Oregon State University

IMPACT 2018
OREGON STATE UNIVERSITY:
A LEGACY OF TRANSFORMATION
SINCE 1868
OREGON’S STATEWIDE UNIVERSITY – FOR 150 YEARS

Since 1868, Oregon State University has provided a legacy of transformation for our state and beyond. While over time, our name has changed and our programs have multiplied, OSU’s mission to provide access to a high-quality education for all Oregonians and to serve the state’s economy and communities has remained steadfast.

Inspired leadership, innovation and excellence have enabled Oregon State to transform generations of learners into leaders who serve our state, the nation and the world in meaningful and significant ways. In the following pages, you will find just a few examples of our impacts.

As Oregon State University begins its next 150 years, I assure you that our commitment to serve will extend this legacy of transformation and guide all that we pursue. From addressing the world’s most pressing issues to discovering far-reaching solutions, the world can count on OSU for a healthier, prosperous and more sustainable future for all of us.

Edward J. Ray
President
Oregon State University
When the Oregon Legislature chose Corvallis College as the state's land grant institution on October 27, 1868, the decision was grounded in the optimistic belief that expanding access to higher education would unlock human potential. It has. From its first graduating class of three to nearly 32,000 students and more than 180,000 alumni today, Oregon State University has sent people out into the world to tackle the overwhelming, make the impossible doable, forge a new path.

1868

1890: Oregon Agricultural College becomes one of the first land grant institutions in the nation to offer scientific courses to women.
and find a better way. After 150 years, the challenges are bigger, the frontiers further, the problems more complex. But we remain uncommonly committed to the common good.

The mission of Oregon State University — to teach, discover and serve — changes lives and is changing the world. That will never change.

EXTENDING EDUCATION FROM THE FEW TO THE MANY.

Oregon State University traces its roots to the Morrill Act of 1862. Written by Rep. Justin Smith Morrill of Vermont and signed into law by President Abraham Lincoln, the Morrill Act provided grants of federal lands to every state to fund the establishment of public universities, extending higher education from the privileged few to the many.

“...the land-grant university system is being built on behalf of the people who have invested in these public institutions their hopes, their support and their confidence.”

— President Abraham Lincoln
July 2, 1862
OREGON STATE UNIVERSITY:  
A LEGACY OF TRANSFORMATION

See 150 years of OSU history and discover 150 unique stories about the university’s past by visiting the OSU150 exhibit at the Oregon Historical Society in Portland, Feb. 10 to Sept. 9. To learn more about OSU150, visit oregonstate.edu/osu150.
Every student comes to Oregon State with potential, and our job is to reveal it, grow it and then release it. As Oregon’s largest university for the fourth year in a row, with Oregon residents making up 73 percent of undergraduates in Corvallis and 92 percent in Bend, we take seriously our responsibility for educating future generations of Oregonians.

We also recognize the value of a more inclusive student body, where everyone gains equally from diverse experiences and perspectives. Because we want all students to graduate with the knowledge, skills and determination to make their lives, their future careers and their communities better.

**There are 31,904 opportunities to make an impact out there.**

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Increase</th>
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<tbody>
<tr>
<td><strong>Total Students</strong></td>
<td>31,904</td>
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</tr>
<tr>
<td>Corvallis</td>
<td>24,760</td>
<td>0.4%</td>
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<tr>
<td>OSU-Cascades</td>
<td>1,204</td>
<td>7.3%</td>
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<tr>
<td>ECampus</td>
<td>6,087</td>
<td>7.1%</td>
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<td><strong>First-Generation Students</strong></td>
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<tr>
<td><strong>Students of Color</strong></td>
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<tr>
<td><strong>International Students</strong></td>
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<td><strong>U.S. Veterans</strong></td>
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<td><strong>Entering First-Year Students</strong></td>
<td>142</td>
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<tr>
<td><strong>Graduates in the Class of 2017</strong></td>
<td>6,807</td>
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</table>

**1968: Oregon State enrolls 15,791 students in its centennial year.**

**Source:** Fall 2017 Enrollment Summary. All comparisons relate to 2016 enrollment. Totals include students who are enrolled at both OSU-Cascades and Ecampus.
Oregon State’s expanded presence in Portland means expanded opportunities to serve the region.

Opportunities like new degree programs. Partnerships with business and industry. Collaborations with communities across the region. Meeting the unmet needs that are out there.

Oregon State’s new Portland center in the historic Meier & Frank Building downtown opens in August. From there, the College of Business will offer its hybrid business administration program, blending online courses with in-person sessions for professional development and industry engagement. More degree options from other colleges also will be offered.

