UNIVERSITY OF OREGON

Federal Priorities

Policy, Budget, and FY2011 Appropriations March 2010

Office of Public and Government Affairs

UO ALUMNI BOARD OF DIRECTORS

The University of Oregon Alumni Association exists to foster lifelong connections with the University of Oregon. The Alumni Association serves more than 155,000 alumni and friends, including more than 18,000 members (with about 4,000 life members).

Through the UO Alumni Association, alumni stay connected to the university through Oregon Quarterly magazine, electronic websites, newsletters and e-mails, campus events such as Homecoming and class reunions, and watch parties, receptions, and signature events held throughout the U.S. and around the world. Career services, mentoring, and travel programs are also available to members. The board of directors is the governing body of the University of Oregon Alumni Association. It is composed of twenty-four geographically selected regional directors from Oregon, four regional directors from areas outside the state, twelve directors at large, three faculty representatives, a representative each from the College of Education and the School of Law, and ex officio members selected from various campus departments and organizations.

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UO FOUNDATION BOARD

The University of Oregon Foundation supports and assists the University of Oregon in its activities by management and administration of foundation assets representing privately donated funds, by leading advocacy for the university, and by developing, financing, constructing, acquiring, and operating facilities for or on behalf of the university. Since 1922, the foundation has received, invested, and distributed private gifts that funded student scholarships, faculty support, academic programs, and building improvements. Distributions have always been made according to the donors' intention. Our goal has remained the same from the beginning: to provide stable financial support for the university while preserving the purchasing power of endowment and trust funds in the future. The board of trustees comprises as many as sixty-five members who donate considerable time and effort in the interest of helping the foundation and the university grow and prosper. They are selected for their professional expertise and consistent support. The board's main responsibilities include hiring the foundation's president and CEO and overseeing the management and administration of the foundation and its assets. Board members are advocates for the university, and serve as volunteers in a variety of fulfilling roles.

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MESSAGE FROM THE PRESIDENT



March 2010

On behalf of the University of Oregon, thank you for your support of higher education. This document outlines some of the university's priorities—federal student aid and projects that, as leveraged federal investments, will lead to new discoveries, economic development, and future leaders.

Federal support is critical to the UO. In fact, in recent years our federal research funding has been almost twice the amount we have received from the state in General Funds. This fiscal year our state appropriation represents only eight percent of our operating budget—seven percent if you take out the one-time federal stimulus dollars. Even more troubling is the volatility of our state funding. It is difficult to plan for the

future when we don't even know what our final appropriation will be for the current fiscal year.

The result is that students and their families are asked to bear more and more of the cost of education. Federal student aid is the single biggest factor in ensuring that Oregon students have access to top-quality higher education. Your support of federal student aid is more important than ever.

Federal research funding helps make the UO a national leader in research and scholarship. The return on the nation's investment is clear and compelling: In 2009 more than 230 Oregonians were employed by companies "spunoff" from UO research, and these companies earned more than \$26 million in revenue.

Another example of how the UO is on the leading edge in higher education is our "Big Ideas," a new academic plan that brings faculty members and students together in new ways to answer some of the most important questions facing society and our world.

Many universities across the nation and world are foundering because of the recent economic woes. You should know that despite the challenges, the University of Oregon is advancing and excelling. In the fall we welcomed our highest enrollment ever—22,386 students from every Oregon county, neighboring states and eighty-seven nations. One day they will work in and lead our companies, nonprofit organizations, and civic entities. They will create industries and careers that do not exist today. They are the future.

With your continued support of federal investments, the University of Oregon will pave their way.

Richard W. Lariviere President

ABOUT THE UNIVERSITY OF OREGON

UNIVERSITY OF OREGON MISSION STATEMENT

The University of Oregon is a comprehensive research university that serves its students and the people of Oregon, the nation, and the world through the creation and transfer of knowledge in the liberal arts, the natural and social sciences, and the professions. The University of Oregon is a student-centered research university that offers 272 academic programs within seven schools and colleges—architecture and allied arts, business, arts and sciences, education, journalism and communication, music and dance, and law.

AMONG THE BEST

Of more than 4,000 institutions of higher education in the country, the University of Oregon is one of only sixty-two public and private institutions in the United States and Canada selected for membership in the exclusive Association of American Universities (AAU). The University of Washington and the University of Oregon are the only institutions in the entire Pacific Northwest and northwestern United States that hold membership in the AAU. The AAU is an invitation-only association of research universities that includes Stanford, UC Berkeley, Harvard, MIT, and other world-leading universities.

OUR FACULTY

The quality of faculty research is a point of pride at the University of Oregon, which consistently ranks high among research universities in attracting research grants, offering fellowships, and producing scholarly articles.

In fiscal year 2008–9, UO faculty members secured over \$100 million in grants, contracts, and other competitive awards.

The University of Oregon is proud of its distinguished faculty members, past and present, including 140 Fulbright scholars, forty-five Guggenheim fellows, thirty-six National Endowment for the Humanities fellows, one recipient of a "genius grant" from the McArthur Foundation, five elected to the National Academy of Sciences, and eleven elected to the American Academy of Arts and Sciences, not to mention the hundreds of other fellowships, awards, and medals.

Seven University of Oregon faculty members received Fulbright Scholar awards to teach and conduct research abroad during the 2009–10 academic year. Fulbright award recipients are selected on the basis of academic or professional achievement, as well as demonstrated leadership potential in their fields. The seven UO recipients are Dennis Galvan, Renee Irvin, John Miller, Doris Payne, William Rossi, Marc Schlossberg, and Magid Shirzadegan.

