Biomedical Engineering (Biomedical Devices), BSE

ESBMEMDBSE

Learn to create biomedical products that address unmet health care needs and improve the human condition. You can fill a critical need in the biomedical industry for professionals who understand how regulations must be implemented in the device design and manufacturing processes.

Program Description

The BSE program in biomedical engineering with a concentration in biomedical devices provides in-depth knowledge to translate an idea for a health solution into a viable prototype of a biomedical device.

With knowledge gained from courses that cover engineering, life sciences, and that tie the two together, graduates are able to apply their skills in an ethical and a sustainable manner to make contributions that address societal and individual needs.


At a Glance

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

Biomedical 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.
First-year | Transfer | International | Readmission

Additional Requirements:

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 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 fewer 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 GPA in ABOR competency courses, 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. Current ASU students should refer to the following Engineering website for the major change requirements for this program. [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 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](https://admission.asu.edu/transfer/MyPath2ASU).

Global Opportunities

Global Experience

With over 250 programs in more than 65 countries (programs vary in length, from one week to one year), study abroad is possible for all ASU students who wish to acquire 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 they may apply financial aid and scholarships toward program costs. [https://goglobal.asu.edu/](https://goglobal.asu.edu/)
Career Opportunities

Graduates are well-qualified for entry level positions in the biomedical industry, including areas such as quality assurance, regulatory affairs and project management. Graduates also are highly qualified to seek advanced degrees if they wish to pursue research and design positions.

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>Biomedical Engineer 🌟</td>
<td>4.7%</td>
<td>$92,620</td>
</tr>
<tr>
<td>Human Factors Engineer 🌟</td>
<td>10.1%</td>
<td>$88,950</td>
</tr>
<tr>
<td>Microsystem Engineer 🌟</td>
<td>1.3%</td>
<td>$103,380</td>
</tr>
<tr>
<td>Technical Sales Engineer 🌟</td>
<td>6.3%</td>
<td>$108,830</td>
</tr>
<tr>
<td>Validation Engineer 🌟</td>
<td>10.1%</td>
<td>$88,950</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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