

Mechanical Engineering, MS

ESMEMS

Program description

Degree awarded: MS Mechanical Engineering

The MS program in mechanical engineering stresses a sound foundation in technical fundamentals, communication and professionalism. To this end, a broad-based curriculum is offered in design, system dynamics and control; fluid mechanics and aerodynamics; mechanics and dynamics of solids and structures; transport phenomena; thermodynamics; and energy.

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](#)

[Mechanical Engineering \(Computational Mechanics\), BSE](#)

[Mechanical Engineering \(Energy and Environment\), 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)

Major Area of Emphasis (12 or 15 credit hours)

Technical Electives (6 or 9 credit hours)

Mathematics (6 credit hours)

Culminating Experience (0 to 6 credit hours)

MAE 593 Applied Project (3) or

MAE 599 Thesis (6) or

portfolio (0)

Additional Curriculum Information

All students are admitted to the nonthesis option unless a faculty thesis advisor is secured, at which time the student can initiate a change to the thesis option.

The plan of study must be in accordance with university and program requirements. A minimum cumulative GPA of 3.00 (scale is 4.00 = "A") is required throughout the program. Candidates for the program must complete a minimum of 30 credit hours of approved courses at the 500 level and above, with a minimum cumulative GPA of 3.00 or above.

Coursework for the major area of emphasis is restricted to MAE coursework.

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 any 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. personal statement
4. resume or curriculum vitae
5. three letters of recommendation
6. 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; a minimum score of 80 on the internet-based TOEFL is required.

Admission to the mechanical engineering graduate program is highly competitive; preferred applicants have an undergraduate degree in aerospace engineering or mechanical engineering.

Admission to the accelerated master's degree program requires a 3.50 ASU GPA (scale is 4.00 = "A") in degree-applicable courses. All applications are subject to review, and admission is not guaranteed.

Applicants should see the program website for application deadlines.

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

The program in mechanical engineering prepares engineers for doctoral study or industrial positions that specialize in research, project management and product innovation in mechanical engineering.

Professionals with a mechanical engineering master's degree have strong opportunities at most levels in mechanical engineering in research, design and manufacturing at companies of all sizes as well as national laboratories (Department of Energy, Department of Defense, NASA). Analytical skills learned in mechanical engineering are also valued for other nonengineering positions.

Career examples include:

- engineer
- engineering manager or director

- research engineer

Contact information

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