

MECHANICAL ENGINEERING, MS

The Department of Mechanical Engineering offers a number of master of science (MS) degree programs in Mechanical Engineering.

- MS Mechanical Engineering: Research (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-research-ms/>)
- MS Mechanical Engineering: Accelerated Program (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-accelerated-program-ms/>)
- MS Mechanical Engineering: Automotive Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-automotive-engineering-ms/>)
- MS Mechanical Engineering: Modeling and Simulation in Mechanical Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-modeling-simulation-mechanical-engineering-ms/>)

The MS Mechanical Engineering degree with a named option in Research takes approximately two years to complete. This program has a significant research component giving students valuable hands-on research experience with mentoring by faculty in the Department of Mechanical Engineering. The MS Mechanical Engineering: Research program requires a written thesis and defense.

The MS Mechanical Engineering degree with named options in Accelerated Program and Modeling and Simulation in Mechanical Engineering; each take approximately three terms (one calendar year) to complete. These programs include only coursework.

All students are mentored by the world-class faculty in the mechanical engineering department at UW–Madison. For a list of mechanical engineering faculty along with faculty research interests, please visit our faculty directory (<https://directory.engr.wisc.edu/display.php/faculty/?page=me&search=faculty>). For more information on research areas, see our page on research in Mechanical Engineering (<https://www.engr.wisc.edu/department/mechanical-engineering/research-in-mechanical-engineering/>).

ADMISSIONS

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Students apply to the MS in Mechanical Engineering through one of the named options:

- MS Mechanical Engineering: Research (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-research-ms/>)
- MS Mechanical Engineering: Accelerated Program (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-accelerated-program-ms/>)
- MS Mechanical Engineering: Automotive Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-automotive-engineering-ms/>)

[engineering-ms/mechanical-engineering-automotive-engineering-ms/](http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-modeling-simulation-mechanical-engineering-ms/)) (suspended, will be discontinued)

- MS Mechanical Engineering: Modeling and Simulation in Mechanical Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-modeling-simulation-mechanical-engineering-ms/>)

FUNDING

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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

MS Research

There are three mechanisms for Graduate Student funding through the university for Mechanical Engineering MS Research students:

1. Fellowships
2. Graduate assistantships: project assistantships, teaching assistantships, and research assistantships
3. Traineeships

Funding is awarded based on the qualifications of the student, the number of applicants, the amount of available funding, the number of continuing students receiving support, and the degree program a student is enrolled in. Fellowship and research assistantship funding is only considered for thesis-based MS students. You can apply for funding for research assistantships by contacting individual faculty members directly. Please check our website (<http://directory.engr.wisc.edu/me/faculty/>) to look for faculty (only those listed with titles of assistant professor, associate professor, or professor can serve as graduate student advisors). Search for faculty who have research interests that align closely with your own by viewing faculty directory entries, visiting the faculty's website (linked from the directory page), and reviewing publications by the faculty member. Once you have identified faculty with interests close to your own, you are encouraged to contact them by email to inquire regarding available research assistant positions. The admissions office does not know if a particular professor has research assistant positions available.

Students who apply to the MS Research program will be automatically considered for fellowship opportunities within the department. Admitted students will be eligible to apply for Teaching Assistantship positions. More information, including the application, will be available to students after admission is complete.

MS Accelerated Program, MS Automotive Engineering, MS Modeling and Simulation in Mechanical Engineering

Students enrolled in the MS Mechanical Engineering named options in Accelerated Program; Modeling and Simulation in Mechanical Engineering; and Automotive Engineering are strongly discouraged to pursue positions as Project Assistants, Teaching Assistants or Research Assistants during their time in these programs, as the rigor and accelerated nature of these programs may not accommodate those work time commitments. Students in this program will not receive the tuition remission that is typically part of the compensation package for a graduate assistantship.

ADDITIONAL RESOURCES

Student Loans

Students who are U.S. citizens or permanent residents may be eligible to receive some level of funding through the federal direct loan program. Private loans may also be available. Learn more about financial aid at the Financial Aid website (<https://financialaid.wisc.edu/>).

International Student Services Funding and Scholarships

For information on International Student Funding and Scholarships, visit the International Student Services website (<https://iss.wisc.edu/students/new-students/funding-scholarships/>).

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

Requirement Detail	
Minimum Credit Requirement	30 credits
Minimum Residence Credit Requirement	See Named Option for policy information.
Minimum Graduate Coursework Requirement	15 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).
Other Grade Requirements	See Named Option for policy information.
Assessments and Examinations	See Named Option for policy information.
Language Requirements	No language requirements.

REQUIRED COURSES

Select a Named Option (p. 2) for required courses.

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.

View as listView as grid

- **MECHANICAL ENGINEERING: ACCELERATED PROGRAM, MS** ([HTTP://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-ACCELERATED-PROGRAM-MS/](http://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-ACCELERATED-PROGRAM-MS/))
- **MECHANICAL ENGINEERING: AUTOMOTIVE ENGINEERING, MS** ([HTTP://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-AUTOMOTIVE-ENGINEERING-MS/](http://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-AUTOMOTIVE-ENGINEERING-MS/))
- **MECHANICAL ENGINEERING: MODELING AND SIMULATION IN MECHANICAL ENGINEERING, MS** ([HTTP://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-MODELING-SIMULATION-MECHANICAL-ENGINEERING-MS/](http://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-MODELING-SIMULATION-MECHANICAL-ENGINEERING-MS/))
- **MECHANICAL ENGINEERING: RESEARCH, MS** ([HTTP://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-RESEARCH-MS/](http://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-RESEARCH-MS/))

POLICIES

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

- MS Mechanical Engineering: Research (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-research-ms/>)
- MS Mechanical Engineering: Accelerated Program (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-accelerated-program-ms/>)
- MS Mechanical Engineering: Automotive Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-modeling-simulation-mechanical-engineering-ms/>) (suspended, will be discontinued)
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PROFESSIONAL DEVELOPMENT

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

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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

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

Yunus Alapan
Joseph Andrews
Jennifer Franck
Corinne Henak
Eric Kazyak
Allison Mahvi
Luca Mastropasqua
Jacob Notbohm
Josh Roth
Shiva Rudraraju
Eric Tervo
Ramathasan 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/>).