

MECHANICAL ENGINEERING, M.S.

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

- M.S. Mechanical Engineering: Research (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-research-ms/>)
- M.S. Mechanical Engineering: Accelerated Program (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-acelerated-program-ms/>)
- M.S. Mechanical Engineering: Automotive Engineering (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-automotive-engineering-ms/>)
- M.S. 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 M.S. 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 M.S. Mechanical Engineering: Research program requires a written thesis and defense.

The M.S. Mechanical Engineering degree with named options in Accelerated Program; Automotive Engineering; and Modeling and Simulation in Mechanical Engineering; each take approximately 3 terms (1 calendar year) to complete. These three 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

Students apply to the M.S. in Mechanical Engineering through one of the named options:

- M.S. Mechanical Engineering: Research (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-research-ms/>)
- M.S. Mechanical Engineering: Accelerated Program (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-acelerated-program-ms/>)
- M.S. 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)

- M.S. 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

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

There are three mechanisms for Graduate Student funding through the university for Mechanical Engineering M.S. 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 M.S. 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 M.S. 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.

Students enrolled in the M.S. 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

FEDERAL 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. These loans are available to qualified graduate students who are taking at

least 4 credits during the fall and spring semesters, and 2 credits during summer. Private loans are also available. Learn more about financial aid at their website (<https://financialaid.wisc.edu/>).

INTERNATIONAL STUDENT SERVICES FUNDING AND SCHOLARSHIPS

For information on International Student Funding and Scholarships visit the ISS 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/#policiesandrequirements>), 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. Details can be found in the Graduate School's Minimum Graduate Coursework (50%) policy (<https://policy.wisc.edu/library/UW-1244>).

Overall 3.00 GPA required.

Graduate GPA Requirement This program follows the Graduate School's 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, M.S. ([HTTP://GUIDE.WISC.EDU/GRADUATE/MECHANICAL-ENGINEERING/MECHANICAL-ENGINEERING-MS/MECHANICAL-ENGINEERING-ACELERATED-PROGRAM-MS/](http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-acelerated-program-ms/))
- MECHANICAL ENGINEERING: AUTOMOTIVE ENGINEERING, M.S. ([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, M.S. ([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, M.S. ([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

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

- M.S. Mechanical Engineering: Research (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-research-ms/>)
- M.S. Mechanical Engineering: Accelerated Program (<http://guide.wisc.edu/graduate/mechanical-engineering/mechanical-engineering-ms/mechanical-engineering-acelerated-program-ms/>)
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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
 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/>).