



Oregon
University
System

ENGINEERING/TECHNOLOGY AFTER-SCHOOL CHAMPIONS PILOT PROGRAM PROPOSAL

THE PROPOSAL: The Oregon Pre-engineering and Applied Science Initiative (OPAS), an effort of the Oregon Engineering and Technology Industry Council (ETIC), is seeking funding to pilot a new youth program: **Engineering/Technology After-School Champions. This new pilot program will partner with Oregon high schools to provide stipends to local school engineering coaches or “champions,” who would lead extracurricular after-school engineering-based activities for Oregon students.**

BACKGROUND: The engineering and technology sector is a strong component of Oregon’s economy, and computer or technological expertise is critical to many Oregon industries. However, Oregon high school student interest in engineering and applied technology university degree programs has been flat in engineering, and has shown a significant decline in computer science. This is of critical concern to local industry leaders, who rely on the skills, knowledge, and innovations of college graduates, and to public and educational advocates, who are working to increase the educational attainment and opportunities for all Oregonians to contribute and succeed in an increasingly global-based economy.

Through their work with K-12 teachers and administrators, OPAS leaders found that high school students do not have sufficient opportunities to explore the hands-on excitement of engineering and applied science careers. While Oregon schools are focusing on increasing rigor in high school math and science requirements, these efforts in college preparation can be strengthened by extracurricular programs providing hands-on engineering-based learning. Extracurricular engineering activities can give the experience of “aha!” moments that come with engaging in real-world problem solving. These hands-on engineering activities can also make meaning and context for the foundations learned in classroom lessons, and foster preference for engineering and technical careers. OPAS leaders are therefore working **to increase after-school opportunities for Oregon students to experience real, hands-on engineering to meet the future work force needs of Oregon’s economy in high tech and other sectors.**

The engineering champion program is based on a common model: schools currently offering teacher stipends have been successful in developing teacher champions for a number of other extracurricular programs including athletics, band, mock trial, debate, choir, drama, and others. A number of state and national engineering challenges, competitions, and exhibitions are available for schools to participate in, but the lack of competitive teacher stipends to encourage coaching of these activities is limiting the number of school-sponsored teams.

FUNDING: OPAS has proposed a program to match school funds in establishing engineering coaching stipends, provided that the schools agree to pick up full funding after 3 years. The attached chart (A) shows how this seed funding (\$200K per year) is expected to grow into a sustainable funding structure after 6 years. ETIC has included \$400K for this proposal to seed stipends for Oregon schools, as part of a 2009-2010 Oregon Biennium Policy Option Package, pending approval by the Governor and Legislature. Under this funding model, OPAS projects that over 2,000 students could benefit from this program by 2015 (see Chart B).

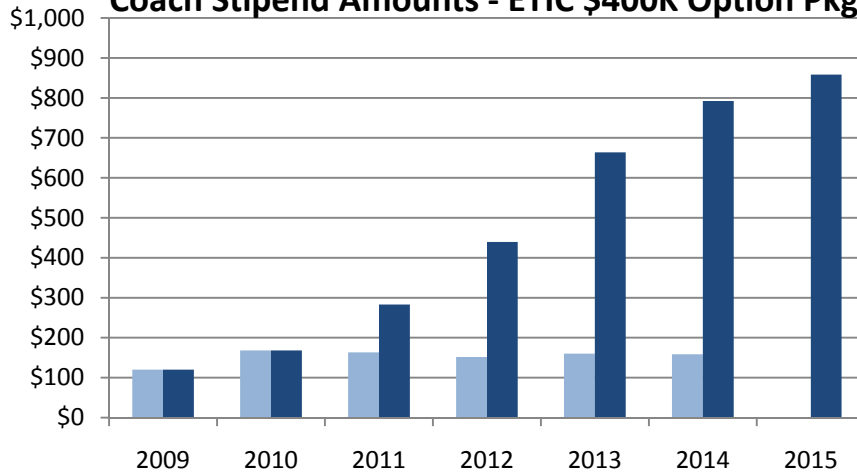
A five school, \$50K pilot program has been defined for the 2008-2009 school year to fine-tune and test this model, and to answer procedural questions as how best to administer funding and maximize the effectiveness of the program. Five schools have already obtained stipend matching commitments from their schools and teachers are already coaching engineering teams and clubs. OPAS has identified one foundation willing to commit a significant part of the needed \$50K, and is seeking additional sources to complete the funding needed for this pilot program.

INFO: Copies of the complete ETIC proposal and Pilot program are available upon request. Please contact, Ben Manny, chair of the ETIC/OPAS Motivate workgroup (bmanny@verizon.net) or Don Domes, teacher and TechStart Education Foundation Board member (domesd@hsd.k12.or.us) for more information.

The Oregon Engineering and Technology Industry Council (OregonETIC.org) was established in 1997 by the Oregon Legislature with the mission of making post-secondary engineering and technology education a strategic resource that fuels the Oregon economy and creates opportunity for all Oregonians. ETIC has set a goal to double the number of engineers produced by Oregon schools to meet future work force needs.

Chart A:

Coach Stipend Amounts - ETIC \$400K Option Pkg.



Dollar Amounts in Thousands

■ Stipend
■ School contribution

Chart B: Projected Students in Teams and Clubs