The University of Oregon finished in a three-way tie for the most Fulbright awards for the 2009–10 academic year.



University of Oregon Psychology Professor Emeritus Michael Posner received the National Medal of Science from President Barack Obama at the White House on October 7, 2009. Posner was one of nine eminent researchers chosen to receive the award last year. The National Medal of Science is the highest honor bestowed on scientists by the United States government. A leading pioneer in the field of cognitive neuroscience, Posner developed measures for illuminating how the mind works and how the operations of the mind can be mapped onto activation patterns in the brain.

STUDENT AND ALUMNI PROFILE

THE UNIVERSITY OF OREGON TODAY

Current enrollment (fall 2009)	. 22,386
Freshman incoming average GPA	. 3.54
Freshman average SAT score	. 548 verbal, 555 math
UO enrollment	. 24 percent of OUS
UO bachelor's degrees conferred	. 28 percent of OUS
UO graduate and professional degrees conferred	. 28 percent of OUS
Instate undergraduate tuition and fees	. \$7,597

Number of UO Freshmen from Oregon's Top Feeder High Schools, Fall 2009

South Eugene83	Tigard41	South Medford26
Sunset (Beaverton)68	Grant (Portland)37	Sprague (Salem)26
Southridge (Beaverton)63	Clackamas35	Cleveland (Portland)25
West Linn56	Summit (Bend)	Central Catholic (Portland)24
Lake Oswego55	Mountain View (Bend)32	Century (Hillsboro)
Churchill (Eugene)55	Jesuit (Portland)30	North Eugene23
Sheldon (Eugene)54	Aloha28	Crescent Valley (Corvallis)22
Wilson (Portland)54	Beaverton28	Sherwood
Lincoln (Portland)53	Corvallis27	Willamette (Eugene)
Lakeridge (Lake Oswego)52	North Medford27	David Douglas (Portland)21
Tualatin	Sam Barlow (Gresham)	Bend20
Westview (Beaverton) 48	Oregon City26	Hood River Valley19

SOME DISTINGUISHED UO ALUMNI

U.S. Senator Ron Wyden Congressman Peter DeFazio Congressman Greg Walden Senator Suzanne Bonamici Senator Ginny Burdick Senator Ted Ferrioli Senator Mark Hass Senator Bill Morrisette Senator David Nelson **Representative Phil Barnhart** Representative Scott Bruun Representative David Edwards **Representative Tim Freeman** Representative Tina Kotek Representative Nancy Nathanson Representative Arnie Roblan Representative Jefferson Smith Representative Suzanne Van Orman **Representative Brad Witt** Portland Mayor Sam Adams

SUCCESS AFTER GRADUATION

Nobel Prize Winners	2
Pulitzer Prize Winners	10
Rhodes Scholars	19
Marshall Scholars	3
Oregon Governors	7
U.S. Senators	8
U.S. Representatives	
U.S. President's Cabinet Members	2
Generals	
Admirals	5
Olympic Athletes in Track and Field	
since 1890	74

OUR STUDENTS

Students from across the state, nation, and world come to the University of Oregon for its academic reputation, the physical beauty of the campus and surroundings, and its size. It is a small public research university by national standards, but provides students with the learning opportunities of a major research university. The University of Oregon's reputation as a student-centered research university means that students receive individual attention from dedicated faculty members. The fall 2009 enrollment was 22,386. This includes one of the most prepared freshman classes ever with an average entering grade point average of 3.54 and among the highest average SAT scores for a UO entering class.







County numbers do not include approximately 3.5 percent of resident students with unidentifiable county affiliations

THE UNIVERSITY OF OREGON

Enrollment by School or College and Student Level, Fall 2009

School or College	Undergraduate	Graduate	Total
School of Architecture and Allied Arts	1,091	509	1,600
College of Arts and Sciences	11,541	1,220	12,761
Lundquist College of Business	3,104	256	3,360
College of Education	774	549	1,323
Graduate School	—	69	69
School of Journalism and Communication	1,371	109	1,480
School of Law	—	598	598
School of Music and Dance	328	150	478
Other	305	412	717
Total	18,514	3,872	22,386

Top 10 States by UO Enrollment, Fall 2009

Top 10 Countries by UO Enrollment, Fall 2009

States	Students	Countries	Students
California	3,246	People's Republic of China	389
Washington	951	Republic of Korea	191
Colorado	342	Japan	127
Hawaii	253	Taiwan (ROC)	125
Idaho	172	Saudi Arabia	82
Illinois	167	Canada	58
Alaska	147	Germany	30
Nevada	140	Hong Kong	29
Arizona	137	India	27
Texas	125	Thailand	26

FUNDING AS COMPARED TO PEER UNIVERSITIES*

	12-Month FTE	State Appropriation	Funding per FTE	Resident Undergraduate Tuition and Fees
University of Oregon	19,838	\$69,466,045	\$3,502	\$6,174
Indiana University, Bloomington	36,631	221,750,367	6,054	7,837
University of California at Santa Barbara	21,969	203,537,000	9,265	7,896
University of Colorado at Boulder	28,333	0	0	6,636
University of Iowa	27,361	313,321,000	11,451	6,293
University of Michigan, Ann Arbor	39,447	290,538,000	7,365	10,447
University of North Carolina at Chapel Hill	24,643	492,471,029	19,984	5,340
University of Virginia	23,838	154,615,152	6,486	8,690
University of Washington	39,432	333,598,580	8,460	6,385
Peer average (excludes University of Colorado)	30,207	251,228,891	8,633	7,441

Source: Integrated Postsecondary Education Data System (IPEDS) Peer Analysis System

* For the purposes of this comparison, "peer universities" are defined by the OUS for each institution within the system



ACCESS AND AFFORDABILITY

The University of Oregon provides a high-quality education to a large number of Oregonians at an affordable price. The University of Oregon receives less state funding per full-time equivalent student than any other Oregon University System institution. This is contrary to flagship institutions in other states, which are typically funded at a higher amount than their counterparts. The comparison to similar state institutions across the country in terms of state funding as well as tuition rates indicates that the UO is less expensive and receives less state funding than many of its peers.



