Computer Science, MS

ESCOMSCMS

Computer science degrees have proven essential to recent graduates of Arizona State University; more than 90% of graduates have achieved employment after completing their computer science master's degree at ASU.

Program Description

Degree Awarded: MS Computer Science
The MS program in computer science affords an opportunity for students employed in industry to seek a breadth of advanced education in computer science.

The program reflects the dual nature of computer science as a scientific and engineering discipline by allowing emphasis on theory as well as practical applications. Students may opt for a thesis or nonthesis option as their culminating event. Students can study topics such as:

- artificial intelligence
- big data
- cloud and distributed computing
- cybersecurity
- database management and information retrieval
- database systems
- data mining and machine learning
- distributed computing and operating systems
- imaging, graphics and visualization
- simulation modeling and systems

At a Glance

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

- **Computer Science, BS**
- **Computer Science (Cybersecurity), BS**
- **Computer Science (Software Engineering), BS**
- **Computer Systems Engineering, BSE**
- **Computer Systems Engineering (Cybersecurity), BSE**

Acceptance to the graduate program requires a separate application. During their junior year, eligible students are advised by their academic departments to apply.

Degree Requirements

30 credit hours and a portfolio, or
30 credit hours and a thesis

Required Core Areas (9 credit hours)
- applications (3)
- foundations (3)
- systems (3)

Electives (15 or 21 credit hours)

Culminating Experience (0 or 6 credit hours)
- CSE 599 Thesis (6) or
- portfolio (0)

Additional Curriculum Information

Students should see the academic unit for the list of courses approved for each core area in applications, foundations and systems. Courses selected as part of the core may not be used as other elective coursework on the same plan of study.

Students complete a thesis or portfolio for the culminating experience. Students in the thesis option take 15 credit hours of electives, and students in the portfolio option take 21 credit hours of electives. The project portfolio is developed from three courses in which the student received a "B" grade (3.00 on a 4.00 scale) or higher. Students should see the academic unit for additional information and requirements.
For thesis students, nine of the 15 credit hours of electives must be courses in a chosen research area and approved by the student's academic advisor. Up to six credit hours can be independent study in CSE 590 Reading and Conference.

Students complete a minimum of 30 credit hours for the program. At least 24 of these credit hours must be 500-level CSE courses at ASU. Up to six credit hours of 400-level courses may be applied to the plan of study.

**Admission Requirements**

Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in computer science, computer engineering or a closely related area from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.25 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.25 (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. scores for the GRE
4. a statement of purpose
5. proof of English proficiency

**Additional Application Information**

An applicant whose native language is not English must provide proof of English proficiency regardless of current residency. [https://admission.asu.edu/international/graduate/english-proficiency](https://admission.asu.edu/international/graduate/english-proficiency)

If the student has graduated with an undergraduate degree in computer science or computer systems engineering at ASU, GRE scores are not required.

Students assigned any deficiency coursework upon admission must complete those classes with a grade of "B" (scale is 4.00 = "A") or higher within two semesters of admission to the program. Deficiency courses include:

- CSE 230 Computer Organization and Assembly Language Programming
- CSE 310 Data Structures and Algorithms
- CSE 330 Operating Systems
- CSE 340 Principles of Programming Languages or CSE 355 Introduction to Theoretical Computer Science
The applicant's undergraduate GPA and depth of preparation in computer science and engineering are the primary factors affecting admission.

**Application Deadlines**

**Fall**

**Spring**

**Career Opportunities**

Students completing the Master of Science program in computer science are able to analyze key theories, algorithms and software modules used in the field of computer science.

Career examples include:

- computer network architect
- computer system analyst
- computer systems engineer
- data scientist or engineer
- machine learning, AI or computer vision engineer
- software engineer
- software developer

**Contact Information**

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