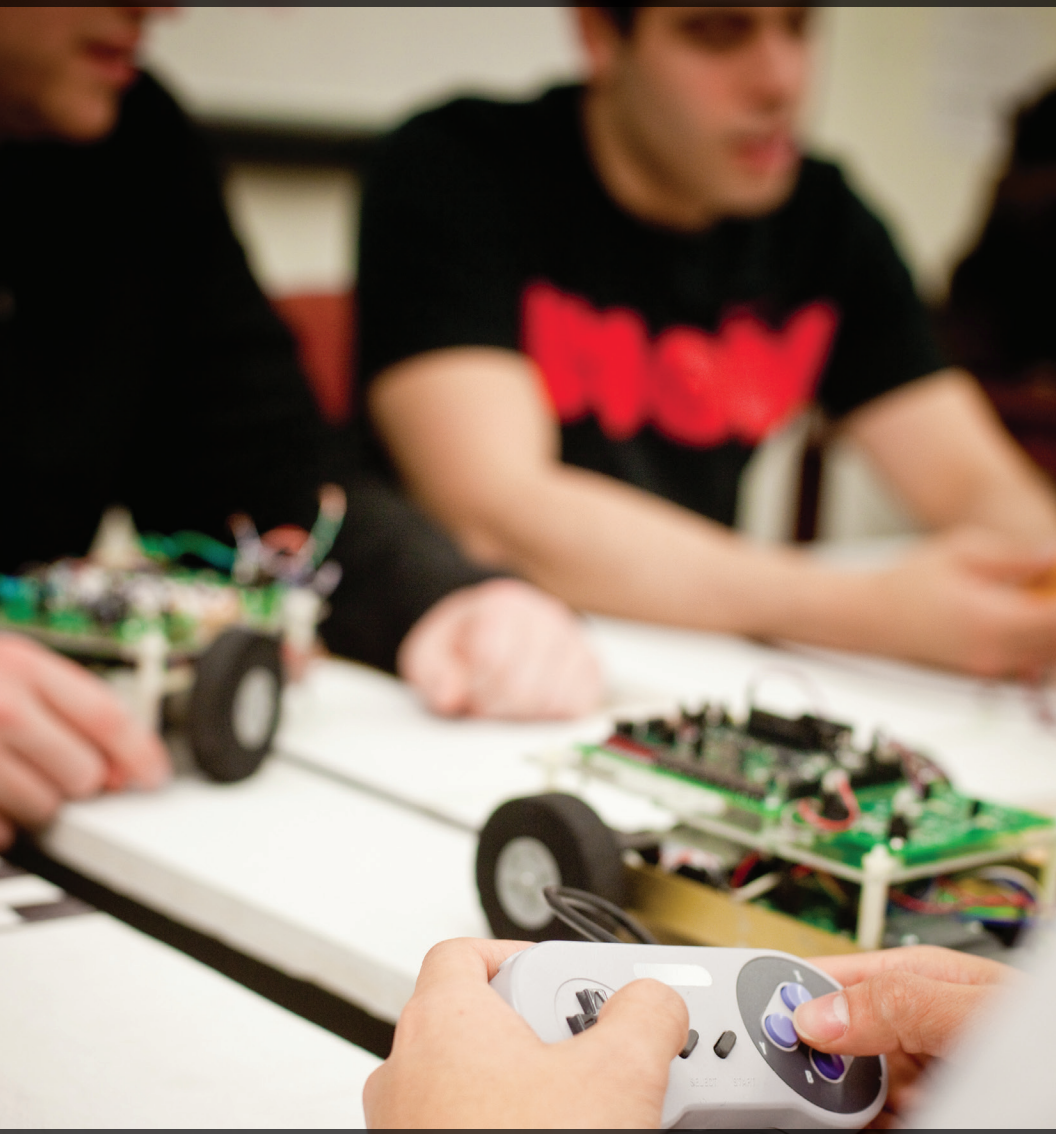
ENGINEERING, COMPUTER AND INFORMATION SYSTEMS



Turn ideas into **reality**

Oregon State UNIVERSITY

Engin

Make a huge difference in our everyday lives. Through talent and innovation, they can create something new or make something better.

