

Oregon Universities' Initiatives in AEED Opportunity Areas: Large Universities & OHSU

Opportunity Area	OSU	PSU	UO	OHSU
Nanoscience and Microtechnologies	<ul style="list-style-type: none"> • ONAMI partnership (Skip Rung, Director) – includes UO, PSU, OHSU, and PNNL. Also SOU in instructional program. Collaboration with OIT under development. • OSU Multiscale Materials and Devices research cluster • Center for Microtechnology-Based Energy, Chemical, and Biological Systems (MECS) • OSU/PNNL Microproducts Breakthrough Institute • Transparent Electronics research group • OSU Multiscale Fabrication Facility • OSU's Mixed Signal Integration research cluster develops methodology for mixed analog & digital IC design and applications • OSU Center for Advanced Materials Research (CAMR) • Optically active materials research group 	<ul style="list-style-type: none"> • ONAMI partnership • PSU Center for Emerging Technologies (CET) brings together faculty from science, engineering, & business to accelerate development of new interdisciplinary research and products and facilitates collaborations with ONAMI institutions and with business on nanoscience and microtechnologies and other technologies. • PSU Nanostructures and Microscopy research groups • PSU IC Design and Test Lab • PSU Nanofabrication Electron Microscopy and Microanalysis Facility 	<ul style="list-style-type: none"> • ONAMI partnership • UO Materials Science Institute (MSI) (James Hutchison, Director) – home for ONAMI • Center for Advanced Materials Characterization in Oregon (CAMCOR) (Dave Johnson, Director)– “high tech extension service” • UO Green Chemistry Program– world leader in this area (James Hutchison, Kenneth Doxsee among others in the Chemistry Dept.) • Oregon Center for Optics 	<ul style="list-style-type: none"> • School of Dentistry – Use of nanotechnology in biomaterials research (e.g., implants) • Clinical research in Medicine not yet connected to ONAMI but discussions under way • Biomedical engineering (OGI) future plan (2-3 years) to appoint faculty with expertise in biological and electrical phenomena at very small scale • OGI Materials and Device research group
Information Technology	<ul style="list-style-type: none"> • Strong Industrial and Manufacturing Engineering group developing wireless technology applications • National leader in developing Vehicle Mileage Tracking (VMT) application. • School of EECS includes 	<ul style="list-style-type: none"> • RAINS program (Regional Alliances for Infrastructure and Network Security) – public/private consortium with >60 Oregon companies; PSU is leading academic partner. • PSU Computer Science department one of 50 programs 	<ul style="list-style-type: none"> • Computational Intelligence Research Laboratory – focus on questions in artificial intelligence including search, knowledge representation, and reasoning, has provided basis for UO start-up firm • Computational Science Institute 	

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	<p>research concentrations in computer graphics and vision, end user shaping effective software, intelligent information systems, learning and adaptive systems, and information security</p> <ul style="list-style-type: none"> • Business Solutions Group (in the College of Business) providing product testing and applications development for industry and student internship experience for more than 50 students annually. • OSU’s Open Source Lab is the only center of its kind in the world focusing on the open source community and is among the top three research and development centers in the world. Besides helping to reduce operational costs at OSU, the lab brings in external money through contracts and donations while providing valuable experiences for students. 	<p>in U.S. awarded Center of Academic Excellence in Information Security Education by National Security Agency.</p>	<p>– a multidisciplinary field from which arises technologies that have potential industrial applications</p> <ul style="list-style-type: none"> • Computer and Information Science Department – strengths in networking, distributed computing and computational science 	
<p>Sustainability & Renewable Energy</p>	<ul style="list-style-type: none"> • Sustainable Business Initiative (OSU Coll. of Business) – how to create to performance when bottom line is measured on economic, environmental and social performance. How to manage a product’s complete life cycle; how to market “greener” products. • Institute for Natural Resources (Gail Achterman, Director). Interdisciplinary approaches, both within OSU and with other OUS institutions. Plan to grow 	<ul style="list-style-type: none"> • Sustainability is a priority for the institution -- initial multidisciplinary research core areas are focused on (1) Green Science and Technology Development (2) Sustainable Urban Design (3) Integrated Water Resource Management (4) Sustainable Business Processes and Practices (5) Intelligent Transportation Systems. • Center for Sustainable Processes and Practices (CSP²)- a campus-wide initiative for internal 	<ul style="list-style-type: none"> • UO Dept of Planning, Public Policy and Management – infuses sustainability concepts into all areas of curricula and research (health, community development, public policy, etc.) • Institute for Policy Research and Innovation (Michael Hibbard) – One of the concentrations of IPRI is sustainability, for example in ecological restoration opportunities (e.g., juniper removal); conservation-based 	<ul style="list-style-type: none"> • OGI Dept. of Environmental and Molecular Systems – focused on connections between human and ecosystem health