PathwayOregon is a model program

The PathwayOregon program is designed to enable more lower-income Oregonians to earn their undergraduate degrees from the UO with reduced reliance on student loans. Specifically, through a combination of state, federal, and institutional grants and scholarships, PathwayOregon promises to cover the cost of tuition and fees for in-state students who meet UO admission criteria and who qualify for the Federal Pell grant.

PathwayOregon students who have both the greatest financial need and the highest high school GPAs are also considered for Housing Awards, which provide the equivalent of room and board in residence halls. During the 2008–9 academic year, the total institutional grant and scholarship support for PathwayOregon students was \$669,629. In addition to financial aid, all PathwayOregon students receive comprehensive academic and personal support to help assure them successful undergraduate experiences and timely graduation from the UO.

The UO marked the initial year of PathwayOregon by welcoming 415 PathwayOregon freshmen to its campus in 2008–09. In the current 2009–10 academic year, 440 PathwayOregon freshmen are enrolled. These students reported a median parental adjusted gross income of \$28,158; more than 38 percent indicated that they are first-generation college students; approximately 31 percent self identified as students of color; and more than 18 percent came to Eugene from rural Oregon communities.

ECONOMIC IMPACT

AN OUTSTANDING RETURN ON INVESTMENT

The University of Oregon is one of the most effective economic engines in Oregon and ranks thirty-second among universities for start-up company formation per research dollar. With total economic activity of \$1.5 billion, the UO pumps \$20 into Oregon's economy for every \$1 of state support. In 2009, more than 230 Oregonians were employed by companies "spun-off" from UO research, with revenues of more than \$26 million.



Aggregata in-Oragon Empirymes of UC Research-Related Starlays



RESEARCH AND TECHNOLOGY: CREATING OPPORTUNITIES FOR OREGONIANS

- The University of Oregon uses progressive "next generation" approaches to foster collaborative engagement and connect UO research with innovation and entreprenuership. Per research dollar, the University of Oregon is now one of the top universities in the nation for translating discoveries into practical applications.
- In FY 2009, expenditures on 987 grants and contracts totaled \$110.3 million—a 10 percent increase since FY 2008 and 74 percent since 2000.
- Income from licensing inventions and faculty research rose from \$6.8 million in FY 2008 to \$7.1 million in FY 2009—the fourteenth consecutive record year.
- Income generated by technology transfer in FY 2009 was more than twenty-two times the FY 2000 level when income equaled just \$313,000.
- The University of Oregon's graduate entrepreneurship program—based in the UO's Lundquist College of Business and tightly linked to innovation and entrepreneurship programs in technology transfer and the UO's School of Law—last fall was ranked among the top twenty in the United States in the most recent review released by *Entrepreneur* magazine and the Princeton Review.
- Of the U.S. patents issued to the UO since 2001, 92 percent (thirty-four of thirty-seven) have been optioned or licensed to private-sector firms).
- The UO ranked third nationally in return on research investment among universities with medium-sized research budgets, according to an article published in the journal of the National Council of University Research Administrators. Based on data published by the Association of University Technology Managers, the UO now ranks in the top twenty for return on research investment.
- The UO ranks thirty-second among the top U.S. universities for startup company formation per research dollar (five-year moving average of the most recent data published by the Association of University Technology Managers).

THE AMERICAN RECOVERY AND REINVESTMENT ACT: RECOVERY THROUGH RESEARCH

ARRA investments in research and education brought \$12.48 million to University of Oregon researchers in 2009. Of the 113 applications submitted by UO faculty and staff members, thirty-six grants have been received, with additional applications still under review. ARRA awards to the UO by funding agencies:

National Institutes of Health: 20

National Science Foundation: 14

U.S. Geological Survey: 1

AmericaCorps (via Oregon Housing and Community Services): 1

BIG IDEAS AT THE UNIVERSITY OF OREGON

As a central component of the overall academic plan, the University of Oregon has selected five "big ideas" as both broad themes and specific projects for the university to undertake over the next three to five years. Building on our strengths, these bold thematic initiatives combine successful programs with ambitious goals to inspire and focus scholarship that will reposition the university and benefit our community, state, and society at large. Each initiative will include multiple component projects that connect campus with local, state, and federal areas of interest.

Global Oregon: Skills for a Connected Planet



Our world is becoming increasingly interconnected as technology, global markets, and migration bring cultures together in new ways. Regardless of their chosen professions, tomorrow's college graduates will need international crosscultural skills.

Global Oregon will make the UO the premier institution for students who want to become citizens of the world by addressing three key themes that reflect major global challenges: sustainability, migration, and translation of language, culture, context, religion, and history. Drawing on outstanding professional schools,

expertise in every world region, and world-class research opportunities, Global Oregon will create individualized opportunities for students to gain a practical tool box of core competencies to address the global issues that will affect every community in the future. Foremost among these skills will be multilingualism, personal international experience, cross-cultural mastery, and historical awareness.

The Americas in a Globalized World: Linking Diversity and Internationalization



In order to succeed at home and abroad, our graduates must understand the multicultural dynamics of their state, their nation, and their geographic neighbors.

