Engineers are creative problem-solvers who help shape the future. No profession unleashes the spirit of innovation like engineering.

**Program Description**

The ABET-accredited BSE program in engineering prepares graduates to collaborate across disciplines to design and build solutions to real-world problems. In the program, students apply fundamental engineering knowledge and design thinking to real projects every semester.

Students in the robotics concentration of the Bachelor of Science in Engineering program first build a broad engineering foundation to which they add skills and knowledge necessary to contribute robotics subject matter expertise in transdisciplinary engineering teams. This expertise includes electromechanical systems, sensor and actuator integration, embedded digital systems application, and design and analysis of dynamic systems. The robotics curriculum also provides significant hands-on experience designing and implementing robotics systems to meet the needs of users.


This major is eligible for the Western Undergraduate Exchange (WUE) program at the following location: Polytechnic campus. Students from Western states who select this major and campus may be eligible for reduced nonresident tuition at a rate of 150 percent of Arizona resident tuition plus all applicable fees. See more information and eligibility requirements on the [Western Undergraduate Exchange (WUE) program](http://www.abet.org).

**At a Glance**

- **College/School:** Ira A. Fulton Schools of Engineering
- **Location:** Polytechnic campus [WUE](http://www.abet.org)
- **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)**

2018 - 2019 Major Map
Major Map (Archives)

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**Accelerated Degrees**

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:

- Engineering, MS
- Manufacturing Engineering, MS
- Secondary Education (Teacher Certification), MEd
- Technology (Management of Technology), MSTech

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

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**Change of Major Requirements**

A current ASU student has no additional requirements for changing majors. Students should refer to the ASU website for information about how to change a major to this program.

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**Transfer Agreements**

ASU has partnered with colleges and universities in Arizona, California, Illinois and Washington to provide transfer curriculum pathways. Students should select their current institution to see if there is a partnership agreement between the institution and ASU for this degree program. Students who do not see their state or institution listed should check back as ASU is always working on creating new partnerships.
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

Engineers collaborate on transdisciplinary teams to design, manufacture and deliver innovative technological products and services. The Bachelor of Science in Engineering program enables students to develop sophisticated technical skills in tandem with the professional skills of communication; teamwork and collaboration; and self-motivation and adaptability that many employers seek. Graduates are prepared to work in large corporations, government agencies, small businesses, as well as to go on to graduate school to pursue advanced degrees. The program’s emphasis on open-ended design and project-based learning supports the development of entrepreneurial skills and attitudes, and some students start companies of their own.

Robotics plays an increasingly important role in many different industries, including manufacturing, automotive, defense systems, biomedical devices and aerospace. Graduates from this program have a broad base of technical knowledge in the design and implementation of robotic electro-mechanical systems. In addition, they have the operational and communication skills that make them invaluable members of multidisciplinary engineering teams, well-suited for employment across the whole spectrum of applications.

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>Automation Engineer</td>
<td>6.4%</td>
<td>$97,250</td>
</tr>
<tr>
<td>Electrical Engineer</td>
<td>8.6%</td>
<td>$95,060</td>
</tr>
<tr>
<td>Electronics Engineer</td>
<td>3.7%</td>
<td>$102,180</td>
</tr>
<tr>
<td>Human Factors Engineer</td>
<td>9.7%</td>
<td>$85,880</td>
</tr>
<tr>
<td>Mechanical Engineer</td>
<td>8.8%</td>
<td>$85,880</td>
</tr>
<tr>
<td>Robotics Engineer</td>
<td>6.4%</td>
<td>$97,250</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).

Solar Bright Outlook, Green Occupation

Contact Information

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polyadvising@asu.edu | 480-727-1874