

LEAD: Learn, Engage, Achieve, Discover

Global Excellence in Science

Oregon State
UNIVERSITY

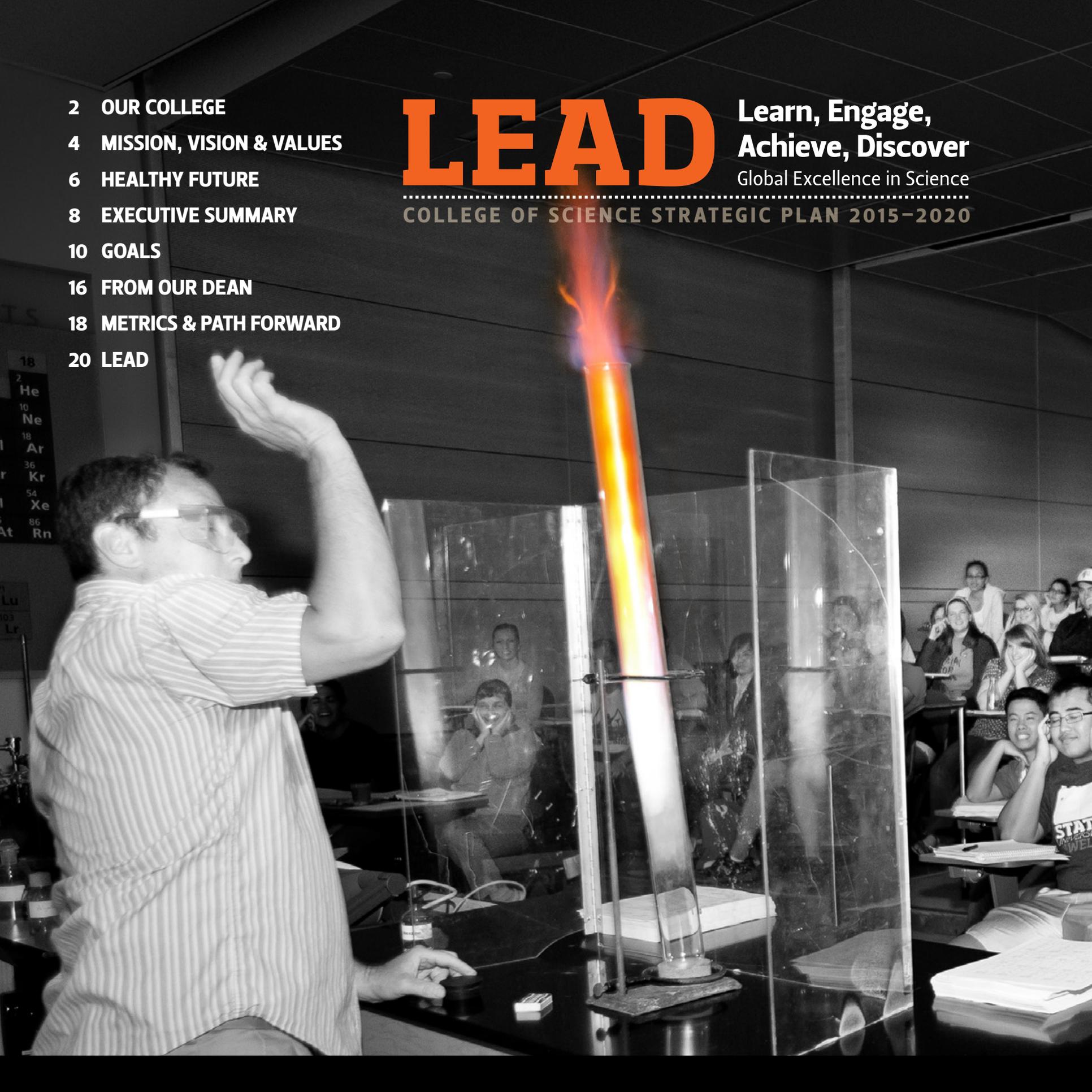
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LEAD

Learn, Engage,
Achieve, Discover

Global Excellence in Science

COLLEGE OF SCIENCE STRATEGIC PLAN 2015-2020



For nearly a century, Oregon State University College of Science has thrived through intellectual exploration, the quest for new knowledge, translation of discoveries into good use, solutions to the most pressing problems of our time and communication of fascinating science across Oregon, the nation and the world. Through investments in these areas, we **inspire and build leaders** in science.

