MS in Mechanical and Aerospace Engineering

Degree Requirements
The master's requires a minimum of 30 hours beyond the bachelor's degree. There are two options for fulfilling the credit hour requirements: Special Project or Thesis.

Special Project
If the report option is chosen, a report must be prepared and submitted to the MAE Department. Reports follow the same manuscript guidelines as a thesis.
- 3-5 hrs of MAE problems
- 9 hrs of 8000 MAE courses minimum
- Maximum of 15 hrs 7000 or 8000 courses (outside MAE or in MAE)
- 1 hr seminar
- Special project report required by MAE
- No thesis required

Thesis
If the thesis option is chosen, a master's thesis must be prepared and presented to the Graduate School on CD-ROM as a PDF with required supplemental materials. The students will be sent "Guidelines for Preparing Theses and Dissertations" from the Graduate School as soon as their Program of Study Form is submitted. See also: Thesis Process for Master's Students.
- 9 hrs of 8000 MAE courses minimum
- Maximum of 12 hrs 7000 or 8000 courses (outside MAE or in MAE)
- 3 hrs 7000 or 8000 math (see requirements below)
- Maximum of 8 hrs research
- 1 hr seminar

Core Course Requirements
Students in Dynamics and Control area must take at least two from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAE 7660</td>
<td>Vibration Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MAE 8001</td>
<td>Advanced Topics in Mechanical and</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Aerospace Engineering (Optimal Control)</td>
<td></td>
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<tr>
<td>MAE 8280</td>
<td>Finite Element Methods</td>
<td>3</td>
</tr>
<tr>
<td>MAE 8620</td>
<td>Advanced Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 8750</td>
<td>Nonlinear Control</td>
<td>3</td>
</tr>
<tr>
<td>MAE 8320</td>
<td>Continuum Mechanics</td>
<td>3</td>
</tr>
</tbody>
</table>

Students in Mechanical and Materials area must take at least two from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MAE 8360</td>
<td>Theory of Plasticity</td>
<td>3</td>
</tr>
<tr>
<td>MAE 8330</td>
<td>Theory of Elasticity</td>
<td>3</td>
</tr>
<tr>
<td>MAE 8320</td>
<td>Continuum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>MAE 8240</td>
<td>Mechanical Behavior of Materials</td>
<td>3</td>
</tr>
<tr>
<td>MAE 8001</td>
<td>Advanced Topics in Mechanical and</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Aerospace Engineering (Materials</td>
<td></td>
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<td></td>
<td>Characterization)</td>
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</tbody>
</table>

Plan of Study
A plan of study is developed by the student and the advisor, subject to approval. The minimum degree requirement is 30 hours with a minimum of 18 hours at the 8000 level. Included within the 30 hours must be a special project report or thesis. A special project consists of three to five hours of MAE problems.

Alternatively, programs directed toward a thesis shall include three to eight hours of MAE 8990 (Research). A thesis or a report is approved by designated faculty committees and is deposited in the department libraries.

Passing the MS final committee fulfills the degree requirements.

Admission Contact Information
muengrgraduatesup1@missouri.edu

Application Deadline for all applicants
- Fall deadline: May 31 (priority deadline Jan. 1)
- Spring deadline: October 31 (priority deadline Oct 1)
- Summer deadline: April 30

Admission Criteria
- BS in same or closely related field
- Minimum GPA: 3.0 during last 2 years
- Minimum GRE Score: 298 combined score on Verbal and Quantitative sections
- Minimum TOEFL score: 80
- Minimum academic IELTS overall score: 6.5
- Resume

Note: Lower GPAs require special action and substantiation, such as good test scores on the GRE or other recognized examinations.
How to apply to the MAE master’s program:

**Step 1:** All documents should be uploaded directly at https://applygrad.missouri.edu/apply.

**Step 2:** Required documents:

- Unofficial Transcripts (all Universities and Colleges attended) Uploaded in Slate
- TOEFL/IELTS score - sent electronically to the University by ETS (Institution Code 6875 Department Code 1502)
- 3 letters of recommendation - uploaded in Slate by the recommenders. Letters must come from a school e-mail address, not personal accounts (like yahoo, gmail, etc).
- GRE score - sent electronically by ETS (Institution Code 6875 Department Code 1502)
- Statement of Objectives - one page letter telling about yourself and the area you will study if accepted (uploaded in Slate)
- CV/Résumé (Uploaded in Slate)

**Contact:**
Mechanical & Aerospace Engineering, Graduate Admissions
muenggraduatesup1@missouri.edu