



Oregon
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System

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Industry Council awards \$520K in “Bright Future” grants to Oregon youth programs to bolster pre-engineering education

Portland, December 9, 2009: The Oregon University System (OUS) and the Engineering and Technology Industry Council (ETIC) are pleased to announce grant awards to four Oregon organizations to increase pre-college engineering initiatives and programs for K-12 students. The “Bright Future” grants are one component of ETIC’s goal to increase engineering degrees in order to meet state and industry needs for a highly-skilled, globally competitive workforce in Oregon.

Bruce Schafer, ETIC executive director, said, “We are very excited to support these innovative projects to expand Oregon engineering education. The more students get involved in these engaging engineer and computer science programs, the more they discover the real-world relevance, creativity, fun, and great job opportunities in these careers.”

Awards include out-of school programs and summer camps for project-based learning in engineering and applied sciences, a high school internship program, and a project to improve computer science/precollege curriculum and professional development. Grants were awarded to:

- **\$216,115 to Oregon State University (OSU) 4-H and The Science & Math Investigative Learning Experiences (SMILE)** to support a collaborative engineering design project for underserved middle-school youth;
- **\$99,619 to OSU Center for Outreach in Science and Engineering for Youth (OSEY)** to develop a library of project-based activity kits and deploy these kits in multi-day summer camps throughout Oregon.
- **\$65,000 to Saturday Academy** to support student apprenticeships in engineering; and
- **\$140,000 to TechStart Education Foundation** to create new computer science curriculum for Oregon high school math and science teachers that meets new state math standards.

ETIC’s “Bright Future” strategy for increasing the supply of engineering, computer science, and materials science undergraduates was developed by a broad coalition of leaders comprising the Oregon Pre-engineering and Applied Science (OPAS) Initiative. The OPAS strategy is designed to: build on proven successes to maximize the ability of programs to increase the number and diversity of future engineering students through measurable, scalable programs; address critical pre-college gaps by promoting participation in hands-on learning for underserved populations; and expand student opportunities in engineering and applied sciences across the state.

The **OSU 4-H and SMILE programs** will use the grant to improve and expand engineering design learning opportunities for underserved youth through out-of-school time, on-campus, and community-based learning. The project aims to expand the capacity of classroom teachers and 4-H faculty to support academic success, college readiness, and engineering and applied sciences career aspirations of educationally underserved middle school youth. The initiative targets youth who are underserved, low-income, rural, and first generation- in-college and is framed so that these students connect to caring adults involved in engineering and applied sciences careers, engage in meaningful engineering design experiences, and spend time on college campuses, all of which contribute to making real the connections between aspirations, academics and engineering and applied sciences careers. Eda Davis-Lowe, director of The SMILE Program at OSU, said, “We appreciate the investment of Oregon ETIC and OPAS in supporting engineering design opportunities for underrepresented middle school students in rural Oregon. Helping students see possibilities for careers, maintain enthusiasm for learning science and

mathematics in school, and develop aspirations for college together provide a win-win-win situation. It is a privilege for The SMILE Program to be part of this type of partnership.”

OSU’s Center for Outreach in Science and Engineering for Youth (COSEY) grant will support programming for summer camps throughout the state by partnering with organizations such as the Boys and Girls Club and 4-H programs, which are ideal venues for engaging rural and underserved students in science and engineering activities. Specifically, COSEY is developing a library of project-based activity kits with a sustainability theme (biodiesel reactor, fuel and solar cell cars, wind power, etc.) that will be used to engage 4th-8th grade students in multi-day summer camps to be held in communities throughout Oregon. Trained college student instructors will deliver 16 summer camps over the course of two summers, reaching over 700 students in locations ranging from Ontario to Coos Bay. The activity kits developed in this project will serve as valuable long-term resources for out-of-school programs and educators who can borrow them through the COSEY lending library. Jim Lundy, executive associate dean of OSU’s College of Engineering, said, “We’re excited about the effective partnering that makes this initiative possible. This ETIC funding enables us to leverage the strengths of our on-campus programs to impact the broader Oregon community.”

Friends of Saturday Academy’s Apprenticeships in Science and Engineering (ASE) Program received a grant to expand their ability to provide full-time, eight-week summer apprenticeships to high school freshmen, sophomores, and juniors in engineering disciplines. ASE is designed to encourage motivated, high-achieving high school students to engage in STEM (science, technology, engineering and mathematics) education and to pursue advanced education and careers in those fields. ASE changes students’ lives by providing real life scientific professional career experiences to high school students that are unavailable to them anywhere else. The program has placed more than 2,900 students from throughout Oregon and SW Washington in these one-of-a-kind apprenticeships in the past 20 years. Andrea Raven, ASE program director said, “ETIC’s investment will ensure that 10 to 15 high school students will experience full-time internships through ASE next summer in local companies and research laboratories. We are grateful to be able to provide this opportunity for our community’s youth and to contribute to building the pipeline of future engineers and innovators.”

TechStart Education Foundation received a grant for an innovative proposal to work with Oregon Computer Science Teachers Association and Chemeketa Community College to improve computer science curricular options for Oregon teachers which will in turn encourage more Oregon students to pursue studies in computer science and related programs. TechStart is a nonprofit that promotes wider access to technology education for K-12 students in order to strengthen the skills they need to thrive in the global economy. Through this grant, the foundation will strengthen existing in-class computer science (CS) offerings and create new computer science curriculum opportunities for math and science teachers that incorporate and satisfy the new state discrete mathematics standard. Chris Brooks, president of the TechStart board of directors, said, “Oregon’s ability to innovate and stay competitive in a global technology marketplace relies on meeting the demand for youth education in technical acumen as well as soft skills like teamwork and creativity. This ETIC grant allows us to more deeply impact K-12 student programs that promote a curiosity in technology, math and science.”

The Engineering and Technology Industry Council (ETIC) is a public-private partnership that was launched by the Oregon Legislature in 1997. This innovative legislation successfully brought the state’s universities and industry together in full collaboration with clear goals: graduate more and better engineers, computer scientists, and technologists; and expand research. The partnership is made up of executives representing a wide variety of industries from throughout Oregon as well as leadership from Oregon universities. For more information on ETIC, go to: www.oregonetic.org

Oregon University System (OUS) comprises seven distinguished public universities, reaching more than one million people each year through on-campus classes, statewide public services and lifelong learning. The Engineering and Technology Industry Council, or ETIC, is a partnership between the private sector and Oregon’s public universities. For additional information, go to www.ous.edu.

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Please note: ETIC also recently announced pre-engineering grants available to Oregon schools; please note these are different grants, and the application for these is still open. More information at: www.ous.edu/news_and_information/news/112309.php