



Arizona State University (Polytechnic Campus)

Software Engineering, BS

Study details

Course type: Bachelor's degree

Degree: Software Engineering, BS TSSERBS

Study mode: Full time

Duration: 48 Month

Cost of study

Cost : 35 430 USD

Reg. fee : 85 USD

Scholarship :

Insurance : 2 765 USD

Intake/s

Jan/May/Aug

Requirements

Academic requirements

First-year students must:

- Have a 3.00 grade point average (GPA) (a "B" or better where "A"=4.00) from a secondary school. Some ASU programs may have higher admission or English proficiency requirements and may consider a minimum ACT or SAT score.
- Must have three years of high school coursework. (If you are currently in high school, ASU needs to see 9–11 grade coursework. If you have completed high school, ASU needs to see 10–12 grade coursework.)
- Must have and present a completed high school diploma or certificate.

Conditional admission

ASU may offer conditional undergraduate admission to international applicants to an on-campus program who meet the academic (aptitude) requirements but who are not proficient in English. This offer of conditional admission will give you time to improve your English proficiency before you start classes at ASU. Your conditional admission offer is good for up to three semesters, during which time you must meet one of these requirements to begin your ASU experience.

Competency requirements

International students who completed high school outside the U.S. are required to meet the following competency requirements:

- Math: four years (algebra I, geometry, algebra II and one course requiring algebra II as a prerequisite).

- Laboratory science: three years total (one year each from any of the following areas are accepted: biology, chemistry, earth science, integrated sciences and physics).

Additional requirements:

The admission standards for majors in the Ira A. Fulton Schools of Engineering, shown below, are higher than minimum university admission standards. International students must meet the same admission standards, with the possible additional requirement of a minimum English language proficiency test score. If the university requires an English proficiency test score from the applicant, then admission to engineering requires a minimum TOEFL iBT score of 79 (internet-based test, taken in a testing center), a minimum IELTS score of 6.5, a minimum PTE score of 58, a minimum Duolingo English score of 105, or a minimum Cambridge English exam score of 176.

First-year admission:

1. Minimum 1210 SAT combined evidence-based reading and writing plus math score or minimum 24 ACT combined score, **or** a minimum high school cumulative GPA of 3.00 in ASU competency courses, **or** class ranking in top 25% of high school class, **and**
2. Admission may be granted with one deficiency in no more than two competency areas. Deficiencies in both math and laboratory science are not acceptable.

Accommodation

Provided by partner agencies

Speciality

STEM-OPT for international students on F-1 visas

This program may be eligible for an Optional Practical Training extension for up to 24 months. This OPT work authorization period may help international students gain skills and experience in the U.S. Those interested in an OPT extension should review ASU degrees that qualify for the STEM-OPT extension at ASU's International Students and Scholars Center website.

The OPT extension only applies to students on an F-1 visa and does not apply to students completing a degree through ASU Online.

Transfer admission requirements:

Transfer students with fewer than 24 transferable college credit hours:

1. minimum transfer GPA of 2.75 for fewer than 24 transfer hours, **and**
2. meet the first-year admission requirements

Transfer students with more than 24 transferable college credit hours:

1. Minimum transfer GPA of 2.75 for 24 or more transfer hours, **and**
2. If ASU Admission Services requires submission of a high school transcript, admission may be granted with one deficiency in no more than two competency areas. Deficiencies in both math and laboratory science are not acceptable.

Also available online

Additional information

Program description

The BS program in software engineering blends engineering, computing, project leadership and software construction.

Students learn how to create innovative software solutions to today's problems. Software systems are complex, often including millions of lines of code. Graduates of the bachelor's degree program in software engineering possess the knowledge and skills of a defined engineering approach to complex systems analysis, planning, design and construction.

The program has a unique, project-driven curriculum, establishing a new model for software engineering education. The program is built around the concepts of engaged learning, discovery-based education, and learning-by-doing. Students learn by solving engaging projects, commonly as a member of a development team. In every semester of the program, students complete projects that emphasize communication, teamwork, critical thinking and professionalism. They have flexibility in designing their course of study, selecting technical electives from a pool of courses in different software engineering application areas; these include web and mobile applications, embedded systems and other interdisciplinary areas.

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

This major is eligible for the Western Undergraduate Exchange 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% of Arizona resident tuition plus all applicable fees.

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:

- Computer Science (Big Data Systems), MCS
- Computer Science (Big Data Systems), MS
- Computer Science (Biomedical Informatics), MS
- Computer Science (Cybersecurity), MCS
- Computer Science (Cybersecurity), MS
- Computer Science (Media Arts and Sciences), MS
- Computer Science, MCS
- Computer Science, MS

- Robotics and Autonomous Systems (Artificial Intelligence), MS
- Software 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.

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics (ABET 1)
- Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. (ABET 2)
- Use the techniques, skills, and modern engineering tools and processes necessary for software engineering practice. (ABET-SER1)

Global opportunities

Global experience

Students in software engineering gain valuable hands-on experience when studying abroad --- experience that enhances their resumes. With more than 300 programs available in a variety of countries around the world, study abroad allows students to tailor their experience to their unique interests and skill sets. In a competitive field, students stand out with the heightened cultural competency, and the leadership and critical thinking skills they gain when studying abroad. More information on available programs can be found on the Global Education Office website.

Career opportunities

Software engineers solve a broad set of transdisciplinary problems and apply new technologies to improve quality of life.

Graduates are prepared for advanced study in computing or an allied field, or to enter the computing profession, most commonly as application software engineers. They design and engineer innovative systems that may include mechanical and electrical components that interact with software.

According to the Bureau of Labor Statistics, software engineers are highly paid, and there is significant growth in the number of employment opportunities. Software engineering jobs may include:

- creating applications for mobile devices
- creating web applications
- designing, creating and validating software for avionics, robotics and similar systems fields