MAKE THE WORLD WORK BETTER

MECHANICAL ENGINEERING
UNIVERSITY OF MICHIGAN

BECOME A
MECHANICAL ENGINEER

GRADUATE PROGRAMS

MECHANICAL ENGINEERING AT MICHIGAN

A TOP-RANKED GRADUATE PROGRAM AT A WORLD-CLASS UNIVERSITY

Mechanical Engineering (ME) at the University of Michigan (U-M) is consistently ranked among the top ME departments with good reason. Michigan mechanical engineers don't just react to society's needs. They shape them — by driving emerging technologies like automated vehicles and robotics, cellular biomechanics, energy storage materials, and nanomanufacturing.

Our graduate programs prepare students to innovate science and impact society through a robust curriculum, meaningful research opportunities, and rich design experiences.

At Michigan, you'll be surrounded by world-class faculty, resources, facilities, and 110 graduate programs ranked in the top 10 by *U.S. News & World Report* — a combination of breadth and expertise that makes U-M an interdisciplinary powerhouse.

You'll learn how to excel at working across boundaries and between disciplines, pioneering new knowledge and discovery that makes a difference for both academia and the world.

You will learn how to make the world work better.

BY THE **NUMBERS**

$42,652,500
Total Research Expenditures
(2021-22)

68
Faculty Members

BEST
ME PROGRAMS IN THE U.S.
2022

#4
Graduate Program
U.S. News & World Report

Grad Students from 32 Countries

289
PhD Students

293
MSE Students

> **"The best thing about U-M Mechanical Engineering is the sheer size and diversity of the ongoing research and the ease of interdepartmental collaboration. There is something for everyone."**
>
> **Bachir Abeid**
> 4th-Year PhD Candidate

BEST
ENGINEERING PROGRAMS
2022

#9
Graduate Program
U.S. News & World Report

#3
U.S. Public University
U.S. News & World Report

110 Top 10
Grad Programs at U-M
U.S. News & World Report

BEST
PLACES TO LIVE
2023

Ann Arbor Ranked #1
StudyFinds

#2
Research Volume for U.S. Public Universities
National Science Foundation

GRADUATE PROGRAMS OVERVIEW

Over the years, graduate students have chosen Michigan because of its outstanding reputation in research scholarship and impact, its consistent record of pushing ME frontiers, and its exceptional support of students. Mechanical Engineering offers two degrees: a Master of Science in Engineering (MSE) and a Doctor of Philosophy (PhD):

Master of Science in Engineering Degree (MSE)

Students choose to pursue a master's degree because of the opportunity to develop a personalized academic program to strengthen their knowledge of ME fundamentals in a specific area. There are three separate MSE degree program options: coursework only, coursework plus an individual research project, and coursework plus an MSE thesis.

Dual/Combined Degrees

You can also pursue dual master's degrees or combined undergraduate/graduate degrees through Mechanical Engineering:

- Masters of Management/MSE Degree: Dual degree with the U-M Ross School of Business
- Engineering Sustainable Systems Degree: Dual degree with the School for Environment and Sustainability
- Sequential BSE/MSE (SUGS) Degree: Earn a BSE and MSE in 5 years
- JI-SUGS: Sequential BSE/MSE degree program with the U-M-Shanghai Jiao Tong University Joint Institute

Doctor of Philosophy Degree (PhD)

The PhD is the highest degree awarded by the ME Department and is recommended for students who are interested in leadership careers in academia (as a faculty member or researcher), industry, or government. Our PhD graduates are trained to be the leaders and best in their fields and pursue a wide selection of career tracks. PhD students begin research immediately and have access to courses and networks that support their interests. ME also partners with the Rackham Graduate School at U-M, which offers workshops, training sessions, forums, and talks relevant to graduate students.

FULL PhD FUNDING

All ME PhD students are guaranteed full funding, which includes a tuition waiver, monthly living stipend, and health insurance.

GET **INVOLVED**

STUDENT GROUPS

As an ME graduate student, you'll become part of a vibrant community that includes student-run organizations such as the ME Graduate Council, Women and Gender Minorities in ME, and the National Society of Black Engineers, to name a few. These groups provide professional networks, supportive peers, and social events.

INTERNSHIP OPPORTUNITIES

Top employers recognize that a candidate with a Michigan Mechanical Engineering master's degree is a tremendous asset to their company. They respect the academic rigor and the evidence-based approach to design that are hallmarks of our curriculum and program. This recognition leads to great internship opportunities which, in turn, lead to great jobs.