We pursue both curiosity-driven, fundamental research to better understand the broader world and use-inspired research to tackle some of the grand challenges of science, engineering, business and education. We take pride in our responsibility to share what we discover with the scientific community and the world.



OneScience: A strong, diverse, cohesive science community—faculty, staff, alumni and friends—who are committed to working together to achieve a set of common goals that foster the academic, personal and professional growth of *all* its members.

Our distinction lies in the depth of our intellectual engagement and the breadth of our scholarly work in the life, physical, mathematical and computational sciences.

We offer internationally recognized programs across a broad spectrum of disciplines: biology, biochemistry and biophysics, biohealth sciences, microbiology, zoology, chemistry, physics, mathematics and statistics. This breadth, combined with our ability to bring together leaders across disciplines, is what galvanizes our faculty and students to work collaboratively to create new knowledge and address major societal issues.

The College of Science is an inclusive, welcoming and intellectually stimulating environment to a diverse community. Working together as **OneScience**, the College is a nucleus of learning, societal engagement, achievement and discovery.



Our College



GUIDING PRINCIPLES

This strategic plan will guide our decisions over the next five years. It is a living document that underscores our commitments to:

» Building a **diverse population** of leaders and innovators.

» Providing access to **high-impact educational and research experiences** that inspire intellectual engagement, academic achievement and personal transformation for all students and faculty.

» Advancing and sharing the biological, mathematical and physical sciences through **fundamental research and outreach**.

» Making discoveries to **improve the quality of life** for everything and everyone on the planet.

» Deepening the public's appreciation and understanding of the **societal value of science**.

» Engaging with people to **communicate scientific knowledge** and learn about societal needs.

As scientists, we are driven to understand how the world works.

In the College of Science, we leverage key areas of collaboration at the intersection of the biological, mathematical, physical and data sciences to educate new scientists, to make discoveries and to innovate.

Our expertise in environmental sciences encompasses all types of biology from the microscopic molecular foundations of living systems to global-scale effects of climate change. We have strong programs ranging from marine ecology and biodiversity to microbiome research and development of analytical methodologies to address large-scale problems. By applying mathematical and statistical approaches to uncertainty quantification, we help augment studies of environmental systems.

Our materials science program integrates the synthesis of new benign molecules and solids from earth-abundant elements with studies of their properties. Faculty incorporate advanced computational and data science methodologies to create targeted materials that function by design.

Together, our work in environmental, materials and data sciences leverages fundamental discoveries that improve resource management and create technology solutions for clean energy and a smart, sustainable planet.

With a focus on understanding the fundamental molecular-level mechanisms underlying life, our biohealth sciences programs explore how vitamins inhibit

disease, the relationships between biomolecular structure and function, and new routes to target-based drug discovery. Researchers develop and integrate new mathematical, statistical and computational methods to organize and understand the large volumes of information derived from studying complex biomolecules and health records. Ultimately, our findings are translated for medicine and the public to improve health.

Our broad science education research improves understanding of the learning process. Students benefit from techniques that enhance critical thinking and communication and that support core scientific reasoning and practice. Hands-on training in a professional work environment maximizes the skills students learn in the classroom.

Collectively, our OneScience community is well positioned to innovate and transform the world through science.

Our people are what make us great—and diversity is what will make our College extraordinary.

A culture that is rich in diversity and harmony and takes pride in excellence gives us a competitive advantage. We can generate new, better ideas and innovate more effectively. We rely on people with different perspectives, experiences and backgrounds to make the scientific discoveries that will advance innovation and make the world a better place. Diversity is part of the foundation that enriches our success, making the College the destination for excellence in science.