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	<p>from \$650K annual research grants to \$3M. With Sun Grant, renewable energy research to increase from current \$1M to \$7M by 2006.</p> <ul style="list-style-type: none"> • Sustainable Plant Research and Outreach Center (SPROUT) – partnership between Oregon Garden Foundation, OSU, USDA, and other public & private institutions. Focus on use of plants and plant material to create a more sustainable environment. • Rural Studies Program, focused on outreach activities and research partnerships to meet needs of rural Oregon. • OSU Partnership for Interdisciplinary Studies Of Coastal Oceans (PISCO). Consortium of scientists from OSU (Jane Lubchenco, Bruce Menge), UCSC, UCSB, and Stanford. • OSU Long Term Ecological Research (NSF-LTER) program and Andrews Experimental Forest. • Communication Partnership for Science and Sea (COMPAS), a program to advance and communicate marine conservation science. • Strong programs in interdisciplinary conservation-oriented research, includes restoration ecology, species conservation in marine, 	<p>implementation of the core research areas and to foster collaborations with business, government and other research institutions.</p> <ul style="list-style-type: none"> • Faculty in Engineering are developing an Urban Heat Island Mitigation Screening Tool (MIST) for the US EPA and analyzing urban climate benefits of eeroofs. Work in evaluating heat island mitigation strategies and modeling individual building energy performance could have market potential, particularly in locations such as China where large cities are under development. • Faculty in Urban Studies and Planning are involved in assessments of energy use and conservation in businesses, government agencies, and households; work on "demand responsive" (e.g., time-of-use metering) energy systems; and studies of consumer response to public appeals and private advertising focused on energy efficiency, energy conservation, and green building. • Faculty in Engineering and in Urban Studies and Planning are developing approaches to assess green building performance, with specific focus son the development and performance of eco-roofs. • Faculty working in green 	<p>development (e.g., range-fed beef).</p> <ul style="list-style-type: none"> • Institute for a Sustainable Environment (Robert Ribe) - projects assist regions and communities around the world to develop and maintain communities and local economies through sustainable practices. • Institute for Housing Innovations (Don Corner) – is active in multidisciplinary research, planning and public service in the planning, development and creation of sustainable buildings and communities. • Environmental Studies Program (Dan Udovic) • Lundquist School of Business – offers classes that focus on encouraging business practices and process that advance sustainability (Mike Russo) • Solar Energy Center (Frank Vignola) • Energy Studies Laboratory, School of Architecture (Charlie Brown) 	

