Computer Engineering (Computer Systems), PhD

ESCENCPhD

Program Description

Degree Awarded: PHD Computer Engineering (Computer Systems)

Computer engineering is a transdisciplinary program that builds on the fundamentals of computer science, electrical engineering, industrial engineering and applied mathematics. Graduates of this program will have the knowledge and skills necessary to fundamentally advance and develop new paradigms for 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 PhD program 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 pursuing a career in academia, research or highly technical entrepreneurial innovation. This doctoral program provides a 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 campus

Degree Requirements

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

Required Core (6 credit hours)
EEE 554 Random Signal Theory (3)
CSE 551 Foundations of Algorithms (3)
Concentration and Electives (54 credit hours)

Research (12 credit hours)
CEN 792 Research (12)

Culminating Experience (12 credit hours)
CEN 799 Dissertation (12)

Additional Curriculum Information
Concentration and elective courses are selected in consultation with the academic unit. Students must complete at least 18 credit hours of approved graduate courses from science, engineering. Additionally, students must complete at least 24 credit hours of approved computer engineering area courses, 12 credit hours of which must be courses noted with M* or D* from the six computer engineering areas, with no more than six credit hours noted with M*.

A maximum of six credit hours of CEN 790 Reading and Conference may be applied to the plan of study.

For more information, students should visit https://cidse.engineering.asu.edu/forstudent/prospective-students/computer-engineering/.

Admission Requirements

Applicants must fulfill both the requirements of 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 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. personal statement
3. three letters of recommendation
4. official transcripts
5. GRE scores
6. proof of English proficiency

Additional Application Information
An applicant whose native language is not English (regardless of where they may now reside) must provide proof of English proficiency. The TOEFL is required for an applicant whose native language is not English: https://students.asu.edu/graduate/proficiency.

The personal statement should explain the professional goals and reasons for desiring to enroll in the doctorate program, as well as describing any research experiences and indicating personal research interest.

GRE scores are required if the student's undergraduate program is not ABET-accredited; http://www.abet.org.

Depending on prior academic preparation and accomplishments of an applicant, 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

Contact Information

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