at the interface of design and construction, and it is attractive for students interested in a career that emphasizes the construction of infrastructure.

The degree program includes engineering design and construction management courses with a focus on sustainability and building information modeling topics. Construction management content includes construction methods, contract management, cost and schedule control, people management and project estimating.

The curriculum's design content includes structures, geotechnical engineering and transportation. Students are further prepared with the computer, management, technical and people skills they need to succeed.

This degree is the third in the southwestern U.S. and one of about 20 worldwide.


ASU offers programs that lead to professional licensure with the state of Arizona and may allow graduates to be eligible for licensure in other states. Students should check the professional licensure list for the Ira A. Fulton Schools of Engineering to determine if this program meets requirements in their state: [https://asuonline.asu.edu/about-us/licensure/](https://asuonline.asu.edu/about-us/licensure/). Students should note that not all programs within the Fulton Schools of Engineering lead to professional licensure.

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)

2021 - 2022 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:

Construction Engineering, MSE

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:

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 (https://admission.asu.edu/international/undergrad-student), then admission to engineering requires a minimum TOEFL score of 550 (paper-based), 213 (computer-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 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 24 or more transferable college credit hours must meet EITHER the primary OR 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 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/](https://engineering.asu.edu/admission-requirements/)

Students should refer to [https://changemajor.apps.asu.edu](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](https://admission.asu.edu/transfer/pathway-programs).

Global Opportunities

Global Experience
Students gain valuable experience through study abroad, experience which enhances their resumes. With over 250 programs available, study abroad allows students to tailor their experience to their unique interests and skill sets. Students in construction engineering are able to gain hands-on experience in a variety of countries. In a competitive field, students stand out with the heightened cultural competency and leadership and critical thinking skills they acquired from studying abroad. [https://goglobal.asu.edu/](https://goglobal.asu.edu/)

**Career Opportunities**

The construction engineering graduate, with this strong background in design and management, is prepared to enter a career in the engineering and construction industry as a field engineer, project engineer or project designer working for:

- construction companies
- design firms
- facility owners
- material suppliers
- specialty subcontractors

Graduates have the unique skills needed to take on the role of integrator in the delivery of design-build projects or development activities. As the graduate's career progresses, they should be able to take on leadership roles in the delivery of sustainable facilities in the built environment and then progress through successively higher levels of management responsibility. The graduate should be particularly attuned to the design and construction of heavy civil and industrial facilities, meeting the infrastructure needs of society.

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>1.7%</td>
<td>$88,570</td>
</tr>
<tr>
<td>Construction Manager</td>
<td>8.5%</td>
<td>$97,180</td>
</tr>
<tr>
<td>Transportation Engineer</td>
<td>1.7%</td>
<td>$88,570</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).

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**Contact Information**