Computer Engineering (Electrical Engineering), MS

ESCENEMS

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

Program description

Degree awarded: MS Computer Engineering (Electrical Engineering)
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 through this transdisciplinary program that spans two schools and encompasses several core areas.

The MS program is intended for students who want to gain knowledge deeper than that provided at the bachelor's degree level, and is sufficient for designing and implementing state-of the-art systems in industrial research and development positions. Students learn to analyze and synthesize key theories and methods used in the field of computer engineering.

The program is also appropriate for students contemplating future doctoral study and for those desiring 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:

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 first 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. three letters of recommendation (optional)
5. 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. More information can be found on the [admission services English proficiency website](#).

The personal statement should indicate professional goals and reasons for applying to the program.

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.

Career opportunities

Graduates from the Master of Science program in computer engineering are able to apply new theories, methods and designs that can advance the field of computer engineering. More specifically, 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; as well as in embedded systems for media processing and communications.

Career examples include:

- computer engineering professor
- computer engineering researcher
- computer hardware engineer
- computer systems engineer
- systems software engineer

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.

Contact information

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[Admission deadlines](#)