

Computer Engineering (Electrical Engineering), PhD

ESCENEPHD

When you are able to solve complex interconnected hardware and software challenges in support of efficient ubiquitous computing found in smartphones and elsewhere, you'll also be able to foster agile and innovative thinkers.

Program description

Degree awarded: PHD Computer Engineering (Electrical Engineering)

The PhD program in computer engineering is a transdisciplinary program that builds on the fundamentals of electrical engineering, computer science, applied mathematics and physical sciences. Students can take courses and participate in projects across two schools and among the core areas.

The program in computer engineering with a concentration in electrical engineering is intended for students with excellent ability in mathematics and physical science who are interested in gaining an in-depth knowledge of the foundational principles of engineering and wish to pursue a career in academia, research or highly technical entrepreneurial innovation.

This doctoral program provides broader and more in-depth preparation than the MS programs in anticipation of a demonstrated ability to independently pursue more creative and substantive innovation with higher impact.

At a glance

- **College/School:** [Ira A. Fulton Schools of Engineering](#)
- **Location:** [Tempe](#)

Degree requirements

84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

Required Core (6 credit hours)

CSE 551 Foundations of Algorithms (3)

EEE 554 Probability and Random Processes (3)

Concentration (9 credit hours)

Focus Area Electives (3 credit hours)

Technical Electives (30 credit hours)

Research (24 credit hours)

CEN 792 Research (24)

Culminating Experience (12 credit hours)

CEN 799 Dissertation (12)

Additional Curriculum Information

Concentration, focus area and technical elective courses are selected in consultation with the academic unit.

The concentration and focus area course lists are located on the computer engineering website and need to meet the following requirements: at least nine credit hours of graduate-level coursework in electrical engineering (EEE XXX) or computer engineering (CEN XXX); and at least three credit hours of graduate-level coursework in computer engineering or computer science (CSE XXX).

This program requires a qualifying exam. Students should see the academic unit for information on timeline and satisfactory progress standards.

Students may apply up to 30 credit hours from a previously awarded master's degree toward their doctoral Interactive Plan of Study with approval of the program and supervisory committee and the dean of the Graduate College.

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 graduate degree from a regionally accredited institution 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 GPA of 3.50 (scale is 4.00 = "A") in the MS or MSE coursework for acceptance into the doctoral program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. 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.

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 doctoral program in computer engineering are able to analyze and synthesize key theories and methods used in the field of computer engineering. They can generate and evaluate new theories, methods and designs that can advance the field of computer engineering. More specifically, program graduates have the knowledge and skills they need to fundamentally advance and develop new paradigms for the design, system integration, testing, evaluation and deployment of the 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

Contact information

[Electrical Engineering Program](#) | GWC 209

askee@asu.edu | 480-965-3424

[Admission deadlines](#)

