Computer Engineering (Computer Systems), MS

ESCENCMS

Our transdisciplinary computer engineering program allows you to develop a unique combination of high-demand computer science and electrical engineering skills through courses and participation in projects across the two schools and across our core areas.

Program Description

Degree Awarded: MS Computer Engineering (Computer Systems)

The MS in computer engineering is a transdisciplinary program that builds on the fundamentals of computer science, electrical engineering, applied mathematics and physical sciences. Graduates of this program have the knowledge and skills necessary to advance the design, system integration, testing, evaluation and deployment of state-of-the-art hardware and software for systems that include computing, communications and networking (wired and wireless), control functions, sensing, signal processing and actuation.

The program is intended for students who want to gain knowledge deeper than that provided at the bachelor's degree level and sufficient for designing and implementing state-of-the-art systems in industrial research and development positions. The program is also appropriate for students contemplating future doctoral study and those who wish to gain experience in research. Master's degree program graduates may work under the direction of scientists and engineers who hold doctorates in high-tech lab settings assisting in developing innovative products and systems that require strong foundational knowledge in the underlying sciences and the ability to synthesize and analyze engineering principles as they relate to the development of new computer engineering technology.

At a Glance

• College/School: Ira A. Fulton Schools of Engineering
• Location: Tempe campus
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 Systems Engineering, BSE

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

Degree Requirements

30 credit hours and a thesis, or
30 credit hours and a written comprehensive exam

Required Core (6 credit hours)
CSE 551 Foundations of Algorithms (3)
EEE 554 Random Signal Theory (3)

Electives (18-24 credit hours)

Culminating Experience (0-6 credit hours)
CEN 599 Thesis (6) or
written comprehensive exam

Additional Curriculum Information
This program has a thesis and a nonthesis option for the culminating experience. Students in the nonthesis option take 24 credit hours of electives and students in the thesis option take only 18 credit hours to reach the 30 credit hour requirement. Electives are selected in consultation with the academic unit.

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 degree or equivalent or a master's degree from a regionally accredited college or university of recognized standing in a related field such as computer engineering, computer science, computer systems engineering or electrical engineering.
Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (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. personal statement that indicates professional goals and reasons for desiring to enroll in the program
4. GRE required if undergraduate program is not ABET-accredited (http://www.abet.org/)
5. letters of recommendations are optional
6. proof of English proficiency

**Additional Application Information**

An applicant whose native language is not English must provide proof of English proficiency via a TOEFL score regardless of current residency. Students should see [https://students.asu.edu/graduate/proficiency](https://students.asu.edu/graduate/proficiency) for more information.

A GRE score is required unless the student has graduated with an undergraduate degree in computer science or computer systems engineering from ASU. Students, international and domestic, are also exempt from taking the GRE if they have a degree from an ABET-accredited program from a U.S. or overseas institution and meet the minimum GPA requirements of the academic units. Students who do not meet these requirements as outlined are required to take the GRE.

Depending upon an applicant's prior academic preparation and accomplishments, it is recommended that students consider taking the following courses to ensure adequate background preparation:

- CSE 230 Computer Organization and Assembly Language Programming
- CSE 310 Data Structures and Algorithms
- EEE 203 Signals and Systems I
- EEE 335 Analog and Digital Circuits
- MAT 243 Discrete Mathematical Structures

A reading list of the topics covered in the placement exam will be provided in advance of the exam.

Students should see the program website for application deadlines.

**Application Deadlines**

**Fall**

**Spring**

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