Mission, Vision & Values



WHAT IS IMPORTANT TO US:

Our people—our students, faculty, staff, alumni—and their successes.

Fundamental research for a better future.

Collaboration to solve the world's problems and create opportunities.

Meaningful experiences that transform lives.

Outstanding teaching for engaging learners.

Diversity to build the best teams to do the best science.

An inclusive community.

Scientific literacy for all.

MISSION

To advance science and build global leaders for a healthy people, living on a healthy planet, in a healthy economy.

VISION

The College of Science is a nucleus of learning, societal engagement, achievement and discovery at Oregon State University. The College conducts essential fundamental research to advance knowledge and to enable solutions to major societal problems through collaborative relationships, while inspiring and building diverse leaders in science to make our communities and world better.

The College is a place of choice for faculty and students to thrive. Recognized internationally for research and training, our faculty are excited to excel at OSU. To help OSU become a top 10 land grant institution and a global university, we will outpace our peers as measured by high impact publications, funded research, visibility, industrial and international partnerships and workforce development.

The College affirms its strong commitment to student success, and to integration of disciplinary education, research, communication and professional skills development to create scientists poised for career success and lifelong learning. We will recruit and retain a community of doers who value diversity of thought. Our OneScience community strives for excellence and is always inclusive.

As a global center of excellence in

research and pedagogy, the College is known for strengths in ecological and quantitative sciences that inform public policies on climate change; materials science to identify cost-effective sources of renewable energy and technology for a smart sustainable planet; biological sciences to advance understanding of disease mechanisms to improve animal and human health; and data sciences to enhance the quality of our research and spur economic development.

CORE VALUES

Excellence. We pursue excellence in everything we do from teaching and research to outreach and service. We take pride in the quality of our work. We focus on the intellectual growth of all members of our OneScience community. We achieve excellence and work-life satisfaction by working smarter.

Diversity. Diversity is the cornerstone of our community. Through our rich collection of people, ideas and perspectives, we engage in a healthy, constructive dialogue to learn, inform our research and make discoveries. From differences, comes excellence. We are committed to creating a welcoming and inclusive environment that respects and affirms the dignity, value, identity and uniqueness of everyone.

Harmony. We value harmony and constantly look to connect and collaborate with colleagues across all areas of research and learning. We work without borders to maximize results and to enhance faculty and student success.

Healthy Future



Photo of SreyRam Kuy, M.D. ('00, B.S., Microbiology and Philosophy) by Hannah O'Leary for *Oregon Stater*

CORE INVESTMENT PRINCIPLES

We play a central role in advancing OSU's overarching goals of a healthy people, living on a healthy planet, in a healthy economy. We support OSU's strategic priorities by bringing world-class leadership in research and training to marine, environmental, materials, biohealth and data sciences.

We draw inspiration from the White House Strategy for American Innovation:

“We will invest in innovation to restore leadership in fundamental research, to educate the next generation with 21st century knowledge and skills, to build a strong physical infrastructure, and to develop an advanced information technology ecosystem.”

These charges align with the College's deep commitment to student success, skills development, innovation, outreach and fundamental research. Our strategic plan offers self-reflection as we build a strong community of OneScience.

STRATEGIC OPPORTUNITIES

Marine Science. We will leverage our top ranked programs and internationally recognized research and faculty to be a leader in OSU's Marine Studies Initiative. We are well positioned to address problems ranging from climate change and ocean acidification to diseases, loss of biodiversity and pollution. Our efforts will sustain healthy, productive and resilient marine, freshwater and terrestrial ecosystems.

Sustainable Materials. We will build on our leadership in materials science to discover sustainable materials for next-generation electronics and to develop techniques for clean energy generation and conservation. We will advance sustainability by creating new technologies and building new companies while training the next generation of environmentally conscious innovators.

Biohealth Science. Our faculty are leaders in fundamental, quantitative and translational research relevant to fighting disease and promoting health. From molecules and model systems to studies of humans, we will accelerate discovery, advance understanding and grow our global impact.