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	<p>freshwater and terrestrial systems.</p> <ul style="list-style-type: none"> • Senator Wyden’s initiative for “Green Technologies with a focus on Energy”, a multi-institutional initiative involving Agricultural Sciences, Forestry, Engineering, Science, plus others at OSU. This includes Biohydrogen, Biofuels, Sun Grant programs, conversion of cellulosic and hemicellulosic materials to fuels, wave, solar and wind energy extraction, low head hydro power and related processing technologies. • The Large Scale Energy Systems Cluster includes alternatives such as Wave and Wind power generation as well as research on nuclear reactor design within the 9th-ranked graduate program in Nuclear Engineering. Chemical Engineering faculty conduct research on methods for bio fuel production. • The Kiewit Center for Infrastructure and Transportation includes research relevant to sustainable transportation systems. • As one of six priority initiatives within the Strategic Plan, OSU provided funding for the Sustainable Rural Communities initiative (\$300K/year for up to five years). 	<p>chemistry are designing molecular sensors for detection of environmental pollutant, more efficient methods of chemical synthesis to improve waste management, and microfabrication for developing miniaturized devices for bioanalytical applications.</p> <ul style="list-style-type: none"> • The Urban Ecosystem Research Consortium, led by faculty in Environmental Sciences and Resources, advances the state of the science of urban ecosystems and improves our understanding of them, with a focus on the Portland/Vancouver metropolitan region in collaboration with researchers, managers and citizens at academic institutions, public agencies, local governments, non-profit organizations. • Professional Certificate Program: “Implementing Sustainability: Building Human Capacity for Implementing Best Practices” is now in its third year. • Oregon Congressman Earl Blumenauer plans to reintroduce the “Higher Education Sustainability Act” that would authorize funding for university sustainability programs modeled after initiatives under way at PSU including “green” capital construction, multi-disciplinary research; public forums and community outreach projects on sustainability. 		

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		<ul style="list-style-type: none"> The offices of Sen. Gordon Smith (R–Ore.) and Sen. Ron Wyden (D–Ore.) have notified Portland State that the Senate Appropriations Committee has included \$300,000 in funding for PSU’s Solar Photovoltaic Test Facility System, Materials & Installation Project in H.R. 2419, the Energy and Water Appropriations bill. This would be the first large-scale solar test facility installation on a university campus to be used primarily as an educational and research tool. 		
<p>Natural Resources (Agriculture, etc.)</p>	<ul style="list-style-type: none"> The Bio and Environmental Systems Research Cluster in the College of Engineering develops methods to remediate environmental hazards through one of five regional EPA-funded centers for hazardous substance research. <p>Water Resources</p> <ul style="list-style-type: none"> Center for Water & Environmental Sustainability (Denise Lach) > 50 faculty in 6 colleges & 12 departments working on water issues. Faculty research strength; more on editorial boards of top water journals than all UC schools combined. Working with ONAMI on advanced treatment technologies New Graduate Program in Water Resources; expect to train 75-125 students each year. 	<ul style="list-style-type: none"> PSU’s Food Industry Leadership Center works with food distributors and retailers. Works with state’s food processors and product retailers to help market Oregon products worldwide. Faculty in PSU’s Center for Lakes and Reservoirs research aquatic invasive species related to the agricultural community, esp. in irrigation systems and water resources. The Aquatic Bioinvasion Research and Policy Institute, a partnership involving PSU and the Smithsonian Environmental Research Center, located at PSU, focuses on both freshwater and marine invasive species and the work provides economic benefits in Oregon, nationally, and world-wide. PSU’s interdisciplinary water 		

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	<ul style="list-style-type: none"> • OSU Partnership for Interdisciplinary Studies Of Coastal Oceans (PISCO). Program includes leading scientists from OSU, UCSC, UCSB, and Stanford. <p>Agriculture</p> <ul style="list-style-type: none"> • Emphasizing 4 areas in the future: (1) food, nutrition & health; (2) development of bio-based energy & products; (3) water and watersheds; (4) ecological services. • Future economic development initiatives focused on: (1) development of bio-based energy via Sun Grant Initiative; (2) food product development for small-scale entrepreneurs; (3) nutritionally-enhanced foods. • Extension Service programs throughout Oregon and 11 branch experiment stations, including Food Innovation Center in Portland (targets collaborative activity with entrepreneurs in food industry). <p>Forestry</p> <ul style="list-style-type: none"> • College of Forestry investing \$250K per year in initiatives to address economic & environmental priorities: (1) Forest fuels, fire & forest resilience; (2) water & aquatic resources in private managed forests; (3) forest plantation productivity & value enhancement; (4) wood products innovation management; (5) wood durability in construction; 	<p>resources faculty group works on issues of sustainability related to water quality, availability, problem remediation, supply, and public policy.</p> <ul style="list-style-type: none"> • Faculty in Environmental Science and Resources are conducting research on the transformation and transport of heavy metals and other contaminants in soil, surface water, sediment, and groundwater systems. Faculty in ESR are also investigating policy and management approaches for minimizing economic and ecological damage associated with transport of invasive species in trade activities (e.g., shipping and transportation). • Faculty in Sociology are investigating approaches to resolve conflicts over scarce natural resources in societies that are motivated to both exploit and preserve them (Klamath Basin; Oregon Coast) • Faculty in the Hatfield School of Government and the National Policy Consensus Center are leading a community-based environmental management project to restore a degraded canal in Ho Chi Minh City, Vietnam. 		

