

GRADUATE PROGRAMS

2015-2016

mime.oregonstate.edu/academics/grad



School of MIME Graduate Programs

The School of Mechanical, Industrial & Manufacturing Engineering offers master of engineering (MEng), master of science (MS), and doctoral (PhD) degrees in mechanical engineering, industrial engineering, materials science, and robotics. These four majors encompass multiple primary disciplinary options as listed below, as well as secondary options including Humanitarian Engineering, Renewable Energy Studies, and Engineering Management.

Mechanical Engineering

- Advanced Manufacturing
- Design
- Mechanics Materials
- Robotics & Control
- Thermal-Fluid Sciences

Industrial Engineering

- Advanced Manufacturing
- Engineering Management *
- Human Systems Engineering
- Information Systems Engineering
- Manufacturing Systems Engineering

Materials Science

- Structural / Mechanical Behavior
- Electroceramic Materials
- Polymer Materials
- Electronic Materials
- Materials Nanoprocessing

Robotics, core areas include:

- Locomotion
- Artificial Intelligence
- Human/Robot Interaction

Structure of Degrees

- Master of Engineering: 45 credits (coursework only)
- Master of Science: 45 credits (coursework and research)
- PhD: 108 credits (coursework and research)

* 100% ONLINE Master's

The Engineering Management option in Industrial Engineering (Online MEng) is administered through OSU's top-ranked Ecampus. It is an entirely online program with flexible modules that provide the business skills of an MBA customized for an engineer.

Graduate Programs at a Glance

+ 330
graduate students
in **4** majors

3
degree paths
in each MIME major

> \$136K
in annual fellowships

49 FULL TIME **FACULTY**
including 8 NSF CAREER
or DoD Young Investigator
awardees

6 interdisciplinary
areas of research
excellence

>\$ 235K avg. annual
faculty research
expenditure

Oregon State University is an internationally recognized public research university, a Carnegie I research institution, Oregon's Land Grant University, and one of only two U.S. universities to have **Sea, Sun, and Space Grant designations**. These credentials allow for unique partnerships among experts with academic, government, and industry leaders nationally and worldwide.

Areas of Excellence: World-Class Research at School of MIME

School of MIME researchers have achieved global prominence in six signature areas of research excellence:

Advanced Manufacturing; Design; Next-Generation Materials & Devices; Production, Service & Human Systems; Renewable Energy & Energy Sustainability; and Robotics.

Our interdisciplinary approach allows us to attract and retain world-class faculty across the core disciplines of engineering, and promote further excellence in thinking and breakthrough research within our collaborative environment. It is a **model that suits the needs and minds of our students** – they also seek to address global challenges and solve real-world problems.

The **Advanced Manufacturing** group focuses on fundamental research as well as the development of commercially feasible manufacturing processes and systems that enable high-value products. Specific areas include scalable nanomaterial synthesis and thin-film deposition, powder sintering and injection molding, and additive manufacturing.

Design researchers focus on improving the process of design in order to facilitate the creation of groundbreaking technologies. With seven active faculty, the School of MIME has the one of the



largest academic mechanical engineering design research labs in the United States.

Next-Generation Materials & Devices research excellence at the School of MIME addresses the challenges in developing breakthrough, innovative materials with

increased functionality. Such research can improve energy productivity and manufacturing processes, reduce waste, and lead to highly functional, high-performance materials technologies.

Production, Service & Human Systems research focuses on the design, integration, and optimization of systems to efficiently integrate people, equipment and information.

Renewable Energy & Energy Sustainability research focuses on the development of breakthrough concepts, energy products, and systems to address critical environmental, societal, and economic issues while informing practices and attitudes towards energy utilization.

Robotics researchers focus on design, modeling and control of systems that observe, move within, interact with, and act upon their environment. Such systems include mobile robots, and large active-sensor networks.



School of MIME Graduate Degrees Take You Places

Oregon State University has a lot to offer – a friendly college town, and a seemingly limitless list of great adventures within a two-hour drive.

Corvallis is one of the nation's safest, smartest, greenest small cities. But, it is only 80 miles south of Portland and an hour by car from the Cascades (east) or Pacific Coast (west), Corvallis is the perfect home base for exploring the state and the Pacific Northwest region's spectacular landscapes.

If you like hiking, mountain biking, skiing, climbing, camping, fishing, surfing, kayaking, or virtually any other outdoor recreational activity, you will find opportunity (and most likely good company) at Oregon State to get out and explore.

With your degree from Oregon State, your career options include:

- Engineering positions in energy, manufacturing, healthcare, defense, or government

- Industry R&D in aerospace, clean tech or high-tech
- Government labs like PNNL, Sandia National Lab, or Lawrence Berkeley
- Federal agencies like NASA, the U.S. Navy, the Patent Office, or Department of Energy
- Faculty positions in the United States or around the world.
- Start-up companies right here in Corvallis, or other hotspots in the state of Oregon, as well as the Pacific Northwest or across the country.