Manufacturing Engineering, MS

Program Description

Degree Awarded: MS Manufacturing Engineering

Manufacturing engineering draws upon two distinct bodies of knowledge: manufacturing processes (i.e., how materials are altered in either shape or properties) and the processes of manufacturing (i.e., manufacturing systems and management). This combination of topics is embedded in the MS program in manufacturing engineering, and students can follow their interests by developing deeper expertise in either manufacturing processes or the processes of manufacturing.

The program provides advanced technical content to help students prepare for career transitions and improve company competitiveness. It consists of a core set of courses designed to provide all students with advanced knowledge of manufacturing fundamentals and an introduction to systems engineering. The expertise developed in the core curriculum supports student focus areas building on existing unit faculty strengths, including automation, additive and subtractive manufacturing processes (including computer numerical control machining), modeling and simulation, electronics manufacturing and manufacturing management.

Thesis, applied project and portfolio options are offered for the culminating experience.

At a Glance

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

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 (Automotive Systems), BSE
- Engineering (Electrical Systems), BSE
- Engineering (Mechanical Engineering Systems), 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 a portfolio, or
30 credit hours and a thesis, or
30 credit hours including the required Applied Project course (EGR 593)

**Required Core (3 credit hours)**

EGR 520 Engineering Analysis (3)

**Electives (12-18 credit hours)**

**Other Requirement (9 credit hours)**

EGR 598 Topic: Manufacturing Systems Management (3)
EGR 598 Topic: Physical Principles and Matl Sci in Additive Mafg (3)
EGR 598 Topic: Physical Principles of Material Removal and Forming Processes (3)

**Culminating Experience (0-6 credit hours)**

EGR 593 Applied Project (3) or
EGR 599 Thesis (6) or
portfolio (0)

**Additional Curriculum Information**

Students should see the academic unit for a complete list of approved electives.

EGR 598 Special Topics courses may be substituted with approval from the academic unit.

**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 engineering, physical sciences, mathematics or similar from a regionally accredited U.S. institution,
or the equivalent of a U.S. bachelor's degree from an international institution that is officially recognized by that institution's country.

Applicants must have a minimum of a 3.00 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
3. professional resume and personal statement
4. GRE scores
5. proof of English proficiency

Additional Application Information
An applicant whose native language is not English (regardless of current residency) must provide proof of English proficiency. Applicants should see the Graduate Admission Services website for requirements [https://students.asu.edu/graduate/proficiency](https://students.asu.edu/graduate/proficiency).

Application Deadlines

Fall

Spring

Contact Information

Engineering Programs | WANER 204
polygrad@asu.edu | 480-727-1874