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	<p>(6) forest-related outdoor recreation & tourism.</p> <p>Oregon Wine Industry</p> <ul style="list-style-type: none"> • Over past 20 years, Oregon’s wine industry has grown to >250 wineries; wine sales >\$200M. • Developing a new OSU Vine & Wine Institute – integrates and aligns multi-disciplinary teaching and research, field station resources. Partnering with Chemeketa CC. • New integrated Viticulture & Enology B.S. degrees • Development of new marketing and small business programs to sustain small family businesses. 			
<p>Neuroscience & Biomedical Research</p>	<ul style="list-style-type: none"> • Center for Obesity Research and Training (Tammy Bray). Interdisciplinary systems approach to examine critical roles of health behaviors, physical environments, physical activity and nutrition in prevention and treatment of obesity. • Linus Pauling Institute, with major research areas in heart disease, cancer, aging, and neurodegenerative diseases. • Center for Gene Research and Biotechnology, with research in genomics, biocomputing and bioinformatics, and image and image analysis. • OSU Environmental Health Science Center (EHSC)(Joe Beckman, Director), research areas include toxicology of 	<ul style="list-style-type: none"> • Biomedical Signal Processing (BSP) Lab – extracting clinically significant information from physiologic signals; focus on projects to help physicians make decisions that improve people’s lives—e.g, reduce tremors in patients with Parkinson’s Disease and treat traumatic brain injury. • Biology faculty working to better understand cellular processes to improve health, in areas such as heart and obesity issues in aging populations; great potential for commercialization. • Engineering faculty developing robotic and adaptive devices at various scales in areas such as increasing physical activity, remote surgical procedures, and at the micro and nanoscales 	<ul style="list-style-type: none"> • Brain, Biology, and Machine Initiative – cognitive neuroscience, molecular biology, genetics, computational science (chaired by Michael Posner) • Institute of Neuroscience – basic scientific and biomedical research activity (Biomedical example - gene duplication and anti-cancer drug screening by John Postlethwait) • Institute of Molecular Biology – basic scientific and biomedical research activity (Biomedical example - Mitochondrian Project by Roderick Capaldi. Research leading to new approaches for diagnosing diverse sets of diseases.) • Center for Cognitive Neuroscience (Helen Neville, Director) 	<p>Major Research Initiatives</p> <ul style="list-style-type: none"> • OHSU Cancer Institute – world class cancer research (esp. Brian Druker, Craig Nichols) • Center for the Study of Weight Regulation and Associated Disorders • Strength in stem cell research, building on it • Znomics, Inc. – building on high density of zebrafish researchers in Oregon (e.g., UO is home to Zebrafish International Resource Center). OHSU one of only 3 sites in U.S. with unique insertional mutagenesis technology. Permits more efficient and rapid development of targeted drug discovery. • Vaccine & Gene Therapy Institute (VGTI) – infectious diseases, including HIV/AIDS,