The OSU Advantage, Oregon State’s industry partnership and commercialization initiative, is also expanding in the new center to better serve Portland’s business community and spur economic growth.
Oregon State University’s expanded mission in Portland builds on a tradition of service to the region:

- The Food Innovation Center in the Pearl District has helped share Oregon’s agricultural bounty with the world since 1999.
- Students in the College of Pharmacy and the College of Veterinary Medicine complete learning, research and service programs at Oregon Health & Science University and the Oregon Humane Society.
- The College of Education places student teachers in districts across the region.
- The College of Business has offered hybrid MBA programs in Portland since 2013.
- Oregon State researchers partner with colleagues at OHSU and Portland State University to tackle local and global challenges.
- Dozens of Portland-area companies offer students real-world work experience through engineering and business internships.
- The OSU Extension Service has been a vibrant presence in local farmers’ markets, 4-H and other community programs for decades.

When you take your mission to serve all Oregonians seriously — and we do — you go where there are more Oregonians. Look for Oregon State out there in Portland, now more than ever.
OREGON STATE’S COMMITMENT TO CENTRAL OREGON AND THE OREGON COAST KEEPS GROWING.

In Newport, a new academic and research building to support the Marine Studies Initiative will begin construction this spring. It features an innovative vertical evacuation design with a ramp from ground level to the roof of the three-story building. At a height of 47 feet, the roof is designed to accommodate more than 900 people in an emergency. A residence hall for 360 students is also planned.

Lindsey Ellett found her passion researching humpback whale feeding patterns and their impacts on other marine life during a summer class at Oregon State’s Hatfield Marine Science Center in Newport. As part of the Marine Studies Initiative, up to 500 students each year will have opportunities to take classes and conduct research on the Oregon Coast by 2025.

Lindsey Ellett  
College of Science | Honors College

After opening its new campus in 2016, OSU-Cascades is expanding further. A landfill and a former pumice mine adjacent to OSU-Cascades will be put into productive use, increasing the campus to 128 acres. With room for 3,500 to 5,000 students, the expansion will include an innovation district to support partnerships between university researchers, students and startup companies in high-tech, bio-tech and other industries.
OSU RESEARCH:
RECORDS ARE MADE TO BE BROKEN. AGAIN.

For the third consecutive year, Oregon State University set a record in research grants and contracts: $441 million in 2017.

This investment in research pays back in countless dividends. Research leads to a new drug delivery system that could treat cancerous tumors resistant to conventional chemotherapy and radiation. It discovers a new blue pigment that absorbs infrared light and could be used in a roof coating to keep buildings cooler and reduce energy consumption. Research launches companies like eChemion, which is using innovative chemistry to make batteries more powerful and longer lasting.

Research energizes the future. And no university in Oregon puts more energy into research than Oregon State.

$441 MILLION
in research grants and contracts, up 31%

$34 MILLION
in research funding from business and industry, up 10%

$1 MILLION
in research funding for undergraduate students

70 COMPANIES
launched and 735 jobs created through the OSU Advantage business incubator since 2013

All comparisons relate to 2016.

1961: Oregon State launches the Acona, the first academic vessel in the U.S. designed specifically for oceanographic research.
Oregon State University's global economic and societal impact in 2017 grew by $343 million since 2014. This impact results from OSU's teaching, research, and outreach and engagement activities. These activities provide a quality higher education; serve community needs; and research vexing problems.

OSU operations contributed $2.334 billion to the Oregon economy in 2017 and were responsible for supporting up to 30,452 jobs statewide.

The university directly contributed $1.459 billion in gross output in Oregon, with $726 million in payroll; $228 million in goods and services; $78 million in capital construction; $385 million in student spending and $42 million in visitor spending. That represents an overall increase of $168 million — or 13 percent — from 2014.

OSU’s activities contributed $1.603 billion in gross output and 20,691 jobs to the Benton and Linn county economies in 2017 — an increase of $269 million, or 20 percent, over 2014. In Portland, OSU was responsible for $281.8 million in impact and 3,884 jobs. OSU-Cascades in Bend is expected to contribute $134.4 million and 2,083 jobs to the state’s economy in 2025 — up from $42.7 million and 410 jobs in 2015.

OSU student spending — beyond the cost of tuition and on-campus housing — averaged $12,540 and was responsible for supporting $485 million in gross economic output and 4,558 jobs statewide in 2017.

