



Oregon  
University  
System

# News Release

November 23, 2009

Office of the Chancellor  
P.O. Box 751  
Portland, OR 97207  
PHONE (503) 725-5700  
FAX (503) 725-5709  
www.ous.edu

**Contacts:**

Bruce Schafer, Director, OUS Industry Affairs; Office: 503-725-2915; Cell: 503-332-4666  
Ken Cone, Project Manager, OUS; Office: 503-725-2918

## University System offers pre-engineering program grants to Oregon schools, including an engineering “athletic” program

*University-industry council encourages middle schools and high schools to apply by January 15*

Portland, November 23, 2009: The Oregon University System (OUS) and the Engineering and Technology Industry Council (ETIC) announce two exciting grant opportunities for Oregon middle and high schools for implementation of pre-engineering curricula and activities for students. The funding is one component of ETIC's goal to increase pre-college engineering programs and engineering degrees in order to meet state and industry needs for a highly-skilled, globally competitive workforce in Oregon.

The available grants will 1) help high schools get started in developing an **extracurricular engineering “athletics” program through an innovative initiative called eCHAMP**, successfully piloted in 2008-09 at five Oregon districts; and 2) support funding and teacher training for middle and high schools to start implementing the nationally-renowned **pre-engineering curricula of Project Lead the Way (PLTW)**.

Bruce Schafer, executive director of industry affairs and ETIC, says, “Many fast-growing, high-paying, and rewarding careers require degrees in engineering, computer science, and material science. We want to spark the interest and involvement of more and more Oregon students in engineering, and prepare them academically for these fields so that ultimately they can become our future innovators. We hope these grants help schools that want to enrich their students’ opportunities and math/science achievements.”

ETIC encourages Oregon high schools to view more information and apply at <http://www.ous.edu/bapp/bopps/view/1656>. Grantees will be determined through a competitive application process. Applications should be submitted by January 15, 2010. Awards will be made on February 15, 2010, and the grant period is through June 2011.

### **eCHAMP**

High schools across Oregon have extracurricular sports teams participating in a variety of leagues, and seasoned teachers and coaches are key to the athletic skills that team members develop as well as the teams’ success. Now Oregon high schools can provide that same opportunity to high school students to learn about the “sport” of engineering through eCHAMP. Just like athletic teams, these engineering teams generally attend a regional or statewide competition to share their results and compete for awards, and benefit from the learning, inspiration, teamwork, scholarships, and rewards that competitive activities provide.

The eCHAMP coaching program was piloted with great success during the 2008-2009 school year at five Oregon school districts: Cascade, Hillsboro, Portland, Sherwood and Tigard-Tualatin. The available ETIC grants will provide stipend funds to be matched by the school district with the goal of expanding a sustainable, engaging student learning opportunity to more Oregon schools. The funds can be used to pay half the stipend cost of a for engineering or technology coaches (school employees and teachers) as well as up to \$4,000 for first-year materials and equipment to get a new program started. There are numerous team programs already in place for schools to adopt, including *FIRST* LEGO League, *FIRST* Tech Challenge, *FIRST* Robotics Competition, Lemelson-MIT InvenTeams, Oregon Game Project Challenge, and Design for the other 90%.

## **Project Lead the Way (PLTW)**

Project Lead the Way (PLTW) is a nationally recognized pre-engineering curriculum program offered in many high schools across the country, and in 2007 was recommended by the National Academies as one way that U.S. education could become more competitive.<sup>1</sup> The program gives students the opportunity to learn about engineering and technology in an academically rigorous way at the same time they learn the connections between engineering and traditional math and sciences courses. Selected Oregon middle schools and high schools will receive grants underwriting some of the start-up costs of the PLTW program, including support for teacher training, classroom equipment, supplies, and software.

PLTW provides curricula and evaluation tools so that teachers can focus on teaching rather than creating materials. Oregon Institute of Technology (OIT) offers a rigorous two-week institute each summer that allows teachers to learn how to teach a particular PLTW course at the same time they gain hands-on experience with the technology associated with the course. These summer workshops plus ongoing support from the national PLTW program help assure that teachers will be successful in teaching PLTW courses. So far, 78 Oregon teachers have attended PLTW training at OIT and currently, 34 Oregon schools are offering at least one PLTW course.

Studies have shown that PLTW students achieve significantly higher scores in reading, math, and science.<sup>2</sup> Peter Schmurr of Glencoe High School in Hillsboro teaches several PLTW classes, and he says he chose the program because he “wanted to find a good science, technology, engineering, and mathematics (STEM) curriculum rather than continuing to try to reinvent the wheel.” Steve Day, principal of the Health and Science School in the Beaverton School District chose PLTW and made a case for implementing the program at his school by citing the achievement gains that students receive. Because of the demonstrated success of the program, ETIC is committed to help more Oregon schools adopt the curriculum, and give more students access to this tremendous learning opportunity.

*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](http://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](http://www.ous.edu).*

— OUS —

<sup>1</sup> *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*, prepared by the National Academy of Engineering, the National Academy of Sciences, and the Institute of Medicine, pp. 5-16.

<sup>2</sup> A study done by the Southern Regional Education Board was particularly persuasive in this regard. See Southern Regional Education Board Research Brief, July 2009, [http://www.sreb.org/publications/2009/09V15\\_PLTW\\_Research\\_Brief.pdf](http://www.sreb.org/publications/2009/09V15_PLTW_Research_Brief.pdf)