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	<p>environmental chemicals, oxidative stress, cellular and molecular toxicology, carcinogenesis, and environmental chemicals and toxins.</p> <ul style="list-style-type: none"> • OSU Molecular and Cellular Biology Program (MCB) with graduate training and research in areas of pathogenesis, parasitology, neurobiology, pharmacology, DNA damage and repair mechanisms. • OSU, exceptionally strong research programs in infectious diseases, virus-host interactions, • OSU Center for Fish Disease Research (Michael Kent, Director), focuses on disease problems in fin fish and shellfish. • OSU Marine and Freshwater Biomedical Sciences Center (MFBSC) (David Williams, Director) uses fish models to study cancer, aging, immune functions, and environmental pollution. • Biological mass spectrometry core in EHSC • Oxidative and nitrative stress research core in EHSC • DNA Mutagenesis and repair research core in EHSC • Nationally prominent biophysics and structural biology research group 	<p>devices that work within the body</p> <ul style="list-style-type: none"> • PSU faculty receive funding from the American Heart Association and the National Science Foundation for research related to genomic approach to cardiovascular function. • PSU faculty have a patent pending for a drug discovery for malaria prevention. • Faculty are engaged in research related to understanding the molecular mechanism underlying contraction and relaxation in skeletal and cardiac muscle. • Biology faculty are doing research in the genetic aspects of alcoholism. 	<ul style="list-style-type: none"> • Integrated Cognitive Neuroscience, Informatics & Computation (ICONIC) – using computing systems for rapid diagnosis of brain conditions. Joint effort of UO, Electrical Geodesics, Inc., & IBM (Allen Malony). • Oregon Neuroinformatics Center (Allen Malony) • Lewis Center for Neuroimaging (Ray Nunnally) • The Zebrafish International Resource Center is housed at the UO. Its mission is to provide a central repository for wild-type and mutant strains of zebrafish and for materials and information about zebrafish research. • Oregon Heart and Vascular Institute - this partnership between the UO and Sacred Heart Medical Center gives physicians access to the UO's pioneering research in human physiology, and researchers, have the opportunity to conduct joint projects with nationally recognized physicians. 	<p>cancers, biodefense, emerging diseases.</p> <ul style="list-style-type: none"> • Dentistry: Development of biomimetic materials to form new mineral similar to tooth enamel and dentin; development of new minimally invasive means of detecting early oral cancers (currently having one of lowest survival rates). • Biomedical engineering (OGI): neuroengineering; biomedical optics; cardiovascular; biosensors and nanotechnology <p>Strategic Planning for Research</p> <ul style="list-style-type: none"> • “The Oregon Opportunity” – plan for enhancing OHSU research in biomedical and engineering fields • New OHSU River Campus – goal to bring OHSU to top 20 nationally ranked research institutions
Healthcare Workforce	<ul style="list-style-type: none"> • Educational programs in preventive health (nutrition and 	<ul style="list-style-type: none"> • Successes in preparing applicants for medical school 	<ul style="list-style-type: none"> • Public/private partnerships: Human Physiology curriculum 	<ul style="list-style-type: none"> • Oregon Consortium of Nursing Education (OCNE) –

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	<p>food management, public health, exercise and sports science) through the College of Health and Human Sciences.</p> <ul style="list-style-type: none"> • Educational programs in the College of Science are strong and prepare students for careers in dentistry, medicine, nursing, medical technology, occupational therapy, pharmacy, physical therapy, physician assistant, podiatry, veterinary medicine, optometry. • Applied Biotechnology program with the Professional Science Master's Degree (Jim Carrington, Director). • As one of six priority initiatives within the Strategic Plan, OSU provided funding for the "Center for Healthy Aging Research: Linking Individuals, Families and Environments (LIFE)" initiative (\$300K/year for up to five years). 	<p>admission, with a very high rate of acceptance at OHSU medical and dental schools.</p> <ul style="list-style-type: none"> • National reputation in preparing students to become physician assistants. • Partnership agreements with OHSU in broad range of research placements for students interested in medical careers. • Partner with OHSU on grant to increase number of underrepresented minority students seeking health careers. • Received funding from ODS for new labs and scholarships for pre-dental program 	<p>partners with MDs to have students do surgical observations, shadow medical professionals in work settings. Curricular model brings med school into non-med school environment.</p> <ul style="list-style-type: none"> • Higher ed partnerships: MOU signed with OHSU to examine new ways of providing medical and nursing training (UO for basic science; OHSU for clinical); potential of expanding OHSU capacity in Eugene area 	<p>collaborations among all Oregon postsecondary institutions, through interinstitutional agreements supporting dual enrollments, common transcript and financial aid packages, common competencies and curriculum, and shared use of training resources.</p> <ul style="list-style-type: none"> • Oregon Area Health Education Center (AHEC) – rural community health clerkship; family practice residency training; Oregon Burdick Interdisciplinary Team Training (OrBITT) • Oregon Rural Practice-Based Research Network (ORPRN) – brings latest medications and procedures to rural Oregonians through their own doctors • Plan to meet physician demand: (1) philanthropic and state support to expand Medical School; (2) change in federal guidelines regarding GME funding; (3) develop alternative model for medical education; (4) OHSU-Community health system partnership to increase number of students in clinical setting.
K-12 Education	<ul style="list-style-type: none"> • Center for Teaching, Learning, and Collaborative Research, a new center focused on enhancing teaching as an academic discipline. • Innovative Education Double Degree in College of Education 	<ul style="list-style-type: none"> • Center for Student Success provides services to schools and school districts • More than 10 years of research and development work in children with autism: behavior 	<ul style="list-style-type: none"> • UO research in education & behavior identified by OCKED as one of 5 core research competencies • 2004 News and World Report is the ranked the UO College of Education fourth for public 	

