

## DEPARTMENT OF MECHANICAL ENGINEERING

### Master of Science Degree in Mechanical Engineering (MSME)

The Master of Science program in Mechanical Engineering (MSME) is designed to offer students the opportunity to prepare for leadership roles in careers with industry, government, or educational institutions. A thesis option is offered for research-oriented students. A nonthesis option is available for students who prefer a practice-oriented degree in engineering.

**Program Admission Requirements.** In addition to satisfying the University-wide graduate admission requirements, admission will be based on a combination of factors: a bachelor's degree in mechanical engineering (or a closely related field) from an accredited institution of higher education or proof of equivalent education at a foreign or unaccredited institution, satisfactory performance on the Graduate Record Examination (GRE), and satisfactory undergraduate grade point average (GPA) in engineering coursework.

An applicant may be admitted on a conditional basis as determined by the Master of Science in Mechanical Engineering Admission Committee. Applicants with a degree in a discipline other than mechanical engineering may be required to make up the deficiencies in the undergraduate mechanical engineering curriculum. Courses listed as deficiencies do not count toward the graduate degree.

Applicants with a mechanical engineering background who wish to continue their education but do not intend to pursue a Master of Science degree in Mechanical Engineering are encouraged to seek admission as special graduate students.

**Degree Requirements.** The minimum number of semester credit hours required for the degree, excluding required coursework to remove admission deficiencies, is 30 for the thesis option and 33 for the nonthesis option.

A. Degree candidates must complete any two courses selected from the following list of core courses:

ME	5013	Topics in Mechanical Engineering* (with consent of Graduate Committee)
ME	5113	Advanced Controls
ME	5143	Advanced Dynamics
ME	5243	Advanced Thermodynamics
ME	5413	Advanced Solid Mechanics
ME	5613	Advanced Fluid Mechanics

\* *ME 5013 Topics in ME: Advanced Manufacturing Systems Engineering*  
*ME 5013 Topics in ME: Lean Manufacturing and Lean Enterprises*  
*are core courses for Manufacturing and Enterprise Engineering concentration in MSME,*  
*pending approval.*

B. Degree candidates must complete the following course requirements for one of the degree options:

<i>Thesis Option</i>	<i>Hours</i>
Core courses (any two)	6
Designated electives (with approval of the student's committee chair)	18
ME 6983 Master's Thesis	6
Minimum total semester credit hours required	30

<i>Nonthesis Option</i>	<i>Hours</i>
Core courses (any two)	6
Designated electives (with approval of the student's committee chair)	24
ME 5973 Special Project	3
Comprehensive Examination	0
Minimum total semester credit hours required	33

In addition to the coursework and other University requirements for the Master's degree, candidates must pass a thesis defense administered by the student's advisory committee, chaired by a full-time graduate faculty member. A successful defense satisfies the University's comprehensive examination requirement.

Degree-seeking students must select a major advisor and a graduate advisory committee (with a minimum of three members) in the first 9 semester credit hours of graduate coursework. The chair of the student's advisory committee, who must be a full-time member of the graduate faculty, is the student's primary advisor. Within the first 9 hours of graduate coursework, degree candidates must meet with the committee chair to develop a degree plan for their program of study. New students who have not selected a graduate advisory committee should seek advice from the Graduate Advisor of Record on course selection during the first semester.