

Engineering and Technology Industry Council New Initiative Proposal Biennium from July 1, 2005 to June 30, 2007

Campus: Eastern Oregon University

Contact Name: John Miller (541.962.3511 john.miller@eou.edu)

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Summary of Proposal: \$100,000 for Pre-college Program (plus 50% match)

Goals

- Create a program parallel to “Girls in Science” that reaches out to boys or uses a gender-neutral approach to reach precollege youths.
- Develop a niche, focused precollege program to include technology, science and engineering.
- Enroll 300 students per year in precollege program.
- Efficiency and access – Pre-college programs to prepare and encourage Oregon’s children.
- Themes from Governor and OSBHE – Access.
- Economic investment focus – preparing a quality workforce and citizenry.

Investment Description

- \$100,000 to precollege outreach programs aimed at potential science and engineering students.
- Currently, EOU offers a “Girls in Science” program; however, no such program exists yet for boys, nor a gender- neutral program.
- EOU recognizes the need to reach out not only to girls at the precollege level, but to all students to expand access to and encourage all students to study and prepare for technology, science, and engineering study at the college level.
- Program will use existing support structures and proven techniques to efficiently roll out an expanded program. Some ideas include:
 - Create opportunities for students to visit the campus and see science, technology and pre engineering students and faculty – Mentors and role models.
 - Allow talented students to enroll in certain courses and experience college while still in high school.
 - Use a “camp” environment to expose students to science, technology, and engineering in friendly environment.
 - Help students to develop their technical skills early.
 - Reduce the distance between science and technology and students’ everyday lives. Increase student confidence and expand possibilities.
 - Capitalize on existing relationships with OHSU and others.

Results

Several OUS campuses, including EOU, offer some level of science and engineering outreach to children and teenagers. This investment supports the development and implementation of a regional outreach program targeting students in our primarily rural schools in the region. This investment helps to reduce the urban/rural divide.

Students, especially students in rural Oregon, may not have been exposed to science, technology and engineering study and may feel discouraged or overwhelmed by these topics. The results of this program will be to make students aware at an early age of that science, technology and engineering study is within their reach. The need to remove objections and foster a curiosity for science and technology in our young people is vital to the economic health of the region. Without students interested in science and technology, the regional economy will gravitate back to the highly cyclical agribusiness and natural resources base that has existed here for years. However, the ability of this industry base to absorb a larger number of graduates is questionable, so young working age people may find it necessary to leave the area or accept lower paying service-oriented work, such as a checker at Super Wal Mart.

We already operate our Girls in Science program. We will add a gender-neutral program and will seek to target the relatively large Native American and Hispanic populations located in our region. The program gives students a more complete perspective on careers in engineering and the sciences, develops technical skills, improves confidence, stresses the importance of math and other study, exposes students to role models, helps develop curiosity about these fields, and shows students that these topics are not remote, but are part of their everyday lives.

The Third International Mathematics and Science Study by National Science Foundation in Arlington, Va. notes:

On average, U.S. students study more topics within science and math than their international counterparts do. This creates an educational environment that "is a mile wide and an inch deep." For instance, eighth graders in the United States cover about 33 topics in math versus just 19 in Japan. Among science courses, the international gap is even wider.

As a result of our small, rural location and issues such as those cited by the NSF study, we plan to sharply focus our efforts to develop high quality programming in areas where EOU can excel, rather than attempt to serve all with mediocrity.

By capitalizing on the successes of existing programs and expanding cooperative efforts, we will increase exposure of precollege programs available in eastern Oregon through state and Federal regional offices, such as:

- 4-H Missions in Space Program
- National Network for Science and Technology
- SPACES: Preparing Kids for a High-Tech and Global Future

To measure results, we plan to track contact hours in the precollege programs and report on our success in meeting the goals below. Specifically, the funds support summer camps, weekend college activities and outreach to middle and high schools. The result will be that middle and high school students will be afforded multiple opportunities to participate and to participate at different levels of commitment.

Proposed Investment and Private Support Forecast (\$M)

	7/1/05- 6/30/06	7/1/06- 6/30/07	Total
Proposed OUS Investment (\$M)			
(1)	0.05	0.05	0.10
			0.00
Subtotal	0.05	0.05	0.10
Expected private support (\$M) (2)	0.03	0.03	0.05
Total (\$M)	0.08	0.08	0.15
New Faculty Supported (FTE) (3)	0.0	0.0	0.0
Notes:			
(1) Use as many lines as you need to give the proposed new investment(s)			
(2) Consistent with ETIC Private Support Policy dated 1-23-02.			
(3) To be hired with ETIC funds during 2005-2007 biennium.			

Metrics Forecast:

	Baseline	Projected			
	AY 99	AY06	AY07	AY08	AY09
(1)					
Pre-college contact hours (5)	100	1,000	1,500	1,800	2,000
Notes:					
(1) List metrics including those relevant from Core Proposal template and others relevant to your proposal. If you use a metric that is also covered in your Core Proposal, the forecasted results that you give above should be the combined result of your Core Proposal and the investment described in this document.					
(5) Pre-college students participating in pre-college engineering, technology, computer science, math, and science programs					