

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 Mechanical Engineering offers two distinct master of science (M.S.) degree programs in Engineering Mechanics:

- Engineering Mechanics M.S., Research (<http://guide.wisc.edu/graduate/mechanical-engineering/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/mechanical-engineering/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

ADMISSIONS

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

- Research (<http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-research-ms/>)
- Aerospace Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/>)

Admissions to the Fundamentals of Applied Mechanics (<http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/>) named option were suspended as of fall 2022 and will be discontinued as of fall 2024. If you have any questions, please contact the department.

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 (<http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-research-ms/>)

- Aerospace Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/>)

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

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

MAJOR REQUIREMENTS CURRICULAR REQUIREMENTS

Requirement Detail

Minimum Credit Requirement 30 credits

Minimum Residence Credit Requirement 16 credits

Minimum Graduate Coursework Requirement See Named Options for policy information.

Overall GPA Requirement 3.00 GPA required.

Graduate GPA Requirement This program follows the Graduate School's policy: <https://policy.wisc.edu/library/UW-1203> (<https://policy.wisc.edu/library/UW-1203/>).

Other Grade Requirements 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.

Assessments and Examinations See Named Options for policy information.

Language Requirements No language requirements.

REQUIRED COURSES

Select a Named Option (p. 1) 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:

View as listView as grid

- ENGINEERING MECHANICS: AEROSPACE ENGINEERING, M.S. ([HTTP://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/ENGINEERING-MECHANICS-MS/ENGINEERING-MECHANICS-AEROSPACE-ENGINEERING-MS/](http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/))
- ENGINEERING MECHANICS: FUNDAMENTALS OF APPLIED MECHANICS, M.S. ([HTTP://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/ENGINEERING-MECHANICS-MS/ENGINEERING-MECHANICS-FUNDAMENTALS-APPLIED-MECHANICS-MS/](http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-fundamentals-applied-mechanics-ms/))
- ENGINEERING MECHANICS: RESEARCH, M.S. ([HTTP://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/ENGINEERING-MECHANICS-MS/ENGINEERING-MECHANICS-RESEARCH-MS/](http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-research-ms/))

POLICIES

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

- Research (<http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-research-ms/>)
- Aerospace Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/engineering-mechanics-ms/engineering-mechanics-aerospace-engineering-ms/>)
- Fundamentals of Applied Mechanics (<http://guide.wisc.edu/graduate/mechanical-engineering/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/>) 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

PROFESSORS

Darryl Thelen (Chair)
 Peter Adamczyk
 Mark Anderson
 Riccardo Bonazza
 Curt Bronkhorst
 Wendy Crone
 Christian Franck
 Jaal Ghandhi
 Sage Kokjohn
 Dan Negrut
 Gregory F. Nellis
 Tim Osswald
 Frank Pfefferkorn
 Xiaoping Qian
 Douglas Reindl
 David Rothamer
 Scott T. Sanders
 Krishnan Suresh
 Mario F. Trujillo
 Lih-sheng Turng
 Fabian Waleffe

ASSOCIATE PROFESSORS

Lianyi Chen
 Melih Eriten
 Katherine Fu
 Tom N. Krupenkin
 Ying Li
 Franklin Miller
 Sangkee Min
 Wenxiao Pan
 James Pikul
 Pavana Prabhakar
 Alejandro Roldan-Alzate
 Michael Zinn

ASSISTANT PROFESSORS

Joseph Andrews
 Jennifer Franck
 Corinne Henak
 Eric Kazyak
 Allison Mahvi
 Luca Mastropasqua
 Jacob Notbohm
 Josh Roth
 Shiva Rudraraju
 Stephan Rudykh
 Eric Tervo
 Ramathanan Thevamaran
 Dakotah Thompson
 Michael Wagner
 Wei Wang
 Michael Wehner
 Jinlong Wu
 Xiaobin Xiong
 Xiangru Xu
 Lei Zhou

See also Mechanical Engineering Faculty Directory (<https://directory.engr.wisc.edu/me/faculty/>).