

Biomedical Engineering (Biomedical Devices), BSE

ESBMEMDBSE

Learn to create biomedical products that address unmet healthcare 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 students with 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 and life sciences, and that tie the two together, graduates can apply their skills in an ethical and sustainable manner to make contributions that address societal and individual needs.

Accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org/>, under the General Criteria and the Bioengineering and Biomedical Engineering Program Criteria.

At a glance

- **College/School:** [Ira A. Fulton Schools of Engineering](#)
- **Location:** [Tempe](#)
- **Second language requirement:** No
- **First required math course:** MAT 265 - Calculus for Engineers I
- **Math intensity:** Substantial 

Required courses (Major Map)

[2024 - 2025 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 plus master's degree](#) with:

[Biomedical Engineering, MS](#)

Acceptance to the graduate program requires a separate application. Students typically receive approval to pursue the accelerated master's during the junior year of their bachelor's degree program. Interested students can learn about eligibility requirements and [how 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** minimum high school cumulative GPA of 3.00 in ASU competency courses, **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** a minimum high school GPA of 3.00 in ASU 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 ASU 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)

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about [ASU tuition and financial aid](#) options to find out which will work best for them.

Change of Major Requirements

[Admission requirements](#) for many majors in the Ira A. Fulton Schools of Engineering are higher than university admission standards.

Students should visit the [Change of Major form](#) 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.

Global opportunities





Global experience

With more than 300 [Global Education program opportunities](#) available to them, biomedical engineering students are able to tailor their experience to their unique interests and skill sets. Whether in a foreign country, in the U.S. or online, students build communication skills, learn to adapt and persevere, and are exposed to research and internships across the world, increasing their professional network.

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.

Example job titles and salaries listed below are not necessarily entry level, and students should take into consideration how years of experience and geographical location may affect pay scales. Some jobs also may require advanced degrees, certifications or state-specific licensure.

Career	*Growth	*Median salary
<u>Biomedical Engineer</u> 	5.1%	\$99,550
<u>Human Factors Engineer</u> 	11.7%	\$96,350
<u>Microsystem Engineer</u>	3.3%	\$104,600
<u>Technical Sales Engineer</u> 	4.7%	\$108,530
<u>Validation Engineer</u> 	11.7%	\$96,350

* 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

Professional licensure

ASU programs that may lead to professional licensure or certification are intended to prepare students for potential licensure or certification in Arizona. Completion of an ASU program may not meet educational requirements for licensure or certification in another state. For more information, students should visit the [ASU professional licensure](#) webpage.

Students should note that not all programs within the Ira A. Fulton Schools of Engineering lead to professional licensure.

Contact information

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