

## **MASTER of SCIENCE in MECHANICAL ENGINEERING (MSME)**

The Master of Science in Mechanical Engineering (MSME) program consists of 24 credit hours of graduate level coursework, plus 6 credits of Master's Thesis. Coursework must be completed with a grade point average of 3.0 or higher (see Graduate Catalog for relevant details). The requirements are designed both to provide a balanced program in Mechanical Engineering and to allow for a degree of specialization. Students should be able to complete all degree requirements, including the thesis, in 18 to 24 months of full-time study.

### **I. Course Requirements**

A. The following four courses are required (12 credits):

- MEEG 690 Intermediate Engineering Mathematics
- Three from the following list:
  - ✓ MEEG 610 Intermediate Solid Mechanics
  - ✓ MEEG 620 Intermediate Dynamics
  - ✓ MEEG 630 Intermediate Fluid Mechanics
  - ✓ MEEG 640 Intermediate Heat Transfer
  - ✓ MEEG 683 Orthopedic Biomechanics

Students may petition the Graduate Committee to substitute a more advanced (e.g., 800-level) course on the same topic for one of these required courses.

B. One additional graduate level course (3 credits) in mathematics or numerical methods. The student makes this selection with the documented approval of the Department's Graduate Committee which has the authority to decide on acceptable courses.

C. Three additional elective graduate level courses (9 credits) in engineering or mathematical, physical or biological sciences. The student makes these selections with the documented approval of the department's Graduate Committee which has the authority to decide on acceptable courses.

D. At least one semester of MEEG 600 Seminar (0 credits). Special arrangements can be made for part-time students to fulfill this requirement.

E. 6 credits of MEEG 869 Master's Thesis.

### **II. Thesis Requirements**

A thesis is required which demonstrates the student's ability to conduct scholarly research. Entering graduate students are expected to choose a thesis advisor and research topic during their first semester in the Department so that they can initiate research and choose appropriate elective courses.

At the completion of the thesis research, candidates for the MSME degree must defend their thesis orally to a committee of at least three faculty members. The committee will be chaired by the thesis advisor who, along with at least one other committee member, must be regular full-time faculty in the Department of Mechanical Engineering. The thesis is to be submitted to committee members at least two weeks in advance of the defense and shall meet the academic and professional standards set forth by the University. Upon acceptance of the thesis, the Committee recommends approval to the Department Chairperson.