The Americas in a Globalized World initiative will use an interdisciplinary approach to prepare our students to face the challenges of globalization and succeed in a world of constant migration, shifting demographics, and crosscultural influences. Leveraging faculty expertise and successful academic programs including Spanish language and culture, a new Native American studies major and related research centers, and the state's first degree program in Latin American

studies, this initiative will help us respond to the challenges and opportunities of increasing the diversity of Oregon, the U.S. and the wider world.

The Green Product Design Network Initiative



Inventing and marketing profitable products that truly are green requires a broad interdisciplinary approach—and the UO is uniquely equipped to provide it. Building on strong programs across campus, the Green Product Design Network Initiative will secure the UO's leadership in sustainability while establishing Oregon as the epicenter of green product design.

The Green Product Design Network will take a systemic approach to invent greener products; discover the best business models and practices to deliver these innovations to society; and improve understanding about how new

products affect the environment, our economic structures, and society. In addition, the initiative will enable UO faculty members to compete for more than \$50 million in funding from such sources as the National Science Foundation, the Environmental Protection Agency, and the National Institute of Environmental Health Sciences.

Translational Research that Promotes Human Health and Performance



According to the National Institute of Medicine, scientific discoveries currently take an average of seventeen years to move from the research bench to the patient bedside. Translational research speeds up this process by enabling researchers and clinicians in the field to work together to turn research findings into treatments and applications.

By expanding current research partnerships, this initiative will lead to faster "bench to bedside" application of research results to benefit Oregonians with health problems ranging from strokes to cancer, from impaired eyesight to mental

illness. The program will also increase field research and clinical experiences for UO students, leading to greater success in their postgraduate careers. In addition, the program will enhance community service and outreach through testing, applied research, and educational programs for the public.

The Sustainable Cities Initiative



The UO prepares students for leadership roles in the professions that drive sustainability efforts. Few universities can match the UO's position as a powerhouse in sustainable design with related efforts in business, law, architecture, journalism, and arts and sciences.

This initiative aims to establish the University of Oregon as a think tank for policy makers, professional practitioners, agencies, and companies seeking to make cities more ecologically, socially, and economically sustainable. It will provide UO students with career-making opportunities for applied learning

and service, especially in Oregon communities, and catalyze our faculty's ability to compete for federal, state, philanthropic, and corporate funding for research in creating sustainable cities.

An accompanying Sustainable Cities authorizing opportunity is discussed in more detail on page 24.

FEDERAL POLICY ISSUES FOR 111TH CONGRESS

The University of Oregon supports stable and robust funding for research and education. We appreciate the American Recovery and Reinvestment Act's support for student aid and research programs and the administration's call for further investments in fiscal year 2011. We urge members of Congress to continue to champion and expand the federal government's critical role in supporting student aid, research, and graduate education. Here are some brief budget and policy recommendations:

GENERAL RECOMMENDATIONS FOR THE 111TH CONGRESS AND ADMINISTRATION

1) Reaffirm and strengthen the government-university partnership.

- The federal investment in university-based research should continue to serve two vital national purposes by first, supporting critical research and, second, educating the next generation of scientists, engineers, and scholars.
- Research projects should be selected based upon scientific merit as judged by leading scientists in a particular field.
- Universities must ensure that those who receive government funding conduct research responsibly and with integrity.
- Because the federal government invests in university-based research to benefit the public through the knowledge it yields and the students it educates, the federal government should provide its share of the costs of that research; this includes its portion not only of the direct costs of conducting the research but also of the necessary costs of research facilities, infrastructure, and regulatory compliance.
- Federal regulations should be designed to foster effective compliance but should not be unnecessarily burdensome or extend beyond their appropriate purview into institutional governance, which should remain a core responsibility of the university's administration and faculty.

2) Provide sustained and balanced growth for basic scientific research.

• Increase investments in federally funded scientific research in both the physical and life sciences that are systematic, reliable, and long-term; include full funding of the America COMPETES Act.

3) Expand access to higher education to provide opportunities for all students to acquire the knowledge and skills they will need to succeed in the competitive global environment of the twenty-first century.

- Enhance K-12 STEM education, increase graduate fellowships and traineeships, and expand the Defense Department's National Defense Education Program and National Security Education Program (NSEP).
- Aim to attract underrepresented minorities and women to studying and undertaking careers in STEM fields.
- Create new sources of competitive federal research funding targeted to exceptional young scientists and engineers, such as the National Institutes of Health's Pioneer Awards.
- Improve the H-1B and employment-based visa programs to attract highly skilled talent to enhance competiveness.

4) Strengthen the government's commitment to the humanities and social sciences to better prepare the nation and its citizens to understand and solve global issues.

- Strengthen the capacity of the National Endowment for the Humanities to support teaching and scholarship in these areas.
- Increase funding for social sciences research at the National Science Foundation and other appropriate agencies.

5) Expand access to higher education to provide opportunities for all students to acquire the knowledge and skills they will need to succeed in the competitive global environment of the twenty-first century.

- Increase funding of student aid programs.
- Improve federal education tax credits and tuition tax deductions.
- Continue efforts to enhance student loan borrower benefits to help ensure that all students are able to pay for their college experience and manage their debts.
- Ask Congress to create clear pathways to permanent residency and U.S. citizenship for talented international students who earn U.S. academic degrees.
- Streamline the process for outstanding international scientists and engineers who are teaching and conducting research in the U.S. to achieve similar status.
- Support the Paul Simon Study Abroad proposal and other efforts to create incentives for U.S. students to study abroad in a wide array of nations and regions.
- Strengthen existing HEA-Title VI and Fulbright Hays international programs at the Department of Education to better prepare our citizens for a global workplace.