Data Science. Data are increasing in velocity, volume and variety. Big data analyses lead to breakthroughs in areas from personalized medicine to precision agriculture, marketing to security, environment to education, and astronomy to information-based industries. As a data science hub for research and training, we will be a key resource for data-enabled research, analysis and visualization at OSU, in Oregon and across the country.

COMMITMENTS TO SCIENCE

Global Education

- » Make every student's success a top priority and everyone's responsibility.
- » Enhance diversity and create a welcoming, inclusive place where everyone can thrive.
- » Provide students with a transformative education and experiences to have a powerful impact on the world.
- » Affirm faculty success as fundamental to student success and value outstanding teaching.
- » Reach a global audience through online education.
- » Ensure that science majors and non-science majors develop strong core, computational and collaboration skills.

Global Research

- » Invest in fundamental, curiosity-driven research with long-term impacts on our people, planet and economy.
- » Value collaborative research that fosters discovery and enables innovation in business, education, engineering and all sciences.
- » Engage international partners to address critical science problems.
- » Be a worldwide source of accurate scientific knowledge and information for the public, press and policymakers.

Global Economy

- » Develop strong partnerships proactively with industry, academia, government and alumni to address societal challenges.
- » Encourage a culture of innovation to support economic development.
- » Generate new revenue sources through outreach, engagement and partnerships.
- » Share the excitement and impact of our discoveries with the world.

Executive Summary



Our plan has three major goals for our people, our planet and our prosperity:

Goal 1. To build a diverse and inclusive science community focused on excellence.

Goal 2. To be a global leader in scientific research and scholarship for a better world.

Goal 3. To excel in outreach, engagement, visibility and economic development.

The College of Science is at the intellectual heart of the university, vital to the success of all of OSU. This strategic plan serves as a blueprint to bring the future forward, focusing on initiatives to define the College as a global leader in science.

The plan recognizes science and the College as the foundation of OSU, as the source of scientific knowledge and education. With growing market demand for scientists worldwide, the need for graduates with critical thinking, analytical and problem-solving skills will only increase.

To help OSU become a top 10 land grant institution and a global university, we will excel and distinguish ourselves among our peers in our areas of strategic opportunity and by championing the success of every student through mentoring and transformative experiences. The College will increase the internationalization of our students and faculty by presenting scientific findings and ideas around the world, hosting global scholars and increasing international research collaborations.

On the heels of a successful \$1 billion capital campaign and SP 3.0, the College is well positioned to move the dial ahead. Our strategic investments will:

- » Provide transformative, meaningful and memorable experiences to promote success among our students and faculty;
- » Build on OSU areas of distinction and invest in new areas of high-impact research;
- » Result in new initiatives in undergraduate and graduate education and training to enhance success at OSU and beyond;
- » Enhance our ability to hire and retain the best faculty and attract researchers from

around the globe;

- » Develop a master space/infrastructure plan;
- » Enhance partnerships with our alumni, industry, public and policymakers to promote scientific literacy, visibility and economic development.

This plan is a result of a year-long collaboration among the Art & Science Group, a strategic planning firm in Washington D.C.; a campus working group comprising faculty, advisors and students; advisory groups of university leaders and alumni; and departmental and administrative leadership teams.

This document summarizes the essential strategies and metrics related to our goals. Specific tactics supporting implementation will be developed and refined by working groups and then captured in an internal working document. Implementation will occur within the coming year. The plan relies on collaborations among departments to develop programs to enhance the quality, quantity and diversity of our OneScience community.

The College will achieve its goals and advance its world-class stature. It will excel in fundamental research, enable discoveries and innovation and build diverse leaders. Our faculty will be a global source of scientific knowledge to attract students and scientists from around the world. Our graduates will be grounded in a solid foundation of science with a rigorous transdisciplinary curriculum and transformative student experiences. The College is committed to the success of every student, faculty and alumnus/alumna.

Goal 1

To build a diverse and inclusive science community focused on excellence.