LOOK AROUND. AN ENGINEER HAD A HAND IN ALMOST EVERYTHING YOU SEE: Your cell phone or tablet. Your car (or bike) and the bridges you cross. The buildings where you live and learn. The wind turbines that generate clean, renewable energy. That silver speck of an airliner silently passing five miles overhead. Engineers were involved in the design and manufacturing of the things we use every day.

The engineering, computer and information systems fields offer virtually unlimited opportunities to put ideas and innovation to work. And Oregon State University is a great place to get started. Here, you can study with world-renowned faculty, make real contributions to groundbreaking research and get hands-on, real-world experience.

Our graduates are in high demand. Companies are looking for people who combine technical capabilities with communication, teamwork and leadership skills — all of which are part of the curriculum at Oregon State. Start here, and you can take your career wherever your ambitions lead you.

Careers
End products

Oregon State graduates in engineering, computer and information systems are ready to step into exciting careers with engineering firms, hardware and software companies, manufacturers, businesses involved in planning, design and construction and a variety of government and nonprofit agencies that need capable people in engineering and information technology fields.

Preparation

Getting ready

Engineering, computer and information systems careers require people who are imaginative and creative, able to apply scientific concepts and adapt new ideas to existing methods. For a rewarding and successful career, it also helps to have an interest in people and the larger world, along with a drive to solve challenging and unusual problems.

To prepare for an engineering or computer and information systems curriculum, start by taking mathematics, including advanced algebra and trigonometry, along with the sciences, including physics, chemistry and biology. Because engineers must communicate effectively and work in teams, you should also take English and speech courses.

Oregon State engineering students consistently score well above the national average on the Fundamentals of Engineering exam required for the profession. Each year, the passing rate for Oregon State students is above 90 percent, compared to the national passing rate of about 75 percent.

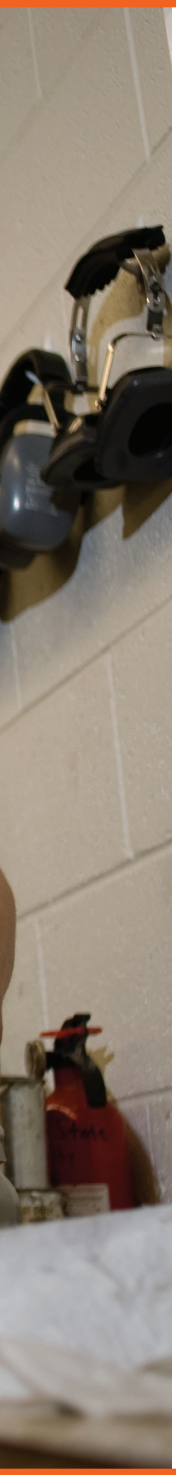
Career opportunities cover a wide spectrum. You might:

- Develop processes to convert chemicals into useful products like biodiesel or artificial bones.
- Design facilities and information systems in the manufacturing, finance or transportation industries.
- Plan, design and build safer structures, alternative transportation systems, wastewater treatment facilities or water supply systems.
- Develop tools, devices, machines and the software that controls them.
- Design computer systems, software and machinery to enhance environmental quality.
- Play an important role in the design, function and safety of nuclear operations in the energy or healthcare fields.
- Design new ways to generate clean energy from waves, wind, biomass or the sun.

Programs
What we offer

All Oregon State engineering programs are fully accredited and offer a Bachelor of Science degree through a basic four-year curriculum. In the College of Engineering, you'll spend your freshman and sophomore years in pre-major programs that prepare you for a professional program in your junior and senior years. Pre-engineering courses can be taken at Oregon State, other four-year schools or community colleges.

