Computer Science, MS

ESCOMSCMS

Computer science allows for up to three opportunities for students to take Curricular Practical Training while completing their degree.

Program description

Degree awarded: MS Computer Science
The MS program in computer science prepares students to undertake fundamental and applied research in computing.

The program welcomes motivated and dedicated students to work with world-class faculty on projects across the field of computing and augmented intelligence. Students may choose a thesis or nonthesis option as their culminating event. Students can study topics such as:

- artificial intelligence, machine learning and statistical modeling
- big data and data mining
- computational biology
- computer design and architecture, including nonvolatile memory computing
- computer system security, cybersecurity and cryptography
- cyber-physical systems, IoT and robotics
- distributed computing and consensus protocols
- networking and computer systems
- novel computing paradigms (e.g., biocomputing, quantum computation)
- social computing
- theory, algorithms and optimization
- visualization and graphics

At a glance

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

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, BS

Computer Science (Cybersecurity), BS

Computer Science (Software Engineering), BS

Computer Systems Engineering, BSE

Computer Systems Engineering (Cybersecurity), BSE

Software Engineering, BS

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.

Degree requirements

30 credit hours and a portfolio, or
30 credit hours and a thesis, or
30 credit hours and the required applied project course (CSE 593)

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

Electives (15 or 18 or 21 credit hours)

Culminating Experience (0 or 3 or 6 credit hours)
CSE 593 Applied Project (3) or
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, applied project or portfolio for the culminating experience. Students in the thesis option take 15 credit hours of electives, students in the applied project take 18 credit hours of electives and students in the portfolio option take 21 credit hours of electives. MS program students who

select project portfolio as their culminating event must complete a project portfolio from two 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 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. GRE scores
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 their current residency.

If the student has graduated with an undergraduate degree in computer science or computer systems engineering from ASU, GRE scores are not required. ASU does not accept the GREÂ® General Test at home edition.

Students assigned any deficiency coursework upon admission must complete those classes with a grade of "C" (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.

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.

Application deadlines

Fall

Spring

expand

expand

Career opportunities

Students who complete 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. The program prepares them to pursue careers in research and education, including academia, government and industry.

Career examples include:

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

Contact information

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