Manufacturing Engineering, PhD

ESMFGPHD

Program Description

Degree Awarded: PHD Manufacturing Engineering
The PhD program in manufacturing engineering provides students with the knowledge, skills and abilities to successfully meet the most difficult challenges of modern manufacturing industries on a global scale. The program involves faculty and industry members together with a hands-on philosophy to education and research, that provides students with various career development opportunities (e.g., internships and exchange experiences).

At a Glance

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

Degree Requirements

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

**Required Core (12 credit hours)**
EGR 520 Engineering Analysis I (3)
EGR 545 Robotic Systems I (3)
Choose two courses from the following:
EGR 581 Simulating Manufacturing Systems (3)
MFG 522 Engineering Statistics (3)
MFG 523 Artificial Intelligence for Smart Manufacturing (3)
MFG 574 Polymer Science and Additive Manufacturing (3)
MFG 582 Metal Additive Manufacturing (3)
Research (15 credit hours)
MFG 792 Research (15)

Electives or Research (45 credit hours)

Culminating Experience (12 credit hours)
MFG 799 Dissertation (12)

Additional Curriculum Information
When approved by the academic unit and the Graduate College, this program allows 30 credit hours from a previously awarded master's degree to be used for this degree.

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 minimum of a bachelor's or master's degree in manufacturing engineering 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 they must have 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. statement of purpose
4. curriculum vitae or professional resume
5. two 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. Applicants should review the Graduate Admission Services website.

The statement of purpose requirement is a 300- to 500-word statement describing the applicant's motivation and rationale for obtaining a doctorate in manufacturing engineering at Arizona State University and how it relates to their long-term career goals.

Tuition Information
When it comes to paying for college, 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

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Career Opportunities

With the doctoral degree, graduates typically seek research-oriented academic appointments or industrial research and development positions.

Professionals with a doctorate in manufacturing engineering have substantial opportunities at all levels in manufacturing engineering in research and development at companies, research institutes and national laboratories (e.g., DOD, DOE, NASA). Relevant careers and related titles include the following:

- industrial engineers
- manufacturing engineers
- materials engineers
- materials scientists
- mechanical engineers
- mechatronics engineers

Contact Information

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