

## Mechanical Engineering, MS

College of Engineering

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The Mechanical Engineering master's program provides advanced level study in distinct areas of specialization such as mechanics and materials, energy and thermal/fluid systems, design and manufacturing, and aerospace. The program prepares the graduate student for doctoral level studies or for advanced mechanical engineering practice in industry, consulting or government service.

### Additional Admission Requirements

- Unconditional admission requires an engineering undergraduate degree from an ABET accredited mechanical engineering program

### Program Outcomes

- Students will develop advanced critical thinking skills by solving complex and challenging problems in mechanical engineering, mathematics and the physical sciences
- Students will communicate effectively by conveying their ideas, both orally and in written form, in accordance with acceptable published standards
- Students will demonstrate their ability to perform research by generating a thesis of an original idea and publishing technical papers under the guidance of an academic advisor
- Graduates will engage in professional activities by attending conferences, presenting papers and serving various roles in professional organizations

### Degree Requirements

Total credit hours: 30

- Core courses (9 credits): MEEN 601, 643, 716

#### Thesis option

- MATH electives (3 credits): Take 3 credit hours from MATH 650, 651, 652
- MEEN electives (9 credits): Take 9 credits of additional MEEN 600-899 courses with approval of advisor
- Technical electives (3 credits): Take additional 3 credit hours with approval of advisor
- Thesis (MEEN 797: 6 credits)
- Pass thesis defense

#### Project option

- MATH electives (3 credits): Take 3 credit hours from MATH 650, 651, 652
- MEEN electives (9 credits): Take 9 credits of additional MEEN 600-899 courses with approval of advisor
- Technical electives (6 credits): Take additional 6 credit hours with approval of advisor
- Project (MEEN 796: 3 credits)

#### Course option

- MATH electives (3 credits): Take 3 credit hours from MATH 650, 651, 652
- MEEN electives (9 credits): Take 9 credits of additional MEEN 600-899 courses with approval of advisor
- Technical electives (9 credits): Take additional 9 credit hours with approval of advisor
- Pass comprehensive exam