Computer Engineering (Computer Systems), MS

ESCENCMS

Develop a unique combination of computer science and electrical engineering skills.

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. Students can take courses and participate in projects across two schools and among the core areas.

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.

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 Systems Engineering, BSE

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

Required Core (6 credit hours)
CSE 551 Foundations of Algorithms (3)
EEE 554 Probability and Random Processes (3)

Electives (18-24 credit hours)

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

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 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
4. 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 their current residency. Students should visit the [Admission Services website](#) for more information.

Letters of recommendation are optional.

The personal statement should indicate professional goals and reasons for desiring to enroll in the program.

Depending on 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 is provided in advance of the exam.

Students should see the program website for application deadlines.

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

Graduates of the Master of Science program in computer engineering are able to analyze and synthesize key theories and methods used in the field of computer engineering. These graduates can apply new theories, methods and designs that can advance the field of computer engineering. More specifically, computer engineering program graduates have the skills 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.

These skills can be applied in high-demand growth areas such as autonomous systems and robotics; distributed, dependable and secure systems; and embedded systems for media processing and communications.

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.

Career examples include:

- computer hardware engineer
- computer systems engineer
- systems software engineer

Contact information

Computer Science and Engineering Program | CTRPT 105
SCAI.Grad.Admission@asu.edu | 480-965-3199
Admission deadlines