Computer Science, MCS

Program Description

Degree Awarded: MCS Computer Science

The MCS degree is an advanced degree program targeted at students with an undergraduate education in computing and related disciplines who can best profit from further breadth and background in computer science. The MCS program also 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 both a scientific and engineering discipline by allowing emphasis on theory as well as practical applications. Students can study topics such as:

- artificial intelligence
- bioinformatics
- cloud and distributed computing
- computer-aided geometric design
- computer design and architecture
- computer graphics
- computer networks
- cyber-physical and embedded systems
- database management and information retrieval
- database systems
- data mining and machine learning
- distributed computing and operating systems
- embedded systems
- health operations and informatics
- imaging, graphics and visualization
- information assurance
- information assurance and security
- intelligent information integration
- multimedia
- network algorithms
- personalized learning and educational games
- simulation modeling and systems
- social computing
At a Glance

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

Accelerated Degrees

This degree is also offered in an accelerated format with:
- Computer Science, BS
- Computer Science (Information Assurance), BS
- Computer Science (Software Engineering), BS
- Computer Systems Engineering, BSE
- Computer Systems Engineering (Information Assurance), BSE

Acceptance to the graduate program requires a separate application. During their junior and senior years, eligible students will be advised by their academic departments to apply.

Degree Requirements

30 credit hours and a portfolio

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

**Electives or Research (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 other elective or research 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 5XX credits at ASU. A maximum of four CSE 598 courses are allowed as elective coursework, which cannot include courses taken at the undergraduate level. Up to six credit hours of 400-level courses may be applied to the plan of study. All 30 semester hours must be from formal coursework. CSE 590 will not be allowed as part of the MCS program plan of study.

All MCS program students must complete a project portfolio from three 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 of a 3.00 cumulative GPA (scale is 4.00 = "A") in the last 60 hours of a student's first bachelor's degree program, or applicants must have a minimum of a 3.00 cumulative GPA (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. a statement of purpose
4. scores for the GRE, unless the student has graduated with an undergraduate degree in computer science or computer systems engineering at ASU
5. three letters of recommendation
6. proof of English proficiency
**Additional Application Information**

An applicant whose native language is not English (regardless of their current residency) must provide proof of English proficiency.

If the student is assigned any deficiency coursework upon admission, those classes must be completed with a grade of "B" (3.00) or higher within two semesters of admission to the program. Deficiency courses are:

CSE 230 Computer Organization and Assembly Language Programming (3)
CSE 310 Data Structures and Algorithms (3)
CSE 330 Operating Systems (3)
CSE 340 Principles of Programming Languages (3)
CSE 355 Introduction to Theoretical Computer Science (3)
CSE 360 Introduction to Software Engineering (3)

The applicant's undergraduate GPA and depth of preparation in computer science and engineering are the primary factors affecting admission.

Students interested in applying to the program must submit an online application to Graduate Admission Services. Students should see the program website for application deadlines.

**Contact Information**

Computer Science and Engineering Program | BYENG 225
cidse.advising@asu.edu | 480-965-3199