



# Master of Science in Advanced Manufacturing and Enterprise Engineering (MS in AMEE)



## Overview

As lean thinking, enterprise process reengineering, and digital manufacturing are becoming more prevalent in the work place, engineering students need to be prepared to design and analyze the enterprise as a holistic system of technology, decision-making processes, and cultural components. The Master of Science program in Advanced Manufacturing and Enterprise Engineering (M.S. in AMEE) is designed to offer an opportunity to individuals for continued study toward positions of leadership in industry and academia and for continuing technical education in a more specialized area.

Advanced Manufacturing, as the core component of enterprise systems, encompasses effective and efficient integration and synthesis of automation technologies, human resources, and decision-making models that facilitate design, planning, scheduling, and control of production of goods and provision of services.

Enterprise Engineering is defined as the body of knowledge, principles, and practices having to do with the analysis, design, implementation and operation of an enterprise.

The MS in AMEE is truly an interdisciplinary program founded on the strong collaboration of the Departments of Mechanical Engineering, Electrical and Computer Engineering, Information Systems and Technology Management, Management Science and Statistics, and Computer Science and the Center for Advanced Manufacturing and Lean Systems (CAMLS). Graduate students are exposed to research problems through interaction with the industry members of CAMLS and its state-of-the-art laboratory facilities.

## Admission Requirements

Due to the multidisciplinary nature of the program, the Graduate Advisor of Record (GAR), in consultation with the Mechanical Engineering Graduate Program Committee and the Department Chair, will evaluate each student's transcript and determine any course deficiencies on a case-by-case basis.

### For more information

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<http://engineering.utsa.edu/~mechanical/amee>

## Degree Requirements

The minimum number of semester credit hours required for the degree is 30 for the thesis option and 33 for the nonthesis option. Courses offered for the graduate programs of these collaborating departments complement the MS in AMEE program in the form of elective courses. Through core and a variety of elective courses, students can customize their program of study according to their specific needs, professional development related goals, and career objectives in consultation with the Graduate Advisor of Record (GAR), as well as their thesis advisor and thesis committee.



- A. 3 semester credit hours of a Required Math Course selected from the following:
- |          |                                     |
|----------|-------------------------------------|
| EGR 5023 | Numerical Techniques in Engineering |
| EGR 5213 | Topics in Systems Modeling          |
| MAT 5603 | Numerical Analysis                  |
| STA 5083 | Methods of Statistics II            |
- B. 9 semester credit hours of Required Topical Courses selected from the following:
- |         |  |
|---------|--|
| ME 5503 | Lean Manufacturing and Lean Enterprises    |
| ME 5563 | Computer Integrated Manufacturing          |
| ME 5583 | Advanced Enterprise Process Engineering    |
| ME 5603 | Advanced Manufacturing Systems Engineering |
- C. Degree candidates must complete the following course requirements for one of the degree options:

<u>Thesis Option</u>	<u>Hours</u>
Required Math Course	3
Required Topical Courses	9
ME 6953 Independent Study	6
Prescribed Electives	6
ME 6983 Master's Thesis	6

<u>Nonthesis Option</u>	<u>Hours</u>
Required Math Course	3
Required Topical Courses	9
ME 5973 Special Project	6
Prescribed Electives	15