SPECIFIC RECOMMENDATIONS FOR FYI 2011

Federal Student Aid Programs

The University of Oregon appreciates the administration's proposed increase in the Pell Grant and its support for the program's long-term health and stability by making it an entitlement. We also applaud the increased support for student aid authorized by the Higher Education Opportunity Act (HEOA) and the American Recovery and Reinvestment Act. The University of Oregon asks that Congress provide the funds to fully support the authorization if entitlement status is not possible. The United States has made great progress in providing educational opportunity for all. Since 1973, the share of the nation's workforce with a college degree or higher has doubled. This growth would not have been possible without the partnership between the two largest sources of financial support for college students: the federal government and postsecondary education institutions.

The U.S. economy requires that an increasing share of the workforce has an undergraduate or advanced college degree. In order to meet that need and to overcome existing inequalities in college access, the nation must invest greater resources in federal need-based grant aid for low-income students. The University of Oregon and higher education associations support a broad array of student aid programs funded by the Department of Education. These include Pell Grants, Supplemental Educational Opportunity Grants (SEOG), Perkins Loans, Federal Work-Study, LEAP, TRIO, and GEAR UP.

Federal and State Student Aid—University of Oregon—2008–9		
Aid Type	Students	Total Dollars
Pell Grants	3,634	\$ 11,950,948
Oregon Opportunity Grants	2,965	\$ 6,426,865
Academic Competitiveness Grants	341	\$ 278,232
SMART Grants	119	\$ 301,846
Federal Work-Study Program	1,165	\$ 1,384,676
Federal Supplemental Education Opportunity Grants	1,549	\$ 1,011,474
Perkins Loans	1,816	\$ 1,943,504
Federal Ford Direct Loans	9,714	\$ 110,581,068
Students receiving federal and state financial aid in 2008–	9 10,872	\$133,878,613
Percent of UO undergraduates and graduates receiving need-based federal financial aid 46		ancial aid 46.9%
Percent of resident undergraduates receiving maximum Pell Grant		7.9%
Percent of resident tuition and fees covered by maximum Pell Grant amount 75		75.2%
Average percent of resident tuition and fees covered by Pell	Grant	45.6%

International Education

The nation should maintain its international educational capacity in order to effectively meet its economic competitive needs and its national security goals. The University of Oregon is an international university that has made a significant and sustained investment in language study and international education programs. The University of Oregon strongly supports the Paul Simon Study Abroad bill and other efforts to encourage the exchange of scholars and students. Participation in study and internship abroad programs at the UO has doubled over the past decade. A record number of students—more than 1,000—participated in study and internships abroad in 2008, with more than fifty students in global internships. Currently, around 25 percent of undergraduates at the UO study abroad during their undergraduate careers, making the University of Oregon one of the most international public universities in the country.

The University of Oregon sponsors more than 150 study abroad programs in more than eighty countries. According to the Open Doors 2007 Report on International Educational Exchange (published by the Institute of International Education), the UO ranks among the top twenty public research institutions for the percentage of undergraduates who participate in study abroad programs.

The UO also welcomed more international students (about 1,200) to campus last fall than any year since 2001 when visa regulations were tightened. About six percent of the UO's student body is international, coming from nearly ninety countries. Less commonly taught languages are a critical component in our efforts to promote proficiency in an increasingly interconnected and globalized world. Only nine percent of postsecondary students study less commonly taught languages such as Arabic, Chinese, Hebrew, Hindi, Indonesian, Korean, Persian, Portuguese, Russian, Swahili, or Yoruba, among many others. Considering the social, cultural, and economic importance of these languages, Congress should increase the percentage of U.S. students studying them by bolstering support for Title VI International Education and the National Security Education Program (NSEP).

Funded by the National Security Language Initiative, the University of Oregon is leading the effort to increase language fluency with its Chinese Flagship program, a partnership with the Portland Public School District.

Federal Research Programs Fuel Oregon's Research Enterprise

The University of Oregon commends the administration's budget proposal that maintains funding for research. Federal research agencies are the primary funder of research that occurs at the University of Oregon. Of the more than \$100 million in sponsored research that took place at the University of Oregon last year, more than 90 percent was funded by federal agencies. The National Science Foundation (NSF), National Institutes of Health (NIH), Department of Energy (DOE) Office of Sciences, and other federal research agencies are important funders of university research. The National Science Foundation, for example, plays a key role in funding discoveries that drive the nation's economy, improve our quality of life, and enhance national security. NSF investments reach faculty members throughout an institution, which gives the agency broader impact on university campuses than any other federal agency. NSF is also an important supporter of graduate education programs, including its Graduate Teaching Fellows in K-12 Education (GK-12) program. DOE is the leading source of federal funds and facilities for research in the physical sciences, providing more than 42 percent of the federal investment in these disciplines. In subfields such as high-energy physics, DOE is the primary government sponsor. The agency also ranks high in support for research in computational science and sponsors significant research and user facilities for the biological and environmental sciences. NIH-supported scientists are ready to spark the next revolution in health care.

RESEARCH AWARDS RECEIVED FY 2008-9







CONGRESSIONAL INTEREST PROJECTS



Oregon Nanoscience and Microtechnologies Institute (ONAMI)

The Oregon Nanoscience and Microtechnologies Institute is Oregon's first Signature Research Center. A cooperative venture among government and world-class nanoscience and microtechnology R&D institutions and industry in the Northwest, ONAMI was created to cultivate research and commercialization to advance the leading economic sector in Oregon, and expand the benefits of technology innovation to traditional and natural resource

industries. It is also an unprecedented and powerful collaboration involving Oregon's research universities—Oregon State University, Oregon Health & Science University, Portland State University, and the University of Oregon; the Pacific Northwest National Laboratory (Richland, Washington); the state of Oregon; and the world-leading "Silicon Forest" high technology industry cluster of Oregon and southwest Washington. ONAMI fosters a deep reach into fundamental science for the next source of innovation and high-wage employment opportunities.