Photo of the 2015 Infinite Possibilities Conference by Hannah O'Leary

GOAL 1 STRATEGIES

1. Proactively **recruit nationally and internationally** and retain a diverse and productive community of faculty, staff and students.
 2. **Enhance and equalize student success** by improved mentoring, advising, and pedagogy that are based on data, technology and STEM education research.
 3. **Cultivate graduates for career success** in a global economy by developing translational skills to convert knowledge to application so it flows to communities and by creating high-impact experiences, such as internships, service learning, leadership training, research and international opportunities.
 4. **Grow online education programs**, including introductory courses; targeted degrees; platforms to bridge prior education achievements and entry requirements; and workshops and certificates.
 5. **Enhance mentoring and career development programs** for all faculty and staff by strengthening a culture of continuous improvement.
-

OUTCOMES

A focus on excellence defines our diverse community. This concentration drives our commitment to see everyone in our OneScience community succeed. The College will recruit individuals with varied backgrounds and life experiences to enhance diversity at all levels, contributing to an environment of equity and inclusion. Our dedication to teaching and mentoring provides pathways for all to thrive, not just survive.

We will be the place of choice for the best and brightest. The College will recruit high-achieving students and target international and transfer students through enhanced, personalized communication. We will develop high-impact experiences and deploy evidence-based instructional practices for students to hone critical thinking and problem-solving skills. We will augment opportunities for skills development that promote career success and expand access and transformative experiences by purposeful engagement with technology. The College will focus on student retention and graduation rates to achieve and exceed the success and equalization goals outlined in OSU's Strategic Plan 3.0.

From the coast to the Cascades and beyond, Oregonians have a deep connection and passion for nature that we can share with the rest of the world. We will take the unique spirit, humility and creativity that are distinctly Oregon to the world. Through science, we will showcase what is great about our state and our people.

WAYS WE ADVANCE SCIENCE

Infinite possibilities. We hosted the 2015 Infinite Possibilities Conference that celebrated successes of women of color in mathematical and statistical sciences. Attracting more than 175 diverse participants from 19 states and Mexico, the conference focused on educating and promoting careers of underrepresented minority women through mentoring and networking.

Better education through innovation. An NSF-funded Paradigms in Physics Program is a nationally recognized, innovative curriculum approach that teaches undergraduates to think like physicists and is regarded as a standard in physics education. ESTEME@OSU, another NSF-funded program, brings evidence-based instructional techniques into introductory science courses.

Science education for all learners. The College will leverage OSU's national leadership in online learning and course development to develop online courses and programs. We will launch an online master's degree in Data Analytics, an online Certificate in Data Analysis and several online math and science courses.

Excellence through diversity. Through the Provost's Hiring Initiative, which supports student success and diversity, the College recruited six faculty with outstanding research records from diverse backgrounds who are committed to student success in 2015. Together with the College of Engineering and Student Affairs, the College is leading a \$1.5 million Improving Undergraduate STEM Education grant.

Goal 2

To be a global leader in scientific research and scholarship for a better world.



GOAL 2 STRATEGIES

1. Cultivate distinction in **research** by enriching and growing specific programs through investment in cross disciplinary and international collaborations.

2. Deepen and enrich a **leading-edge and responsive research portfolio** by focusing early-career faculty investments in areas that advance knowledge to support human health, marine science and sustainable materials.

3. Position the College as a leader in **cross-cutting data science and mathematical modeling** research and educational programs.

4. Enhance research capacity and productivity by **improving infrastructure**.

5. Promote student curiosity, discovery and creativity by **integrating undergraduate research and international opportunities** across the curriculum, and **strengthening and expanding graduate programs** to match national and market needs.

OUTCOMES

The College advances the frontiers of knowledge and delivers discoveries to enable transformative contributions to OSU's signature areas of distinction encompassing sustainability, health and economic well-being.

The College will build on its strengths and strategic opportunities in marine, environmental, biohealth and materials sciences. Investments made in these areas will foster effective policies for resource management and enable new technologies for a smarter planet. We will help enhance human and animal health with better treatment of diseases through our fundamental research and collaborations across campus, with researchers in Oregon and around the world. This combination will provide a path toward healthy people and a sustainable planet.

