

Robotics and Autonomous Systems (Mechanical and Aerospace Engineering), MS

ESRASMAEMS

Program description

Degree awarded: MS Robotics and Autonomous Systems (Mechanical and Aerospace Engineering)

The mechanical and aerospace engineering concentration is one of the concentrations in the multidisciplinary MS program in robotics and autonomous systems. It emphasizes robotics, controls, autonomous systems, artificial intelligence and related fields.

This concentration is appropriate for students who wish to focus on applications in mechanical or aerospace engineering.

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:

[Aerospace Engineering \(Aeronautics\), BSE](#)

[Aerospace Engineering \(Astronautics\), BSE](#)

[Aerospace Engineering \(Autonomous Vehicle Systems\), BSE](#)

[Mechanical Engineering, BSE](#)

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 (MAE 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)

MAE 593 Applied Project (3) or

MAE 599 Thesis (6) or

portfolio (0)

Additional Curriculum Information

Students are required to select from one of the available concentrations and 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 poster presentation with content from courses taken in the program. Students must write a portfolio report that includes the highlights of the three projects.

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, science, mathematics or a related field from a regionally 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.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. letter of intent or written 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.

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

Robotics engineers are in high demand in various engineering specialty areas, such as manufacturing, mechanical, aerospace, biomedical-rehabilitation, autonomous vehicle and artificial intelligence engineering, among others. Skills in the design and control of robotic systems, artificial intelligence, machine learning and robot perception are valuable to consumer, automotive, aerospace and defense industries.

Career examples include:

- automation engineer
- machine learning and AI engineer
- robotics engineer
- systems engineer

Contact information

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