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	<p>that focuses on preparing science, math, and technology teachers.</p> <ul style="list-style-type: none"> • Web-based "Mentored Masters," creates mentoring learning communities and develops informed practitioners, reflective researchers, and professional leaders and advocates. • Center for Teaching and Learning, a new center focused on teaching as an academic discipline. • Mid-valley regional PK-20 Education Partnership. • Technology Network for Teaching, working with regional school districts to facilitate the use of technology in support of learning. • Grassroots Learning Project (http://oregonstate.edu/education/podcasts/), podcasting in support of learning for everyone. • Oregon School Boards Association/OSU study on leadership and student achievement. <ul style="list-style-type: none"> • Research on cultural competence for teachers, counselors, and educational leaders. • Western Center for Community College Professional Development, developing and offering professional development opportunities for community college staff. • NSF funded Mathematics 	<p>and educational intervention (Joel Arick, P-I)</p> <ul style="list-style-type: none"> • Research and development on alternative testing for students with low incidence disorders • Regional Research Institute in Graduate School of Social Work does \$5 million in research on education and social service issues • Center for Learning and Teaching funded by NSF to improve teaching of math and science, develop research and a diverse teaching and professorial workforce • Bilingual Teacher Pathway program prepares bilingual teachers for area schools • Portland International Center for Ecology, Culture and Leadership prepares leaders in sustainability education • Center for Science Education: research and support for science in K-12 schools. The Center was the organizing sponsor for the Intel Northwest Science Expo for middle and high school students throughout Oregon. Over \$400,000 in scholarships to Oregon universities was awarded to participants. 	<p>graduate school of education, and has the third best special education graduate program.</p> <ul style="list-style-type: none"> • UO Coll of Educ rated as the most productive education research faculty of all public or private graduate education programs in the nation for 7 of the last 8 years • Institute on Violence & Destructive Behavior (Hill Walker & Jeff Sprague) – preventing school violence • “Positive Behavior Support” – research by George Sugai & Rob Horner • More than 2,500 schools and 38 states utilize research and outreach services produced by the college. • Early Childhood Coordination Agency for Referrals, Evaluations, and Services (EC CARES) provides support and services to more than 1,000 Lane County families with infants, toddlers, and preschoolers with special needs. • Planning has begun for an Institute on Learning and Behavior to transfer the results of basic science in learning and behavior into policies and professional practices. • UO Coll. of Educ offers online & on-site training for district and school leadership • Institute for the Development of Educational Achievement (Deborah Simmons, Ed 	

