

Sensor Signal and Information Processing (Graduate Certificate)

ESSSIPGRCT

Program description

Degree awarded: Certificate Sensor Signal and Information Processing (Certificate)

The graduate certificate program in sensor signal and information processing provides background and application-oriented training in processing and interpreting signals acquired from sensors. The focus is on building knowledge and skills in several sensor network applications.

The program includes courses on signal and data processing for sensor systems. Course topics include digital signal processing, random signal theory, detection and estimation, sensor systems, big data and machine learning. The certificate may be completed with on-campus coursework and iCourses.

At a glance

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

Degree requirements

16 credit hours

Required Core (7 credit hours)

EEE 517 Sensors and Machine Learning (1)

EEE 554 Probability and Random Processes (3)

EEE 556 Detection and Estimation Theory (3) or

EEE 606 Adaptive Signal Processing (3) or

EEE 607 Speech Comprehension and Recognition (3)

Electives (5 or 6 credit hours)

Other Requirements (3 or 4 credit hours)

EEE 509 DSP Algorithms and Software (3) or EEE 591 Seminar: Digital Signal Processing (4)

Additional Curriculum Information

For the required core, students choose either EEE 556, EEE 606 or EEE 607. Additionally, students complete either EEE 591 Seminar: Digital Signal Process and five credit hours of electives, or EEE 509 and six credit hours of electives.

For electives, students should see the academic unit for the approved course list. Other coursework may be used with the approval of 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 or master's degree in an engineering or a science discipline such as physics, mathematics or computer science from an accredited institution.

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.

Applicants are required to submit:

1. graduate admission application and application fee
2. official transcripts
3. statement of purpose
4. 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.

International students who need an F1 or J1 visa first need to apply to and be accepted into a graduate degree program prior to being considered for the certificate program. International students residing in the USA on other types of visas must adhere to all Graduate College policies and procedures regarding admission to be considered for admission to this certificate program.

Regular admission is granted to applicants who have at least a GPA of 3.00 or equivalent (scale is 4.00 = "A") and are competitive in the applicant pool. All prerequisites to the sensor signal and information processing certificate required courses must be in place (EEE 203 and EEE 350 from ASU, or signals and systems and random signals course equivalents from other universities).

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.

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Master the key concepts in the sensor and signal processing engineering fields at an advanced level.
- Master the key concepts in the signal processing and communication engineering field at an advanced level.

Career opportunities

The certificate is a professional graduate program. The area of sensor information extraction and interpretation has various professional applications including in health, sustainability, media, communications and security.

Contact information

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