Mechanical Engineering, PhD

ESMEPHD

Program description

Degree awarded: PHD Mechanical Engineering
This PhD program in mechanical engineering emphasizes original research and 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. Modern computational and laboratory facilities are available to support timely research investigations.

At a glance

- **College/School:** Ira A. Fulton Schools of Engineering
- **Location:** Tempe

Degree requirements

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

84 credit hours
qualifying exams
written and oral comprehensive exams
prospectus
dissertation

All students pursuing the doctorate are required to pass both a qualifying and a comprehensive examination administered by the program committee.

credit hours of coursework directly related to the research area (18)
credit hours of mathematics (9)

credit hours of graduate elective courses outside the major research area (9)
MAE 792 Research
MAE 799 Dissertation credit hours (12)

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 from an accredited U.S. or international institution.

Applicants must have a minimum cumulative GPA of 3.25 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program or a minimum cumulative GPA of 3.25 (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. GRE scores
4. personal statement
5. resume or curriculum vitae
6. three letters of recommendation
7. 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 and is required to achieve a minimum score of 80 on the internet-based TOEFL.

ASU does not accept the GREÂ® General Test at home edition.

Admission to the mechanical engineering doctoral program is highly competitive, and preferred applicants have an undergraduate or Master of Science degree in aerospace engineering or mechanical engineering. The admission process considers all aspects of the student's application, and admission is not guaranteed. The typical successful applicant has at least a cumulative GPA score of 3.25 (scale is 4.00 = "A") in engineering and science coursework in a bachelor's or master's degree program, and a high GRE score; a successful applicant whose native language is not English typically also has a high TOEFL score.

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 doctorate program provides students with a strong background for employment in academic institutions, government laboratories and industrial research laboratories with a focus on mechanical engineering.

Professionals with a mechanical engineering doctoral degree have strong opportunities at all 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
- engineering professor
- research engineer

Contact information

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