Industrial Engineering, MS

Program Description

Degree Awarded: MS Industrial Engineering

Industrial engineering combines knowledge from the physical, mathematical and social sciences to design systems that integrate people, equipment and information in the most efficient way. Improvements made by industrial engineers in automation, information control and process quality revolutionized manufacturing in the past century and greatly increased quality of life. Trends toward globalization, increased complexity and rapid technological innovation create an even greater need for industrial engineering in the 21st century.

Successful industrial engineering concepts are also spreading to the financial, logistics and health care services industries, affording new areas of opportunity.

Faculty members in the industrial engineering program are internationally recognized for their innovative research projects, funded both by government and industry. The MS program in industrial engineering at ASU is consistently ranked among the top 20 in the nation for graduate programs in the United States.

At a Glance

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

Concurrent Degrees

This degree is also offered as concurrent degree program with:

- W. P. Carey MBA - Online Program

Accelerated Degrees
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 and master's degree with:

- Engineering Management, BSE
- Industrial Engineering, BSE

Acceptance to the graduate program requires a separate application. During their junior year, eligible students will be advised by their academic departments to apply.

**Degree Requirements**

30 credit hours and a thesis, or
30 credit hours and a written comprehensive exam

**Required Core (12 credit hours)**
- IEE 505 Information Systems Engineering (3) or IEE 506 Web-Enabled Decision Support Systems (3)
- IEE 545 Simulating Stochastic Systems (3) or IEE 561 Production Systems (3)
- IEE 572 Design Engineering Experiments (3) or IEE 573 Reliability Engineering (3) or IEE 578 Regression Analysis (3)
- IEE 574 Applied Deterministic Operations Research (3) or IEE 575 Applied Stochastic Operations Research Models (3)

**Elective (0-6 credit hours)**

**Related Area (9-12 credit hours)**

**Culminating Experience (6 credit hours)**
- IEE 599 Thesis (6) (thesis track only)

**Additional Curriculum Information**

The Master of Science in industrial engineering is a 30-credit hour program which has a thesis and a nonthesis track. The thesis track requires 24 credit hours of coursework, six credit hours of thesis, a written thesis and a final oral examination. The nonthesis track requires 30 credit hours of coursework and a comprehensive exam.

At the time of admission, students' applications are considered primarily for the nonthesis track. After matriculating at Arizona State University, a student may consult with and receive approval from the industrial engineering faculty to pursue the thesis track.

Students must successfully defend the thesis or pass the written comprehensive examination to graduate.
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 of a 3.20 cumulative GPA (scale is 4.00 = "A") in the last 60 hours of a student's first bachelor's degree program, or applicants must have a minimum of a 3.00 cumulative GPA (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 from all institutions attended
3. a statement of purpose
4. GRE scores
5. three letters of recommendation
6. proof of English language proficiency

Additional Application Information

An applicant whose native language is not English (regardless of current residency) must provide proof of English proficiency.

At the time of application, all applicants must have successfully completed a minimum of nine credit hours of calculus (Calculus I, II, III) with a grade of "C" (scale is 4.00 = "A") or higher.

A student with any deficiency coursework must complete each deficiency with a grade of "B" or better (scale is 4.00 = "A") within two semesters of admission to the program. Deficiency courses include:

CSE 110 Principles of Programming
CSE 205 Object-Oriented Programming and Data Structures
IEE 376 Operations Research Deterministic Techniques/Applications
IEE 380 Probability and Statistics for Engineering Problem Solving
IEE 470 Stochastic Operations Research
MAT 242 Elementary Linear Algebra

Applicants should refer to the program website for application deadlines.

Attend Online
ASU offers this program in an online format with multiple enrollment sessions throughout the year. Applicants may view the program description and request more information here.

Contact Information

Industrial, Systems & Operations Engineering Prgm | CTRPT 105
cidse.advising@asu.edu | 480-965-3199