The explosion of data creation is altering the landscape of science and generating new opportunities to analyze, visualize process and understand complex data sets. The College will make bold moves to transform its research and education in data sciences, leading to high quality, reproducible research, create a culture of data-enabled thinking, and engage corporate, government and academic partners to build an OSU brand in data analytics.

Oregon's ecosystem, with its forests, mountains, deserts and marine environments, is our home and a beautiful part of our healthy planet. The College will leverage its location and global excellence to create new international partnerships and conferences, study abroad programs and opportunities for lifelong learners.

WAYS WE ADVANCE SCIENCE

Groundbreaking research/world-class faculty

The College had a record year for research funding in 2014-15, receiving \$26.7 million. NSF and NIH continue to balance constrained budgets with funding the best research; the ability of our faculty to receive million-dollar-plus grants speaks volumes.

New grants support major research projects in marine science across the College. Our biologists study new approaches to understand ecosystem changes and apply the knowledge generated to guide management of marine resources. Our mathematicians and statisticians lead studies in biology to build models that predict the effect of environmental changes on fish populations in marine-protected areas. Our microbiologists study SAR11, the most abundant component of plankton in the ocean, to discover how organic matter is oxidized to the greenhouse gas CO₂.

Our \$20 million NSF-funded Center for Sustainable Materials Chemistry conducts curiosity-driven and use-inspired research to make environmentally friendly materials for a sustainable world.

Our Data Science Initiative integrates disciplines to increase overall impact. One team of ecologists, mathematicians, statisticians and social scientists received a \$3 million grant to develop a training program to analyze and understand the effects of human activities and climate change on oceans. Faculty and students will examine large data sets in new ways to quantify uncertainty and risks to better manage ocean resources.

Goal 3

To excel in outreach, engagement, visibility and economic development.



Photo of Jon DeVaan ('85, B.S., Computer Science and Mathematics), former senior vice president for Windows Development at Microsoft, from the College of Business

GOAL 3 STRATEGIES

- 1. Expand partnerships** with OSU Outreach and Engagement and Research Impacts Network to promote public understanding, lifelong learning and civic engagement.
 - 2. Enhance engagement** of key external constituents, including alumni and friends, to advance and support our mission.
 - 3. Engage more deeply with policymakers** and government agencies on state and federal initiatives.
 - 4. Enhance marketing and communications efforts** to show how our contributions address today's most pressing problems and advance science.
 - 5. Drive economic development** by nurturing innovation in education and by helping to build an ecosystem for successful translation of fundamental research for societal benefit in partnership with the OSU Research Office.
-

OUTCOMES

New understanding from research will strengthen outreach programs that develop a scientifically literate public and prepare decision makers to formulate effective policy. We will enhance trust in science. The College will become a leader for translating scientific research to meet human and market needs. The plan will raise the visibility of the College of Science's impact and increase its influence at the university, in Oregon, the nation and the world.

Through broad outreach and engagement, the College will significantly strengthen its philanthropy and stewardship efforts among its alumni and key constituents and will raise its visibility to play influential and strategic roles in major campus, state and federal initiatives, such as Big Data, marine studies and emerging breakthrough opportunities in science.

The College will engage Oregonians and people around the globe via online learning technologies to enable degree completion and to foster lifelong learning. The College is excited to deepen our connections across Oregon—from the coast with an expanded Marine Studies Initiative to new programs at the Cascades campus, and to Portland, home to 26 percent of OSU alumni. We will focus our engagement and outreach in these key areas to leverage our Oregon connection and to bring OSU excellence to communities around the globe.

WAYS WE ADVANCE SCIENCE

The College impacts the world through discoveries and innovations. Faculty have launched startup companies involving nanoscience, microfluidic analytical systems, data analysis and chemical manufacturing of organic building blocks for pharmaceutical and biotech markets.