Panagiota Kitsopoulos
ME PhD Student

"As an international student who has experienced multiple relocations, I have found it difficult at times to identify a place where I belong. But at U-M ME, I have found just that. By being able to join a group like the ME DEI Alliance student group, we have become a big family that has been able to explore the diverse beauty of the whole department."

RESEARCH

An Essential Part of the ME Graduate Experience

Roughly 70 percent of all ME master's students are involved in an independent research project or a thesis. Many students tailor their course structure to learn the analytical and experimental techniques that prepare them to contribute quickly to cutting-edge research.

At the PhD level, the qualification examination involves coursework that supports each student's particular research topic. Due to this synergy between research and coursework, as well as valuable mentoring opportunities and a strong graduate student peer community, nearly all of our students become PhD candidates by their fourth semester in the program.

This early research engagement is a hallmark of a program known for putting students on the leading edge of scholarly contributions and real-world impact, as well as graduating students who are in demand for job opportunities in academia, industry, and government.

ME Research Focus Areas

- Biomechanics & Biosystems Engineering
- Controls
- Design
- Dynamics & Vibrations
- Energy
- Fluids
- Manufacturing
- Mechanics & Materials
- Mechatronics & Robotics
- Micro/Nano Engineering
- Mobility, Automotive, and Transportation
- Multiscale Computation
- Thermal Sciences

For full details on each areas:
me.engin.umich.edu/research/areas

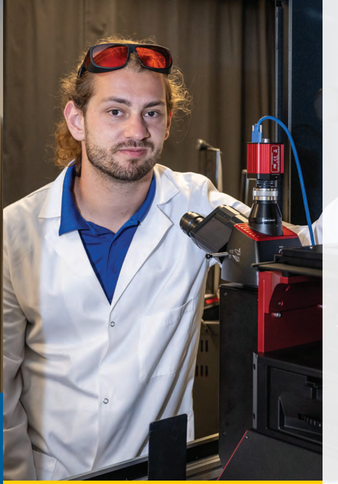
65+ ME Research Labs

State-of-the-Art Labs and Facilities

The U-M campus is home to the world's most powerful laser, a 32-acre proving ground for driverless technology, a two-story earthquake lab, a robot playground, and an 18,000 sq. ft. cleanroom nanofabrication facility.

The Department of Mechanical Engineering's home, the G.G. Brown Building, recently received a $46 million addition and an additional $50 million in renovations. The improvements provide state-of-the-art, student-centric instructional space. They also enable transformative research that combines core mechanical engineering with emerging technologies.

Whatever your focus, there are more than 65 active ME labs where you can learn from and work with top researchers in the fundamental and emerging areas in Mechanical Engineering.



ABOUT THE **UNIVERSITY OF MICHIGAN**

Bringing Excellence and Impact to the World

Founded in 1817, the University of Michigan is known for producing Leaders & Best who are making a difference across the globe, including one U.S. president, two dozen governors, three Supreme Court justices, and eight Nobel Laureates. U-M also boasts one of largest living alumni networks in the world (644,000+).

Widely regarded as a top research institution, U-M fosters collaboration among faculty, staff, students, and external partners to positively impact society. With annual research volume that exceeds $1.7 billion — one of the largest of any U.S. university — research, scholarship, and creative endeavors are central to U-M's mission and permeates all 19 schools and colleges.

U-M's reputation for excellence and its vast resources and opportunities attract exceptional students, faculty, and staff from all 50 states and more than 100 countries.

ABOUT **ANN ARBOR**

A Vibrant, Livable City

Ann Arbor consistently ranks among the country's best places to live. Home to more than 150 parks and green spaces, the city is a vibrant and diverse community for both students and families. Only 40 miles from Detroit and 30 minutes from an international airport, Ann Arbor combines small-town charm with the excitement of a metropolitan community.

In addition to its wide variety of restaurants and cafes, you'll also find coffee shops, unique stores, live music, museums, and the world-famous Zingerman's Deli — all near the U-M campus and the downtown area.

At any time of year, there are many local events and festivals to enjoy. Whether you want to go to an art fair, kayak down the Huron River, or cheer on the Wolverines on a Saturday afternoon at The Big House, Ann Arbor has you covered.

12+ Museums

Largest Art Fair in the U.S.

#1 Hospital in Michigan

MECHANICAL ENGINEERING
UNIVERSITY OF MICHIGAN

APPLY TODAY

Contact Us to Learn More

Michigan's graduate program in Mechanical Engineering is one of the best in the country, and we'd love to tell you more about it. Our website has detailed information on program prerequisites, degrees offered, application guidelines, and much more. Please email our Academic Services Office at **me-aso@umich.edu**, call us at **734-936-0337**, scan the QR code here, or visit our website at the link below.

me.engin.umich.edu/admissions/graduate