

# Robotics and Autonomous Systems (Systems Engineering), MS

ESRASSEMS

## Program description

**Degree awarded: MS Robotics and Autonomous Systems (Systems Engineering)**

This is an advanced degree emphasizing system-level competency in the rapidly growing fields of robotics and autonomous systems.

The systems engineering concentration is one of the concentration options in the multidisciplinary MS program in robotics and autonomous systems, which emphasizes robotics, controls, autonomous systems, artificial intelligence and related fields.

This concentration is appropriate for students who wish to focus on applications in systems engineering.

## At a glance

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

## 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:

[Engineering \(Automotive Systems\), BSE](#)

[Engineering \(Electrical Systems\), BSE](#)

[Engineering \(Mechanical Engineering Systems\), BSE](#)

[Engineering \(Robotics\), BSE](#)

[Manufacturing Engineering, BS](#)

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, or

30 credit hours including the required applied project course (RAS 593)

### Required Core (6 credit hours)

EGR 501 Applied Linear Algebra for Engineers (3) or MAE 501 Linear Algebra in Engineering (3)

EGR 545 Robotic Systems I (3) or MAE 547 Modeling and Control of Robots (3) or RAS 545 Robotic Systems I (3)

### Concentration (6 credit hours)

### Electives or Research (12-18 credit hours)

### Culminating Experience (0-6 credit hours)

RAS 593 Applied Project (3) or

RAS 599 Thesis (6) or

portfolio (0)

### Additional Curriculum Information

Students are required to select one of the approved culminating experiences for the concentration.

A defense is required for the thesis option. The applied project requires a written report and an oral presentation. The portfolio includes a summary of the graduate program and a report highlighting three projects from the program.

Students should see the academic unit for the approved concentration coursework as well as the available elective and research courses. Elective or research coursework must be selected from among the courses listed for the other three concentrations. Additional electives must be graduate courses in science, engineering, mathematics, or others approved by the graduate program committee. Three credit hours of internship may be included among the electives.

## 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 engineering, physical sciences, mathematics or a similar field from a regionally accredited U.S. institution or the equivalent of a U.S. bachelor's degree from an international institution that is officially recognized by that institution's country.

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 from each college or university attended
3. personal statement
4. professional resume
5. 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. Applicants should see the [admission services](#) website.

[Global Launch](#) at ASU offers an online alternative to standardized testing for international students who are seeking admission to ASU and need proof of English proficiency.

If the applicant does not meet the minimum GPA requirements, the application may still be considered. In certain cases, demonstrated aptitude through professional experience or additional postbaccalaureate education is considered.

## **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 are prepared for industry careers in positions such as:

- automation engineer
- controls engineer
- machine learning engineer

- robotics engineer
- systems engineer

## Contact information

School of Manufacturing Systems and Networks | TECH 104  
msngrad@asu.edu | 480-727-2097