Oregon State's Formula SAE racing team has won multiple competitions against university teams from around the world, including winning four of the last five U.S. National Championships.



Engineering, computer and information systems

Undergraduate degree programs at Oregon State

(Selected minors, options and certificates in small type)

College of Agricultural Sciences

Bioresource Research
- Animal Reproduction and Development
- Applied Genetics
- Bioenergy
- Bioproducts
- Biotechnology
- Climate and Biosystems Modeling
- Environmental Chemistry
- Food Quality
- Genomics/Bioinformatics
- Pest Biology and Management
- Plant Growth and Development
- Sustainable Ecosystems
- Toxicology
- Water Resources

College of Business

Business Information Systems
- International Business

Interior Design

College of Earth, Ocean, and Atmospheric Sciences

Earth Sciences
- Geography
- Geology
- Ocean Science

Environmental Sciences

College of Engineering

Bioengineering

Chemical Engineering
- Biochemical Processes
- Environmental Processes
- Microelectronics Processes and Materials Science
- Nanotechnology Processes

Civil Engineering

Computer Science
- Applied Computer Science
- Computer Science Double Degree
- Computer Systems
- Information Systems

Construction Engineering Management

Ecological Engineering

Electrical and Computer Engineering

Energy Systems Engineering
- (pro-school courses completed at OSU-Cascades)

Environmental Engineering

General Engineering (freshmen)

Industrial Engineering
- Business Engineering

Manufacturing Engineering

Mechanical Engineering

Nuclear Engineering

Radiation Health Physics
- Radiation Health Physics-Pre Med

College of Forestry

Forest Engineering

Forest Engineering–Civil Engineering

Renewable Materials
- Management and Marketing
- Science and Engineering

College of Liberal Arts

Digital Communication Arts
- Multimedia
- New Media Communications

Your first year

Suggested first-year curriculum

The broader and stronger your foundation, the higher you can build. So along with calculus, chemistry and calculus-based physics, most first-year students in engineering programs also take an orientation course that can help in choosing a major and the appropriate options. If you're not sure which engineering major you want to pursue, there's a general engineering program where you can get started.

You'll also develop your critical thinking, communication and problem-solving skills through courses from Oregon State's Baccalaureate Core — the arts and humanities, writing and cultural diversity.

Students in business information systems will mostly take courses from the Baccalaureate Core and from the business core curriculum during their first year.

To make sure you get off to a good start and stay on course for graduation, you should meet with an advisor as you plan your first-year program — and at regular intervals after that.

Oregon State is home to one of the Oregon Nanoscience and Microtechnologies Institute (ONAMI) research parks.

Take a test drive
Internships

Learning by doing is one of the best ways to prepare for a career, and internships are increasingly important for landing a great job after college. More than 80 percent of Oregon State engineering students complete at least one internship while they're here.

The Multiple Engineering Co-op Program (MECOP) and Civil Engineering Co-op Program (CECOP) offer two paid six-month internships during the third and fourth years of a five-year program of study. On average, you can earn $40,000 during these two internships. In addition, you'll get real-world work experience, professional contacts and in many cases, a job offer after graduation.