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	<p>Leadership Institute Partnership Project.</p> <ul style="list-style-type: none"> • Science and Math Education programs in the College of Science--Professional Teaching Education Programs. • Programs in Free Choice Learning at Hatfield Marine Science Center and Oregon Sea Grant. • Program in Science and Math Investigative Learning Experiences (SMILE), a partnership between OSU and 14 Oregon school districts -- mostly rural -- to provide science and math enrichment for underrepresented and other educationally underserved students in grades 4-12. • Science Connections and Science Education Partnership Programs with Portland and Willamette Valley School districts • GK-12 programs with rural school districts • Museum Days and other curriculum augmentation programs for science in middle and elementary schools • Pre-college programs involving all OSU Colleges. 		<p>Kame'enui, Roland Good, David Chard) – research on importance of early development of reading skills (K-3)</p> <ul style="list-style-type: none"> • The College of Ed directs the only national technical assistance project to support implementation of the federal Reading First Program 	
<p>Interdisciplinary and Cross-disciplinary; Other</p>	<ul style="list-style-type: none"> • OSU has identified six strategic initiatives for investment that will bring to the university new centers for research and outreach, additional faculty, and undergraduate and graduate 	<ul style="list-style-type: none"> • Business Accelerator (College of Business) under development – cooperative effort with Portland Development Commission and “Starve Ups” (group of start-up company founders). Will provide 	<p>Cross disciplinary work:</p> <ul style="list-style-type: none"> • Neuroscience (brain) and education • Nanoscience (Materials science, chemistry) and neuroscience • Information technology and 	<ul style="list-style-type: none"> • Biomedical engineering at OGI – new program, admitted first class in 2003. Interdisciplinary perspectives to address common problems. • OGI Center for Spoken

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	<p>student scholarships, internships and educational opportunities. The initiative proposals were submitted by teams of OSU faculty from different colleges and departments—this interdisciplinary approach is intentional. The six strategic initiatives will be funded at \$2million annually for five years.</p> <ul style="list-style-type: none"> • Austin Entrepreneurship Program (Jon Down, Director) – housed at new Weatherford Hall facility; center of campus-wide integration of entrepreneurship efforts (residential, instructional, research, business community connections). • Professional Science Master’s Degree programs in Applied Physics, Applied Biotechnology, Applied Systematics, and Environmental Sciences. • Interdisciplinary graduate program in Molecular and Cellular Biology Program (MCB). • Interdisciplinary programs in Environmental Science for graduate and undergraduate students. • OSU Honors College • Inter-disciplinary programs in Water Resources and Water Sciences • Emerging inter-unit programs in Ecology and Earth Science • Interdisciplinary programs in Entomology 	<p>opportunities for faculty and students to work with start-up companies; build additional long-term funding sources; build long-term relationships for PSU.</p> <ul style="list-style-type: none"> • Lab2Market – a \$600,000 initiative that facilitates the commercialization of novel technologies by forging networks between private-sector business expertise and world-class research at Oregon’s universities. • Business School MBA collaboration with Lewis & Clark law school to facilitate tech transfer for local organizations (e.g., OHSU). • Other Education focus: Preparing Math & Science teachers – multiple sources of funding, including NSF Center for Learning & Teaching in the West, NCLB, Boeing, etc. Encourages collaborations with university math/science faculty. Results: 3X grads in 2 years. • PSU water resources research group – faculty from sciences, engineering, geography, environmental sciences, and urban/public affairs; focus on water quality, storm water management, civic involvement, government policies, regulations regarding water quality, availability, and supply. 	<p>biomedical research (e.g., Oregon NeuroInformatics Center)</p> <ul style="list-style-type: none"> • Sustainability • Information Technology and Neuroscience (e.g. Zebrafish Information Network) • Technology and Entrepreneurship Fellows Program – collaboration between UO Lundquist College of Business Center for Entrepreneurship, UO Law School, UO MaterialScience Institute and the Pacific Northwest National Laboratory - enables science, business and law students interested in technology and entrepreneurship to participate actively in evaluating, developing, and launching high-technology start-up businesses . 	<p>Language – speech technology research group focused on human health</p>

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	<ul style="list-style-type: none"> • Austin Family Business Program: (Mark Green, Director) - helps owners, managers, successors, non-family employees, and service providers understand challenges and opportunities that accompany the growth of family and close-held businesses. Practical business education is delivered throughout the Northwest via workshops, seminars, and conferences. Family businesses can learn to identify challenges, evaluate options, formulate plans, and take action in a world of change. Academic education in family business management is offered on the OSU campus. Research in the fields of family business and entrepreneurship is also a top priority of the program. • International dimensions of OSU. One example: The Rural Livelihoods Consortium improves livelihoods in rural regions of southern Africa impacted by drought, poverty, and AIDS. 			