

Computer Systems Engineering (Cybersecurity), BSE

ESCSEIBSE

Program description


The BSE program in computer systems engineering with a concentration in cybersecurity provides students with the knowledge and skills they need to build dependable and secure information systems and networks and to ensure the integrity and quality of the information being stored, processed and transmitted.

ASU has been certified as a National Center of Academic Excellence in Information Assurance Education and a National Center of Academic Excellence in Information Assurance - Research by the National Security Agency and the Department of Homeland Security. Information assurance courseware at ASU has been certified by the Information Assurance Courseware Evaluation Program to satisfy the standards for Information Systems Security Professionals (NSTISSI 4011) and Senior Systems Managers (CNSSI 4012).

Domestic students enrolled in the cybersecurity concentration are eligible for federal fellowships such as the Department of Defense Information Assurance Scholarship Program and the Federal Cyber Service Scholarship for Service Program. <https://ctf.asu.edu/>

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

[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](#)

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:

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 SAT score of 1210 for evidence-based reading and writing plus math or minimum ACT composite score of 24, **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. 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 SAT score of 1210 for evidence-based reading and writing plus math (or 1140 if taken prior to March 5, 2016) or minimum ACT composite score of 24, **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 2.75 in all critical courses: CSE 110 Principles of Programming, CSE 205 Object-oriented Programming and Data Structures, MAT 265 Calculus for Engineers I, and MAT 266 Calculus for Engineers II

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

Students learn to thrive in a global environment through the rich educational and interpersonal experiences inherent in study abroad. A resume enhanced by the valuable study abroad experience will impress prospective employers and will also help the student stand out should they decide to pursue advanced study.

With over 300 [Global Education program opportunities](#) available to them, 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

Computer scientists are highly sought-after in diverse areas and industries, including education, logistics, tech, government and security.

Graduates of the Bachelor of Science in Engineering program in cybersecurity find employment in a variety of capacities, including computer systems and software development and research on information assurance technologies. Related jobs may include:

- computer forensic data analysis
- information security consulting

- information systems security engineering
- network security engineering
- secure information systems and networks design

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>Computer Hardware Engineer</u> ☀	4.6%	\$132,360
<u>Computer Network Administrator</u>	2.5%	\$90,520
<u>Computer Network Analyst</u>	3.5%	\$126,900
<u>Computer Scientist</u> ☀	22.7%	\$136,620
<u>Computer Software Quality Engineer</u> ☀	20.3%	\$99,620
<u>Computer Systems Architect</u> ☀	9.7%	\$98,740
<u>Database Administrator (DBA)</u> ☀	7.0%	\$99,890
<u>Engineering Manager</u>	4.1%	\$159,920
<u>Information Security Analyst</u> ☀	31.5%	\$112,000
<u>Software Developer</u> ☀	25.7%	\$127,260

* 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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