

# UNDERGRADUATE PROGRAMS

2015-2016

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## School of MIME Undergraduate Programs

The School of MIME offers bachelor's degrees in mechanical, industrial, manufacturing, and energy systems engineering; all are accredited by ABET, the recognized U.S. accreditor of college and university programs in applied science, computing, engineering, and technology. These degrees encompass multiple engineering disciplinary options:

### Mechanical Engineering

Mechanical engineers design, develop, and improve devices, products, processes, and systems. A mechanical engineering degree can lead to work in almost any type of industry. Our students have learning opportunities beyond core studies through clubs and electives, including world-class car racing, robotics, rocketry and humanitarian engineering.\*

### Industrial Engineering

Industrial engineers work in all sectors of industry and government to design and manage complex systems requiring integration of people, processes, and materials. The Oregon State industrial engineering program allows for customized paths, including a business engineering option.

### Manufacturing Engineering

Manufacturing engineers develop and implement high-quality, efficient, and economically viable production processes and systems. These students, we find, are highly sought-after for available internships. At Oregon State, manufacturing engineering students frequently add industrial engineering as a second major.

### Energy Systems Engineering

Energy systems engineers oversee complex energy conversion and distribution systems, improve energy storage systems, and ensure efficient energy use in building, manufacturing, and processing systems. Housed at the OSU-Cascades campus in Bend, the program combines core mechanical and industrial engineering classes with business and energy management coursework.

### \* ENGINEERING FOR GOOD

The School of MIME has launched its **HUMANITARIAN ENGINEERING** undergraduate minor option. The program seeks science- and engineering-based solutions to improve the human condition by increasing **access to basic human needs such clean water or renewable energy**, and improving community resilience, whether in face of natural disasters or economic turmoil.

*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.*

## School of MIME at a Glance

+ **1,600**  
engineering students  
in **4** majors

**4**  
bachelor of science  
engineering degrees  
available

> **\$136K**  
in annual fellowships

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

**6** interdisciplinary  
**areas of research**  
excellence

+ **15** NATIONAL CHAPTER  
**engineering-focused**  
student clubs at OSU

# How We Achieve Engineering Excellence at School of MIME

## Outstanding academic team

School of MIME faculty have achieved global prominence in six signature areas of research excellence: Advanced Manufacturing; Design; Production, Service & Human Systems; Next-Generation Materials & Devices; Renewable Energy & Energy Sustainability; and Robotics.

Our interdisciplinary approach allows us to attract world-class faculty across the core disciplines of engineering, and contribute breakthrough research to engineering's biggest global challenges.

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.

From the day that you arrive to the day you receive your diploma, the undergraduate advising team helps you meet your program requirements. This team is committed to helping ensure that you progress and graduate as a mindful, purposeful and professionally excellent engineer. We are known for producing work-ready engineers, year after year.



## Experiential learning model throughout the program, and beyond

Whether it is job experience, research experience or teamwork and leadership, the School of MIME has developed programs and courses to prepare successful graduates. Many MIME undergrads participate in the Multiple Engineering Co-Op program, or MECOP, which provides **two 6-month paid internships** at companies located throughout the Pacific Northwest. Students normally enter the program during their junior year.

Capstone Design courses place our engineers onto teams to solve a real-world R&D project, often sponsored by industry. **These projects provide outstanding experiential learning opportunities for MIME seniors** – and they are winning arrangements for the sponsor.

Oregon State's Career Development Center organizes two engineering-focused career fairs each year, which attract hundreds of regional and national corporations interested in recruiting our students. Students can also interact with employers at MIME's annual recruiting events, and attend the presentations of companies conducting interviews right on campus. Such companies include **Boeing, Intel, Oracle and others**.

## International opportunities

MIME offers unique opportunities for developing a global engineering skill set. For example, the **Humanitarian Engineering** minor has required fieldwork that may bring students to places such as Guatemala, Pakistan, India or Uganda for incredible, life-changing perspectives.

The **Atlantis Bachelor Program** is a transatlantic program leading to Bachelor's degrees in materials science and mechanical engineering. MIME participants spend a year in Germany completing their materials science degree requirements, and return to Corvallis to complete their final year back at Oregon State.

**Global Formula Racing (GFR)** is a global collaboration that dominates U.S. and EU Formula racing circles. Students at OSU and Duale Hochschule Baden-Württemberg-Ravensburg in Germany jointly design, build, and test racing vehicles, one at each school, and race at competitions around the world.

## Our competitive edge

### Find the right fit

Common first-year "Intro to Engineering" classes are designed to help you know which discipline of engineering is right for you.

### Top-tier, hands-on education

Our students complete rigorous coursework and real-world engineering projects. They engage in extracurricular activities, international competitions, and industry and research internships. Hands-on lab work hones skills in designing, building, and testing.

### World-class faculty

Our faculty are research leaders in their fields, and they involve undergraduate students in their research programs.

### Strong industry ties

We build connections with industry through research partnerships, recruiting events, student project sponsorships, company workshops, and more.

### Our graduates get jobs

MIME students have an excellent track record for securing employment, in many cases before they graduate from Oregon State. We have a solid reputation in the Pacific Northwest, and beyond.

### Oregon: our special place

Oregon State University has a lot to offer – a safe, friendly college town, and your choice of outdoor adventure at the mountains or Pacific coast. Whether it be hiking, mountain biking, skiing, climbing, fishing, surfing, kayaking, Oregon has it. Portland, just 80 miles north, satisfies the urban urges when they strike with its amazing culinary and cultural experiences.