SUMMARY

OREGON NANOSCIENCE AND MICROTECHNOLOGIES INSTITUTE (ONAMI)

- 1. ONAMI Mobile Military Energy (MME) (Army RDT&E)
- 2. ONAMI Safer Nanomaterials and Nanomanufacturing (SNNI) (Air Force Materials Research Lab)
- 3. ONAMI Nanoelectronics, Nanobiotechnology, and Nanometrology (N31) (Office of Naval Research)

Source of Federal Funds: Department of Defense, research accounts for Army, Air Force, and Navy

Project History: ONAMI is a collaboration involving the University of Oregon, Oregon State University, Portland State University, and Oregon Health & Science University, their industry partners, and other entities such as the U.S. Department of Energy's Pacific Northwest National Laboratory. This partnership is supported by the state of Oregon and the world-leading "Silicon Forest" high technology industry in Oregon and southwest Washington. **Project Request:** \$5 million for each project

ONAMI Mobile Military Energy (MME)

Microtechnology-based energy and chemical systems are the basis for mobile military energy and are based on the observation that mass and heat transfer are best accomplished in massively parallel microchannels, and that application of this principle can lead to dramatic acceleration, miniaturization, and distribution of chemical, thermal, and biomedical processes—with potentially revolutionary results. In addition to the many energy applications now being developed, other promising efforts are addressing medical devices (dialysis, oxygenation) and specialty chemical (e.g. nanoparticles) production. Several spinout companies and Oregon businesses are now involved in this technology, led by Home Dialysis Plus, which uses a microchannel inline pasteurizer and a microlaminated blood filter to enable the first truly useful home-based hemodialysis system.

ONAMI Safer Nanomaterials and Nanomanufacturing (SNNI)

The goals of the Safer Nanomaterials and Nanomanufacturing Initiative (SNNI) are to develop new nanomaterials and nanomanufacturing approaches that offer a high level of performance, yet pose minimal harm to human health or the environment. Research under the initiative merges the principles of green chemistry and nanoscience to produce safer nanomaterials and more efficient nanomanufacturing processes in the context of producing nanoparticles and nanostructured materials for applications in fields such as in photovoltaics, nanoelectronics, and sensing. This initiative is confronting concerns about the biological impact of nanoparticles. As part of an international research community, the initiative's researchers are developing standards, well-characterized material libraries, and precise methods for fundamental impact measurement. Additionally, ONAMI partners across all research disciplines develop and share green nanoscience best practices to ensure that nanotechnology's potential will be realized in a safe, responsible, and cost-effective manner. By coupling the advances in all areas of ONAMI research with its worldclass expertise in green chemistry and microproducts, ONAMI is creating high-performance materials, devices, and systems that protect human health and the environment.

ONAMI Nanoelectronics, Nanobiotechnology, and Nanometrology (N31)

The Nanoelectronics, Nanobiotechnology, and Nanometrology initiative combines the necessity of accurate measurement (an increasingly pressing problem for semiconductor industry progress) with strong regional industrial and academic experience in microscopy, analytical tools, test, and measurement. Advances in electron and ion microscopy resolution (emitters, optics), photoelectron microscopy, near-field scanning optical microscopy, and approaches to semiconductor metrology are being applied to real-world problems such as characterization of carbon nanotube emitters for displays and optoelectronic material produced in diatom-based bioreactors.



Brain Safety Net

This interdisciplinary project integrates the University of Oregon's internationally recognized strengths in cognitive neuroscience, molecular biology, high-performance computing, and imaging technologies to investigate the fundamental processes of the human brain and mind, and pioneers the use of the latest magnetic resonance imaging (MRI) and electroencephalographic (EEG) techniques.

SUMMARY

Source of Federal Funds: Department of Defense, Army Research, Development, Technology, and Evaluation (RDTE) account

Project Request: \$3.75 million

The University of Oregon seeks funds to acquire an fMRI instrument and to continue its neurorehabilitation research program involving the application of high-performance computing to analyzing human brain activity. A distinguishing feature of this interdisciplinary project is the use of techniques ranging from state-of-the-art brain imaging (functional and structural MRI and dense-array EEG to genetic and behavioral analyses, to advanced computational modeling. The University of Oregon proposal furthers multimodal advanced rehabilitation neuroimaging using multimodal imaging and research to improve the science and health of civilians and veterans, targeting rehabilitation with both stroke and traumatic brain injury. The combination of instrumentation will result in the first advanced multimodal (MRI-dEG) neuroimaging system in the world collecting 256-channel EEG simultaneous with BOLD imaging and supported by a high-performance dedicated computing cluster.

TRANSPORTATION AUTHORIZATION REQUESTS



Archaeological Transportation Research Laboratories

The University of Oregon is an essential partner in nearly every state or federallysponsored road and bridge project that occurs within the state of Oregon. Since the 1970s, the UO Museum of Natural and Cultural History has had an agreement with the Oregon Department of Transportation (ODOT) for university researchers to use the tools of archaeology to identify, interpret, and preserve significant historic and prehistoric artifacts found during highway projects.

The museum's Research Division operates with an annual ODOT contract of about \$2 million for this archaeological and historical work—most of it related to highway, bridge, and other transportation-related projects.