College researchers in the Partnership for Interdisciplinary Studies of Coastal Oceans lead research in nearshore ecology. Their contributions are essential to a broad program of marine studies and help managers make decisions that enhance and preserve marine research and the environment.

Raising our game

To raise our visibility, the College launched an alumni magazine and a blog-type website to share the extraordinary stories of our faculty, students and alumni. Departments invested in alumni communications and outreach to raise the visibility of our people.

To celebrate excellence, we awarded the College of Science Alumni Awards and established a Distinguished Lecture Series with the inaugural presentation featuring "From Big Data to Big Statistics" by John Sall, co-founder of the global software company SAS.

Through outreach activities such as Discovery Days and Science Pubs to VividScience and Discover the Scientist Within, our faculty and students are making a tremendous impact on scientific literacy.

From our Dean



A heritage from the deeds of the students of today, and the assurance of...

solely through the generosity of fees and philanthropy... generations to enjoy... of generous donors... Oregon State University... Our... living... represent... by stu...

OSU PARTNERS

OSU DONATIONS

OSU FRIENDS

OSU
Oregon State University

“ This strategic plan will help us realize our core mission: building global leaders to advance science and achieving our vision of OneScience, where together we act as a nucleus of learning, societal engagement, achievement and discovery.

Science faculty, students and alumni LEAD: Learn, Engage, Achieve and Discover.

Science champions the success of every student through mentoring and transformative experiences in the classroom and beyond.

Science builds global leaders who improve the quality of life for everyone and everything on the planet.

Science at OSU is the place of choice for marine, environmental, materials, biohealth and data sciences.

”

I am proud to present *LEAD (Learn, Engage, Achieve, Discover): Global Excellence in Science*, the 2015–2020 Strategic Plan for the College of Science at OSU. This plan is our blueprint for global excellence. It will guide our priorities and inform our decisions about how best to innovate in science education, to prepare students to be leaders in science, to foster impactful discoveries and to improve our world. We have identified specific metrics related to OSU Strategic Plan 3.0 to help us realize our vision and hold us accountable. To successfully execute the plan, we will form working groups that will collectively develop tactics and focused metrics to address efficiencies, priorities and resource alignment to advance our goals.

The College is where people discover science and learn to be ethical global citizens. At the heart of the plan is our commitment to the success of our people—our faculty, our students and our alumni and friends. Our goal is to see everyone thrive as we strive for global excellence, enhance diversity and foster harmony. Science faculty are the foundation of the university: their success is critical to all success.

Faculty research excellence attracts top students, while outstanding teaching and mentoring builds strong leaders. By investing in our faculty through recruitment, retention and promotions, we can truly transform lives.

We envision a future in which all of our students, regardless of their background, graduate on time, engage in meaningful research experiences, expand their perspectives through global experiences and grow from mentoring. Ultimately, our

success is determined by the success of our alumni and faculty. Enabling the success of our people is a cornerstone of this plan and is important to me personally.

Our fundamental discoveries and research will continue to shape the future through life-changing technologies, medicines, pedagogy, policies, businesses and innovation that improve our quality of life. By building a better environment and a strong community, we will foster the innovative and critical thinking of future generations and lay a strong foundation for future technologies. Our excellence in fundamental and curiosity-inspired research will enable us to solve major societal problems to make our state, nation and world better.

Most importantly, this strategic plan will help us realize our core mission: advancing science and achieving our vision of OneScience, a nucleus of learning, societal engagement, achievement and discovery at OSU. We will leverage our hallmark collaboration and spirit of harmony to build bridges and leaders across all science. Teaching every student at OSU, we are committed to every student's success.

Together we can, and will, make the College of Science at OSU one of the best in the world for its research and education and for being a diverse and inclusive place of choice. I welcome you to join us as we LEAD OSU toward global excellence in science.

Sastry G. Pantula

Sastry G. Pantula
Dean, College of Science

Metrics & Path Forward



COLLEGE OF SCIENCE METRICS FOR OSU STRATEGIC PLAN 3.0

The indicators below have been set using the College's current demographics and the growth rates in OSU Strategic Plan 3.0. Working groups will establish additional focused metrics to guide the implementation of our strategic plan and to assess progress toward our goals.