<table>
<thead>
<tr>
<th>Statewide Economic Impact</th>
<th>$2.334 Billion</th>
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- **Direct Impact**: $989 Million (42.4%)
- **Indirect Impact**: $155 Million (6.6%)
- **Induced Impact**: $1.19 Billion (51%)

Source: ECONorthwest analysis of 2016-17 Oregon State University expenditure data, visitor data, student enrollment data and 2013 Oregon Travel Impacts Study/Dean Runyon and Associates.
JOBS SUPPORTED STATEWIDE

30,452 JOBS

JOBS SUPPORTED IN BENTON AND LINN COUNTIES

20,691 JOBS

MONEY OSU INFUSED INTO THE OREGON ECONOMY IN 2017

$1.459 BILLION

DIRECT IMPACT | 18,953 JOBS | 62.2%
INDIRECT IMPACT | 1,266 JOBS | 4.2%
INDUCED IMPACT | 10,233 JOBS | 33.6%

DIRECT IMPACT | 12,666 JOBS | 61.2%
INDIRECT IMPACT | 401 JOBS | 1.9%
INDUCED IMPACT | 7,624 JOBS | 36.9%

PAYROLL | $726 MILLION | 49.8%
GOODS & SERVICES PURCHASED | $228 MILLION | 15.6%
CAPITAL CONSTRUCTION | $78 MILLION | 5.3%
STUDENT SPENDING | $385 MILLION | 26.4%
VISITOR SPENDING | $42 MILLION | 2.9%

DIRECT IMPACT | $783 MILLION | 48.8%
INDIRECT IMPACT | $43 MILLION | 2.7%
INDUCED IMPACT | $777 MILLION | 48.5%

ECONOMIC IMPACT IN BENTON AND LINN COUNTIES

$1.603 BILLION
OREGON STATE’S ECONOMIC IMPACT IN PORTLAND

JOBS SUPPORTED IN PORTLAND

3,884 JOBS

DIRECT IMPACT | 2,995 JOBS | 77.1%
INDIRECT IMPACT | 413 JOBS | 10.6%
INDUCED IMPACT | 476 JOBS | 12.3%

ECONOMIC IMPACT IN PORTLAND

$281.8 MILLION

DIRECT IMPACT | $137.8 MILLION | 48.9%
INDIRECT IMPACT | $78.8 MILLION | 28%
INDUCED IMPACT | $65.2 MILLION | 23.1%

SOURCE: ECONorthwest analysis of 2016-17 Oregon State University expenditure data, visitor data, student enrollment data and 2013 Oregon Travel Impacts Study/Dean Runyon and Associates.

HOW OREGON STATE’S IMPACT WAS MEASURED

Economic consulting firm ECONorthwest analyzed data provided by the university and calculated the impact of Oregon State’s expenditures, employment, student enrollment and visitors. The university’s economic footprint comes from three sources:

• Direct impacts result from Oregon State spending on operations, goods and services, capital construction and payroll.
• Indirect impacts result from companies purchasing additional supplies or hiring additional employees to support spending by Oregon State.
• Induced impacts result from the purchasing power of Oregon State employees.
A BEAVER ALUMNUS IS DRIVING THE FUTURE.

Jensen Huang has seen the future. And Nvidia, the $6.9 billion company Huang cofounded, is helping to power it. Nvidia’s GPUs — graphics processing units — provide the massive computing capabilities required for artificial intelligence applications like self-driving cars. Huang, who has led the company to integrate AI technologies into real-world applications, predicts fully autonomous vehicles will be on the road by 2021. Recognizing his visionary leadership, *Fortune* magazine named Huang its 2017 Businessperson of the Year.

Jensen Huang ’84 | College of Engineering

**1971:** John Blankenbaker ’52 develops the Kenbak-1, the world’s first personal computer.
DONORS MAKE THE DIFFERENCE

THE BEST PART OF SETTING A HIGH GOAL IS SURPASSING IT.

Exceeding expectations has become the norm for the OSU Foundation. In 2017, donors contributed a record $132.15 million to Oregon State, well past the foundation’s $103 million base goal — and its $126 million stretch goal.

Spurred by a $25 million gift from an anonymous donor, Oregon State will expand The LaSells Stewart Center to create a cutting-edge arts and education complex, expected to open in 2022. Another $5 million in private support is needed for $30 million in matching public funds.

An anonymous gift of $5 million — the largest donation ever at OSU-Cascades — will lead support for a second academic building. The gift will go toward a $10 million philanthropic match required for state funding.