SUMMARY

Source of Federal Funds: Surface transportation reauthorization (Federal Highway Administration) **Project Request:** \$4.75 million from the surface transportation reauthorization to consolidate research labs and operations dedicated to facilitating construction of highways, bridges, and other transportation projects throughout the state of Oregon.

Current facilities are antiquated and scattered widely across the UO in five separate buildings. A consolidated and modern facility will provide greater efficiencies in expediting the planning, construction, and environmental

compliance for highway and other federal- and state-funded transportation projects. The project provides a model for efficient archaeological and environmental compliance through a cooperative arrangement between a state transportation agency and a university-based institution that includes the public dissemination



New Collections Center
New Exhibit Hall
New Research Wing

of its findings, the federally-mandated storage of historical, archaeological, and ecological collections for future generations, and a broad-based public-private partnership that serves local, state-wide, national, and international audiences.

Under the leadership of Jon Erlandson, museum director and professor of anthropology, the UO completed a new collections storage facility in summer 2009 that added about 7,000 square feet to the existing museum building. The project was the first of three phases planned to expand and update the museum's research laboratories, collections facilities, and public exhibit spaces. The museum is currently expanding and updating its public exhibition spaces (phase 2) with roughly \$2 million in private funds. The UO seeks funds from the Oregon State Legislature and the surface transportation reauthorization for phase 3, an expanded research laboratory space.

When completed, the new collections facility will allow the UO to continue to fulfill its responsibility as the official state-mandated repository for archaeological and paleontological collections found on public lands. The museum also provides consulting services and curation support for other local, state, and federal agencies including forensic work for law enforcement entities—and private-sector corporations.

East 13th Avenue Axis—"Green-streeting" a Multimodal Connector

The central area of campus is largely used as a pedestrian zone, with the East 13th Avenue Axis (from Kincaid to University streets) also serving as an access point for public safety vehicles, service vehicles, and after-hours transit. Once a busy city arterial, a section of East 13th Avenue was closed in 1971 by agreement between the university and the city of Eugene. A gradual transformation of the avenue is occurring as many street features associated with the axis, such as curbs, parking strips, sidewalks, and roadbed, are altered as the avenue continues to evolve into a bicycle and pedestrian mall.

SUMMARY

Source of Federal Funds: 2009 Highway bill, U.S. Department of Transportation (Federal Highway Administration)

Project Request: \$2 million

The project will demonstrate best practices for converting auto-oriented city streets to multimodal corridors. It repurposes a city street to predominantly pedestrian and nonmotorized transportation. Closed by agreement with the city of Eugene since 1971, the East 13th Avenue axis is now used largely as a high-priority corridor to facilitate the movement across the University of Oregon campus of pedestrians, bicyclists, and permitted motorized vehicles (including safety, service, and transit). More than a pedestrian zone, the project will demonstrate features that are essential to ensuring the safe and efficient mix of the range of transportation modes now seen in any urban area including public safety, para-transit vehicles for people with disabilities, and off-hours transit

that connects to the Lane Transit District system. The project will use paving, planters, curb removal, and similar actions to improve functionality and safety of the corridor. It will also help address bicycle parking and storm-surface water mitigation needs in ways that enhance the beauty of the University of Oregon campus. Coupled with university programs aimed at preparing students and practioners to consider livability and sustainability



in planning and urban design, the project will be a showcase for ways an institution's built environment improves the educational experience of students while demonstrating best practices in place. The project will also showcase how cities can convert streets designed primarily for automibile use into streets that can accommodate a variety of transportation modes.

The federal interest in East 13th Avenue Axis: The project will demonstrate the conversion of auto-oriented streetscapes to corridors used predominately, but not exclusively, by pedestrians and nonmotorized modes of transportation. The East 13th Avenue Axis multimodal corridor will showcase ways to dedicate corridor functions to particular purposes such as movement of pedestrians, safe transit of bicyclists, and the continued presence of off-hours transit, para-transit vehicles throughout peak periods of corridor use, and service vehicles.



Oregon Transportation Research and Education Consortium (OTREC)

OTREC is dedicated to stimulating and conducting collaborative multidisciplinary research on multimodal surface transportation issues, educating a diverse array of current practitioners and future leaders in the transportation field, and encouraging implementation of relevant research results.

SUMMARY

Source of Federal Funds: Reauthorization of the highway bill and Surface Transportation program (U.S. Department of Transportation)

Project History: OTREC brings together Portland State University, the University of Oregon, Oregon State University, and the Oregon Institute of Technology to sponsor education, research, and technology transfer projects.

Project Request: \$16.5 million, Reauthorization of the highway bill and Surface Transportation program

OTREC is one of ten National Transportation Centers created in 2005 that differentiates itself through its set of themes—sustainable transportation through advanced technology, integration of land use and transportation, and healthy communities. These themes guide OTREC's research and educational efforts. The University Transportation Center (UTC) program was created to develop internationally recognized centers of excellence within institutions of higher learning as part of the USDOT's Research and Innovative Technology Administration (RITA). OTREC is a five-year, \$33 million (\$16.5 federal and \$16.5 nonfederal match) program supported through the 2005 Safe, Accountable, Flexible Transportation Equity Act-Legacy for Users (SAFETEA-LU) federal transportation legislation. Congressman Peter DeFazio connected the national legislation to this Oregon effort.

