

Mechanical Engineering

► The University of Rochester's Department of Mechanical Engineering (ME) offers a rigorous undergraduate and graduate program that prepares students for a lifetime of continued learning.

Students gain broad hands-on laboratory and design experience in a collegial, collaborative environment. They also pursue many opportunities, including study abroad, summer research programs, and invaluable internships with organizations such as NASA and Sandia National Labs, or with companies such as Corning, General Motors, ITT Exelis, and OptiPro. Research areas include fusion science, optical manufacturing and precision engineering, and materials science.

The department is recognized for its emphasis on teaching both engineering science and its applications. It is also known for its multidisciplinary work with many departments, including biomedical engineering and optics. Mechanical engineering is an essential part of Rochester's

In the 20th century, mechanical engineers were involved in the design and manufacture of automobiles and jet planes, water supply and distribution systems, computers, and other engineering feats. Today, they are making solar energy economical, securing cyberspace, engineering better medicines, preventing nuclear terror, and much more.

undergraduate major in archeology, technology, and historical structures, too. No other university nationwide offers a program like this.

The department also plays a prominent role in ongoing programs in the Center for Emerging and Innovative Sciences and the Rochester Center for Biomedical Ultrasound. In addition, many professors work with the Laboratory for Laser Energetics and the School of Medicine and Dentistry.

Points of Pride

Rankings

Out of 127 graduate programs nationwide in mechanical engineering, the National Research Council ranked Rochester 14th in terms of publications per faculty and 8th in

terms of citations per publication (2010 study).

Distinguished Faculty

The department's award-winning faculty includes Professor Riccardo Betti, the Helen F. and Fred H. Gowen Professor of Mechanical Engineering and director of the Fusion Science Center. He is the recipient of the 2012 Department of Energy Distinguished Scientist Award, which was presented to him by then U.S. Secretary of Energy and University alumnus Steven Chu '70.

With a five-decade-long career, James C. M. Li, the Albert Arendt Hopeman Professor of mechanical engineering, is among the most internationally decorated professors



"Through coursework, lectures, and labs, I have gained an understanding of the design process along with the machining skills necessary to excel in the field. The open curriculum has given me some unique opportunities, too, including studying abroad for a semester."

Rachel Bierasinski '13

mechanical engineering major, Edmund A. Hajim Scholarship recipient, and GEAR student

The Graduate Engineering at Rochester (GEAR) program allows qualified students to accelerate their education by earning a bachelor's and a master's degree in just five years.

in the materials science field. In 2012, an international conference was even held to honor his scientific contributions.

Many faculty members are also fellows of professional societies.

Laboratory for Laser Energetics

As the largest user facility for fusion and high energy density physics research, the lab has laid the foundation for laser inertial confinement fusion research (ICF). The ICF concept originated with this department in the 1970s. The lab's first director, Moshe Lubin, was an ME faculty member. Its current director, Robert McCrory, and its associate director, David Meyerhofer, are also ME faculty members.

Mini Baja

Rochester's Mini Baja team is composed of undergraduate students who design, build, and test an all-terrain vehicle. Each year, the team competes in the Society of Automotive Engineer's Collegiate Design Series, traveling across the country to compete with more than a hundred other university teams.

Open-Ended Problem Solving

Students apply creative thinking, technical know-how, and solid communication and teamwork skills to experientially solve open-ended lab and design problems.

Transformational Gift

In 1994, Pandeli Durbetaki '54 (MS), P'79 funded a generous endowment to support graduate student fellowships in mechanical engineering. Durbetaki is a mechanical engineering alumnus, former professor here and at Georgia Tech, and current member of the Edmund A. Hajim's School of Engineering & Applied Sciences Visiting Committee. Since its inception, the fund has benefited nearly 20 Rochester PhD students, making a significant impact at the department level.

How You Can Help

Gifts to the department will help it continue to provide high-quality instruction and conduct important research. Consider these giving opportunities:



Students

Supporting students is one of the highest priorities at Rochester. Fund a graduate-level fellowship as these help attract the most qualified students, allow them to pursue research projects, and strengthen the department overall.

Faculty

Endowed faculty positions are another priority. They help attract and retain faculty of exceptional talent and are among the most prestigious and visible honors at the University. The department seeks specific funding to support the Hopeman Endowed Professor and to establish the James C. M. Li Endowed Chair.

Learning Environment

Having state-of-the-art equipment, labs, and classroom space are essential in this field. Naming opportunities exist and provide resources to upgrade space and equipment used for education and research.

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