The OSU Foundation’s stretch goal for 2018 is $132 million. Expect another exceptional year.

2007: Oregon State launches its first comprehensive capital campaign.

2015: The Campaign for OSU concludes, having raised $1.14 billion for 600+ new scholarships, 79 new endowed faculty positions and 30 new building or renovation projects.
SCHOLARSHIPS ARE AN INVESTMENT IN THE FUTURE.

Out of all the contributions Oregon State has made since 1868, none are more significant than our graduates. And generous donors are helping ensure more of our students can complete their degrees. Donor support also helps fund study abroad, research projects, clubs, internships and other learning beyond the classroom — experiences that prepare students for successful careers and meaningful lives. The return on this investment? Priceless.

SCHOLARSHIPS BY THE NUMBERS

$74 MILLION
raised toward the $150 million goal of the Student Success Initiative

4,000+
students received almost $11 million in donor-funded scholarships

35 PERCENT
of 2017 first-year students received scholarship support

95 OF 100
at-risk first-year students who received a $1,000 High Promise Scholarship returned to OSU for their second year

“My ultimate goal with my degree is to make a change. As long as I make a change in someone’s life, or do something to help someone, then I’m happy.”
Kila Gebeysse
College of Science
High Promise Scholarship

“I was really grateful because every penny counts. My parents were always telling me, you’ve got to get scholarships to help pay for college. This will help out a lot.”
Alec Nagaoka
College of Engineering
High Promise Scholarship

“It has completely changed my school experience, and it’s let me pursue projects that are way more ambitious than I would have been able to before.”
Madelaine Corbin ’17
College of Liberal Arts
Plinkiewisch Art Scholarship
What’s the best way to prepare future teachers for long-term success in the classroom? Put them in the classroom. Immediately.

Teach for Beaverton is changing the student teaching template. The immersive, two-year Master of Arts in Teaching program is a partnership between OSU’s College of Education, Ecampus and the Beaverton School District. Oregon State students gain hands-on experience and mentoring from seasoned teachers from day one, plus they have paid substitute teaching opportunities and receive a stipend in their second year. Beaverton schools benefit from much-needed help with teaching loads and exposure to the latest educational research from the College of Education.

Studies show that more than 40 percent of new teachers leave the profession within three years, often because they are not prepared for real-world challenges in the classroom. Teach for Beaverton aims to prepare them.

1970: Teacher preparation courses became largely field-based, with Oregon State placing student teachers in public schools early in their degree program.
All of the more than 2,500 students who have participated in Oregon State University’s Open Campus Juntos program have graduated from high school. The next step is college, and to help students get there, Juntos offers campus visits, parent and family workshops, financial aid counseling and ongoing support in 23 communities statewide. The program is working. Since 2012, 92 percent of Juntos participants have gone on to post-secondary education.

**A 100 PERCENT SUCCESS RATE IS ONLY THE FIRST STEP.**
DOING THE RIGHT THING IS RARELY EASY, BUT ALWAYS WORTH IT.

Oregon State faculty and students don’t avoid hard conversations. In Professor Dwaine Plaza’s sociology class in the College of Liberal Arts, students of all races confront historic injustices and how people of color continue to resist inequalities in the workplace, the education system and their communities. And after students spoke out about their own experiences with injustice, university leadership took action — recruiting more diverse faculty, establishing a bias-response process and incorporating diversity education into new student orientation.

Building a community that’s equitable, inclusive and just takes time and ongoing effort. We welcome everyone to join in.
1970s: Oregon State establishes four cultural centers. There are now seven student-led centers on campus to share and learn about different cultures, histories and identities.
In 1992, 1,500 scientists famously warned that humanity was pushing Earth’s ecosystems beyond their capacity to support life. Humanity has not heeded the warning.

Oregon State Distinguished Professor William Ripple and graduate student Christopher Wolf reached this conclusion after studying 25-year trends for nine environmental issues identified in 1992. Global population, temperatures and carbon dioxide emissions are increasing while biodiversity and ocean and forest health are declining.

Ripple and colleagues published “World Scientists’ Warning to Humanity: A Second Notice.” They outlined 12 steps toward sustainability, such as marine reserves, renewable energy, population control and a more plant-based diet.

More than 20,000 scientists from 184 countries co-signed or endorsed their findings.

Oregon State research has been changing the world for 150 years. And it always will.
1926: The first parcels for what would become OSU’s McDonald-Dunn Research Forest are acquired. Oregon State now manages 15,000 acres of forests statewide for research, teaching and demonstration.