At the University of Oregon, OTREC has been a catalyst for a multidisciplinary approach to the integration of sustainable transportation and livable communities. Through OTREC-supported research, the UO has developed a national reputation for its expertise on livability, was recently featured in RITA's newsletter on the topic, and was a key reference for Secretary LaHood's 2010 agenda. OTREC leadership has supported complementary research, teaching, and service learning work at the UO in the fields of city and regional planning, architecture, landscape architecture, public policy, business, and law. This interdisciplinary and nonengineering approach is a unique and relatively rare approach to addressing our nation's transportation, climate, and health needs. In essence, UO researchers do not focus on transportation supply, but seek to address the nation's transportation challenges through understanding how city design can impact the demand for different types of transportation. We have a special focus on walking, biking, and transit, and the urban form that best supports these more sustainable and livable modes of transport. And, when combined with the strengths of the other partner universities, OTREC presents an important national model in how to be a leader in retrofitting American cities into a model of sustainability and livability.

In addition to continued support for OTREC, the university urges consideration of any additional resources that will augment OTREC's leadership role among UTCs by focusing on livability. Oregon in general, OTREC as a UTC, and the students and faculty members across Oregon's universities are experts in sustainability and livability and that means that OTREC and its Oregon researchers are uniquely positioned to be a model for the nation.



Project TREK: Making Public Transportation Available to Persons with a Cognitive Impairment

Bringing together education and computational sciences researchers, this research activity is helping to identify supports needed to ensure that people with cognitive impairments are able to access communities via public transportation.

SUMMARY

Source of Federal Funds: Surface transportation reauthorization (U.S. Department of Transportation United We Ride)

Project History: Phase 1 supported by \$1 million in 2005 SAFETEA-LU (United We Ride)

Project Request: Phase 2, \$1 million from surface transportation reauthorization

The University of Oregon seeks research funds to support research and demonstration activities that focus on the capacity and resources of public transportation systems to address the needs, barriers, and desires for travel of people with cognitive impairments. University of Oregon education professor McKay Sohlberg and computer and information science professor Stephen Fickas, working with the federal United We Ride program, are examining whether certain tools and devices can help people with cognitive impairments better access mass transit. Research and development will be carried out in the area of travel prompts delivered by assistive technology.

Phase 1 Accomplishments. In the first phase of the project, researchers and developers identified problems and corresponding solutions. A comprehensive model of transportation was developed that was inclusive of a specific population: travelers with cognitive impairments. This population is often left out of transportation support systems. The result of the project was a new model called ACTS: Activities of Community Travel. The ACTS model defines the fine-grained activities or steps that one must complete to successfully travel in a community. Further, the model specifies the knowledge and skills a person needs for each step. The model is the first of its kind and has been validated nationwide by a consortium of travel trainers and para-transit transportation workers. The model has been disseminated through its own website, allowing travel trainers across the country to make use of it. It has guided subsequent experimental work evaluating methods for orienting and supporting travelers with cognitive impairments when they are out in the community.

Phase 2 Objectives. In Phase 1, we built the model necessary to generate travel solutions for people with a cognitive impairment: it pointed the way toward community access through the use of public transportation. However, it also made clear that there were support people necessary for a successful trip: (a) a person who can help with trip-planning; (b) a help-center that can aid a user who is lost or confused while on route. In phase 2, we propose to link the traveler (user) with support personnel using the Internet. We will develop a web-based tool that allows someone to do trip-planning for a specific user. We will develop a means to deliver prompting and information to the user while on the trip using a standard cell-phone. We will develop a web-based tool that allows a help-desk (e.g., a call-center at a transit agency) to view information about callers, including their current location, trip transit points, skill in using a bus, or other impairments that might cause them problems on the trip. In summary, phase 2 proposes to actually link the ACTS model with assistive technology. A primary goal of the project will be to make that technology easily accessible and adoptable by travel-trainers and transit agencies around the country. Sohlberg and Fickas have field-tested results that show that this is a highly viable approach to public-transportation accessibility by people with a cognitive impairment.



Livability, Transportation, and Sustainable City Design: How the Surface Transportation Reauthorization and universities can move the nation forward in a new direction

For the first time in human history the majority of humans live in cities. As a result the human experience, whether urban or rural, has become metropolitan. This unprecedented migration has been accompanied by equally unprecedented changes in

the relationship between humanity and the global ecosystem, an alarming rise in obesity, and transportation systems that fail to give Americans choices.

SUMMARY

Source of Federal Funds: Research title, Surface transportation reauthorization; HUD-DOT-EPA Livability initiative

Project Request: Authorize and fund programs in applied, cross-disciplinary, university efforts focusing on transportation and livability from the research title and evaluation components of the surface transportation reauthorization. This support should aim to integrate research, education, community service, and public outreach so that knowledge generation and instruction can also be quickly transferred to community implementation. The focus must be on the demand for transportation as much, if not more so, than its supply. Such a focus is consistent with new priorities of the HUD-DOT-EPA Livability Initiative.

Cities and public agencies urgently need capacity—both in expertise and personnel—to meet the new demands of livability and sustainability. Universities like the University of Oregon are in a unique position to help—both immediately through engaged learning, applied research, and service projects, and long term through the training of the next generation of experts on sustainable transportation and community development.

To meet this urgent challenge, researchers at the University of Oregon have developed the Sustainable Cities Initiative to fundamentally alter the way cities and regions evolve and develop into forms of ecological, social, and economic sustainability. This is a new approach to knowledge transfer that perfectly aligns with the federal interest in sustainable transportation and livability. A tangible example of this new effort is the Sustainable City Year program, which this year is directing over twenty university courses, fifteen faculty members, seven disciplines, 400 students, and 100,000 hours of work, all in the service of a single city, Gresham, Oregon. This is a new model of research, education, and knowledge transfer that can be accelerated with targeted support from the research title and evaluation components of the surface transportation reauthorization.



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