Metric	2013–14 Baseline	2019–20 Target
Bachelor's Degrees Awarded	530	680
Master's Degrees Awarded	51	65
Doctoral Degrees Awarded	28	38
First-Year Retention Rate	86%	91%
Six-Year Graduation Rate	63%	67%
Junior Transfer 4-Year Graduation Rate	62%	72%
High-Achieving Oregon High School Graduates	46%	52%
U.S. Minority Students* in the College	29%	35%
International Students	6%	13%
Total R&D Expenditures	\$18M	\$21M
Invention Disclosures	14	22
E-campus Revenue	\$4M	\$6M
Annual Private Giving and Grants	\$4M	\$6M

* Includes African-American, Asian, Pacific Islander, Hispanic, Native American, or those reporting "two or more races." International students from any background are not included.

INVESTMENTS IN PATH FORWARD

» Increase the quality, quantity and diversity of students while providing transformative experiences, equalizing student outcomes, and boosting graduation rates.

» Enhance disciplinary training, professional skills development and mentoring to foster career success for students and faculty.

» Invest in cross-cutting research initiatives that advance sustainability, marine studies, human health, innovation and global excellence.

» Accelerate access to research and training opportunities in data science across campus and beyond.

» Amplify the use of Ecampus and technology to educate a broader community of learners, communicate the societal impact of research, and build a scientifically and civically engaged public.

» Engage alumni, industry, government leaders and other key partners to advance our mission.

LEAD



Photo of Claire Skach ('15, B.S., Biology) by Nicki Silva

Part of what I'm passionate about is **how do we close achievement gaps and how do we raise the level of success for everybody?**

Excellence in the arts and sciences is at the core of every great national and international research university, and Oregon State University will be no different.

—Ed Ray, President, Oregon State University

OUR POINTS OF PRIDE

Learn

- » About 3,000 undergraduate students and 400 graduate students.
- » One-third of Honors College students are science majors; highest minority student enrollment at OSU.
- » 11 of the 14 Goldwater scholars at OSU since 2004 have been science students.
- » Biology is Oregon State's #1 program for study abroad.
- » We teach everyone: all undergraduates take a science/math course.
- » Our free online tools promote access: textbook *Biochemistry Free & Easy* was downloaded over 140,000 times since 2012; our 440 YouTube videos had over 3.1 million views.

Engage

- » 48 new inventions disclosed and 18 U.S. patents received since 2011.
- » Faculty shared science with the public at several "Science Pub" outreach events across the state in a fresh, accessible way in an informal atmosphere.
- » We have more than 26,000 science alumni worldwide
- » Science alumni and friends contributed more than \$95 million in total to the \$1 billion Campaign for OSU.

Achieve

- » Our medical school admit rate averages 75%, one of the highest in the country.
- » 19 University Distinguished professors; two National Academy of Science members; 11 AAAS Fellows; a John D. and Catherine T. MacArthur Fellow.

- » Distinguished alumni: reproductive biologist and leader in human parthenogenic stem cell research; first African-American president of the American Meteorological Society; researcher on the team that discovered the antidepressant Prozac; co-founder/CEO of Panda Express; founders of leading scientific data-collection technology company; leader of the development and commercial launch of Fuzeon, the first of a novel class of drugs to treat HIV infection; and university presidents.

Discover

- » In 2014, the College received \$26.7 million in research funding, explosive growth of 230% from 2013.
- » Researchers conducted the most comprehensive study of a marine disease, attracting global attention on sea star wasting disease on the West coast.
- » Biochemists used a known copper compound to treat amyotrophic lateral sclerosis (ALS) in mice, showing great promise as a valuable new human therapy for ALS.
- » Materials chemists and physicists helped to build the foundational transistor technology of modern flat-panel displays.
- » Investigators discovered a new durable, environmentally friendly blue pigment—the first of its kind since the 1800s—that has led to the manufacturing of other non-toxic pigments.



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