ENGINEERING MECHANICS, M.S.

The master of science and doctor of philosophy degrees in engineering mechanics are offered within a graduate program covering contemporary areas in both theoretical and applied mechanics. With the guidance of a major professor, a program can be designed to meet an individual student's needs and interests.

The Department of Engineering Physics offers three distinct master of science (M.S.) degree programs in Engineering Mechanics:

- Engineering Mechanics M.S., Research (https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-research-ms/) – traditional master's program culminating in a thesis for students with an undergraduate background in mechanics
- Engineering Mechanics M.S., Aerospace Engineering Option (http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/) - an accelerated coursework-only program, where students will learn advanced mechanics topics pertaining to the aerospace field
- Engineering Mechanics M.S., Fundamentals of Applied Mechanics Option (http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/) – accelerated, for students with an undergraduate background in science, who would like to transition into engineering

ADMISSIONS

Students apply to the Master of Science in Engineering Mechanics through one of the named options:

- Research (https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-research-ms/)
- Aerospace Engineering (http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/)
- Fundamentals of Applied Mechanics (https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/)

FUNDING

GRADUATE SCHOOL RESOURCES

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

PROGRAM RESOURCES

Program specific funding information may be reviewed through one of the named options:

- Research (https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-research-ms/)
- Aerospace Engineering (http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/)
- Fundamentals of Applied Mechanics (https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/)

See the program website (https://www.engr.wisc.edu/department/engineering-physics/academics/ms-engineering-mechanics/) for additional information.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/#policiesandrequirementstext), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

CURRICULAR REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirements Detail</th>
<th>Minimum Credit Requirement</th>
<th>Minimum Residence Credit Requirement</th>
<th>Minimum Graduate Coursework Requirement</th>
<th>Overall Graduate GPA Requirement</th>
<th>Other Grade Requirements</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>See Named Options for policy information.</td>
<td>3.00 GPA required.</td>
<td>Courses in which grades of BC, C, or below are received cannot be counted toward the degree except as follows: 1) Credits of C will be allowed provided they are balanced by twice as many credits of A or by four times as many credits of AB, 2) Credits of BC will be allowed provided they are balanced by twice as many credits of AB or by an equal number of credits of A.</td>
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<tr>
<td>Assessments and Examinations</td>
<td></td>
<td></td>
<td>See Named Options for policy information.</td>
<td>3.00 GPA required.</td>
<td>Courses in which grades of BC, C, or below are received cannot be counted toward the degree except as follows: 1) Credits of C will be allowed provided they are balanced by twice as many credits of A or by four times as many credits of AB, 2) Credits of BC will be allowed provided they are balanced by twice as many credits of AB or by an equal number of credits of A.</td>
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<tr>
<td>Language and Requirements</td>
<td>No language requirements.</td>
<td></td>
<td>See Named Options for policy information.</td>
<td>3.00 GPA required.</td>
<td>Courses in which grades of BC, C, or below are received cannot be counted toward the degree except as follows: 1) Credits of C will be allowed provided they are balanced by twice as many credits of A or by four times as many credits of AB, 2) Credits of BC will be allowed provided they are balanced by twice as many credits of AB or by an equal number of credits of A.</td>
</tr>
</tbody>
</table>

REQUIRED COURSES

Select a Named Option (p. 2) for courses required.
NAMED OPTIONS
A named option is a formally documented sub-major within an academic major program. Named options appear on the transcript with degree conferral. Students pursuing the Master of Science in Engineering Mechanics must select one of the following named options:

- **ENGINEERING MECHANICS: AEROSPACE ENGINEERING, M.S.** ([http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/](http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/))
- **ENGINEERING MECHANICS: FUNDAMENTALS OF APPLIED MECHANICS, M.S.** ([http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/](http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/))
- **ENGINEERING MECHANICS: RESEARCH, M.S.** ([http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-research-ms/](http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-research-ms/))

POLICIES
Students should refer to one of the named options for policy information:

- Research ([https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-research-ms/](https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-research-ms/))
- Aerospace Engineering ([http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/](http://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/))
- Fundamentals of Applied Mechanics ([https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/](https://guide.wisc.edu/graduate/engineering-physics/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/))

PROFESSIONAL DEVELOPMENT
GRADUATE SCHOOL RESOURCES
Take advantage of the Graduate School's professional development resources ([https://grad.wisc.edu/pd/](https://grad.wisc.edu/pd/)) to build skills, thrive academically, and launch your career.

LEARNING OUTCOMES
1. Demonstrate a strong understanding of mathematical, scientific, and engineering principles in the field.
2. Demonstrate an ability to formulate, analyze, and independently solve advanced engineering problems.
3. Apply the relevant scientific and technological advancements, techniques, and engineering tools to address these problems.
4. Recognize and apply principles of ethical and professional conduct.

PEOPLE

FACULTY
**PROFESSORS**
- Paul Wilson (Chair)
- Matt Allen
- Riccardo Bonazza
- Curt A. Bronkhorst
- Wendy Crone
- Chris Hegna
- Douglass Henderson
- Roderic Lakes
- Oliver Schmitz
- Carl Sovinec
- Kumar Sridharan
- Fabian Waleffe

**ASSISTANT PROFESSORS**
- Jennifer Choy
- Adrien Couet
- Stephanie Diem
- Jennifer Franck
- Benedikt Geiger
- Ben Lindley
- Jacob Notbohm
- Ramathasan Thevamaran
- Yongfeng Zhang

See also Engineering Physics Faculty Directory ([https://directory.engr.wisc.edu/ep/faculty/](https://directory.engr.wisc.edu/ep/faculty/)).