Fire is a natural element of the forest, but decades of fire suppression and federal forest management policies have resulted in denser forests — leading to bigger, more costly wildfires.

Matthew Reilly used satellite data to study landscape patterns in the eastern Cascades from 1985 to 2010. He found that only about 10 percent of the forest had burned. Reilly and other Oregon State scientists advocate for controlled burns and tree thinning to clear out small trees and brush. Current fuel reduction activities, they add, are a drop in the bucket.
A DRONE THAT STAYS ALOFT SIX TIMES LONGER IS EXPONENTIALLY MORE USEFUL.

OSU-Cascades Associate Professor Chris Hagen, graduate student Sean Brown and colleagues have developed a hybrid drone that can be deployed for lengthy search-and-rescue missions, forest and farm crop monitoring, landscape mapping and much more. Their breakthrough uses a small gasoline engine that while in flight can charge the batteries that power the drone’s propellers. Hagen is collaborating with industry to commercialize his innovation, soaring past the limitations of what drones can do out there.
2001: Classes begin at OSU-Cascades, bringing bachelor’s and graduate degree programs to Central Oregon for the first time.

2016: OSU-Cascades, now a four-year university, opens its stand-alone campus in Bend.
WHEN ANTIBIOTICS COULDN’T STOP THE NATION’S SECOND MOST-REPORTED INFECTIOUS DISEASE, OREGON STATE DID.

Associate Professor Aleksandra Sikora stopped the superbug Neisseria gonorrhoeae with a novel peptide inhibitor that binds to a protein on the outer surface of the bacteria and disables its function. This kills the bacteria and keeps the infection from spreading.

Worldwide, 78 million cases of gonorrhea are reported each year, many of them antibiotic-resistant. But Sikora’s unconventional approach could lead to an effective treatment.

Aleksandra Sikora | College of Pharmacy
When you enjoy a beer, you may not think about the gallons of wastewater generated in the brewing process. But Oregon State researcher Hong Liu did — and created a microbial fuel cell process that can simultaneously clean up wastewater and generate electricity. Waste2Watergy, an OSU spinoff company, is partnering with a Portland brewery on a pilot test of the technology, treating about 1,000 gallons of wastewater a day. It’s good for the environment. Good for business. Good for beer lovers everywhere.
Roxy is an Australian shepherd who lives to run. When she injured her leg in an agility competition, her owner, Jill Wolfard, feared Roxy’s running days were over. But with an intensive rehabilitation program at Oregon State’s Veterinary Teaching Hospital, including laser and ultrasound therapies, an underwater treadmill, plus stretching and strength exercises, Roxy regained muscle mass and range of motion. Six months later, she won her sixth agility championship.

1983: The College of Veterinary Medicine graduates its first class. More than 1,300 veterinarians have earned their degrees from Oregon State.
SILICON WRISTBAND DOES PUBLIC HEALTH DETECTIVE WORK.

After Hurricane Harvey dropped 27 trillion gallons of rain over Houston in the summer of 2017, residents faced exposure to toxic chemicals lurking in the receding floodwaters. A team led by Kim Anderson, an environmental chemist in the College of Agricultural Sciences, went to Texas with silicon wristbands she developed that pick up molecules of organic chemicals similar to the way human cells do. Nearly 200 residents wore the wristbands for a week, then returned them to Oregon State for chemical analysis and an individual report for each user, providing some answers and peace of mind.

Researchers in the College of Public Health and Human Sciences also have used the wristbands. They found a possible link between exposure to flame retardant chemicals and preschoolers’ social skills and school readiness.

The first step to solving a problem like chemical exposure and human health is to know what you are dealing with. Thanks to a simple wristband, Oregon State scientists are learning what is at stake.
BEAVERS NEVER GIVE UP — EVEN WHEN THE DAM BREAKS.

Rock bottom for Orman Morton III wasn’t losing his job at a Baltimore steel mill in 2012. Rock bottom was breaking the news to his three children. Nevertheless, Morton knew something better was out there — and he found it by earning a degree in environmental sciences through Oregon State Ecampus. And even while Morton was an online student living 2,400 miles away, as a member of the Penobscot Nation, he became active in Oregon State’s indigenous community through the Native American Longhouse Eena Haws.

Today, Morton restores wetlands and assesses water quality in Maryland, creating a better environment for his kids and all others. Losing his job led him to the one he always wanted.

Orman Morton III ’16
College of Earth, Ocean, and Atmospheric Sciences

Historic photographs courtesy of Special Collections & Archives Research Center, Oregon State University Libraries.