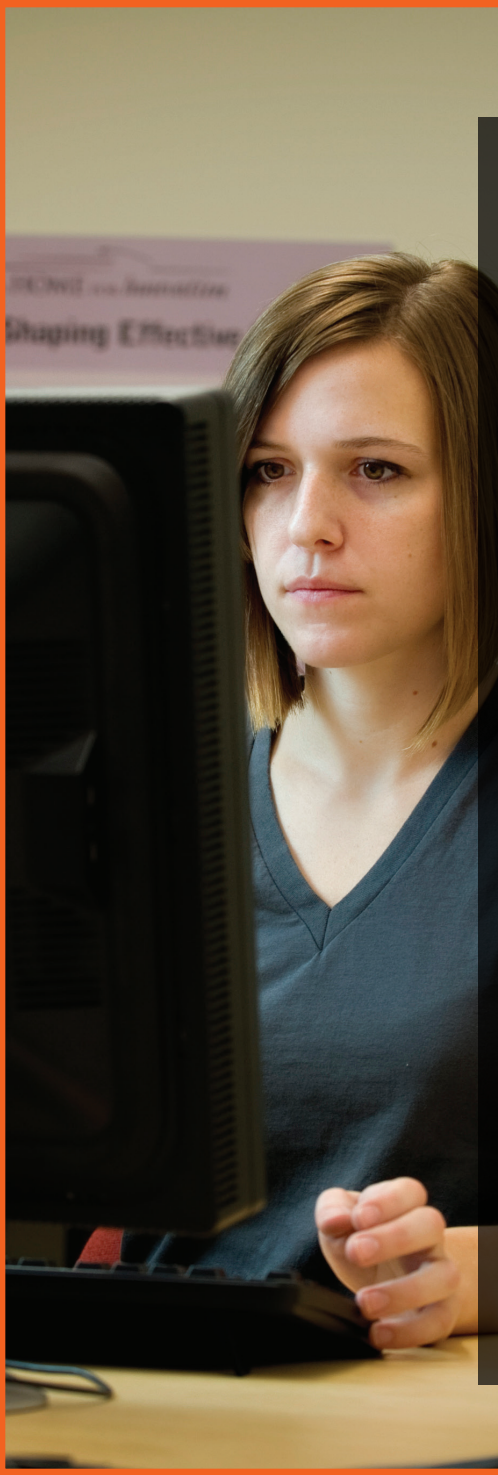
To be considered for an internship, you must be admitted to the professional program. Oregon State Career Services offers assistance with applications and interviews. Industrial interview teams select students for these programs and place them with companies in Oregon and throughout the Pacific Northwest.

Research
Discover solutions

Like internships, research experience can give you an advantage whether you're starting your career or applying to graduate programs. Even as an undergraduate, you'll have opportunities to make real contributions to faculty and graduate students' research projects. You may also develop and pursue your own research in a variety of engineering disciplines.

Multitasking
Interdisciplinary programs

For students interested in an engineering career in the forest products industry, the College of Engineering and the College of Forestry offer a joint five-year degree in civil engineering and forest engineering.



Additional programs

Other ways to learn

Oregon State offers a variety of resources to help you pursue your ambitions and interests. Many engineering students are involved in the University Honors College, International Degree and Study Abroad programs. These programs offer challenges and unique experiences to support your academic, professional and personal growth. They're also fun.

Startup funds

Scholarships

Anything worthwhile, including college, requires an investment. But we might be able to help with some of your startup costs. Scholarships are available at the university level, as well as from individual colleges and departments. Most scholarships are awarded based on information in the Oregon State scholarship application submitted with your application for admission, but others require separate applications. The deadline for applying for university scholarships is Feb. 1. Be sure to check with your college and department on the deadlines for other scholarships. Engineering students received a total of $6.4 million in scholarships last year, largely through generous support from alumni and industry.

See yourself here

Be sure to visit

The best way to see yourself as an Oregon State student is to come visit. Set up a campus tour and arrange to talk with people in your area of academic interest by calling the Office of Admissions at 800-291-4192 or visiting oregonstate.edu/admissions.

For more information:

- College of Agricultural Sciences 541-737-2211
  agsci.oregonstate.edu
- College of Business 541-737-2551
  business.oregonstate.edu
- College of Earth, Ocean, and Atmospheric Sciences ... 541-737-1201
  ceoas.oregonstate.edu
- College of Engineering..... 877-257-5182
  engineering.oregonstate.edu
- College of Forestry 541-737-1594
  forestry.oregonstate.edu
- College of Liberal Arts 541-737-0561
  oregonstate.edu/cla

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Oregon State University
104 Kerr Administration Building
Corvallis, OR 97331-2106

oregonstate.edu/academics

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