Computer Science, MCS

ESCOMSCMCS

Are you seeking to expand your knowledge in the computer science field? If you have an undergraduate degree in computing or a related area, this may be the program for you.

Program description

Degree awarded: MCS Computer Science
The MCS program affords students employed in industry the opportunity 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 can study topics such as:

- artificial intelligence
- big data and data mining
- cloud and distributed computing
- computer system security, cybersecurity and cryptography
- cyber-physical system and IoT
- imaging, graphics and visualization
- machine learning
- operating systems
- theory and algorithms
- simulation modeling and systems

Students build a project portfolio through the program to demonstrate the knowledge gained.

At a glance

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

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

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

Electives (21 credit hours)

Culminating Experience (0 credit hours)
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.

Students choose 21 credit hours of elective coursework approved by their academic advisor. Coursework selected as part of the area core may not be used as elective coursework on the same plan of study.

At least 24 of these hours must be CSE 500-level credits at ASU. Up to six credit hours of 400-level courses may be applied to the plan of study. All 30 credit hours must be from formal coursework. CSE 590 is not allowed as part of the MCS program plan of study.

All MCS program students must complete a project portfolio from two courses in which the student received a "B" (3.00) grade or higher.

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 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or they must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. statement of purpose or a curriculum vitae
4. 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. Students can find more information on the Admission Services website.

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.

Attend online

ASU Online

ASU offers this program in an online format with multiple enrollment sessions throughout the year. Applicants may view the program's ASU Online page for program descriptions and to request more information.

Application deadlines

Fall

Spring   expand

Summer   expand

                              expand

Career opportunities

Graduates 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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