

**Engineering and Technology Industry Council
Campus Investment Proposal
Biennium from July 1, 2007 to June 30, 2009**

Campus: Eastern Oregon University

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Summary of Proposal:

EOU's Computer Science & Multimedia Studies program seeks to enhance its course offerings, increase number of faculty, and improve outreach to rural Oregon Communities. In addition, the university seeks to increase enrollment of minority and female students in computer science.

Vision Statement

Eastern Oregon's economic, educational and cultural development requires increased interest and involvement in science and technology. EOU seeks to support this interest by

- Maintaining and enhancing excellence in undergraduate science and technology education;
- Continuing outreach to the surrounding community K-12 schools; and
- Increasing enrollment of minority and female students in science and technology degree programs.

Aspirational Peers

Oregon Institute of Technology, also a smaller Oregon public institution, educates many students in computer science and other applied sciences. OIT has demonstrated the ability to develop new innovative programs.

Wake Forest University's computer science program, like EOU's, incorporates digital media and multimedia. WFU has become a leader in the development of curriculum materials for these emerging fields of study.

Long-term Goals

By 2020:

- Double the number of Bachelor's degrees awarded (4.5% increase per year)
- Increase minority and female student enrollments to 30% of total
- Begin developing MS program
- Restart pre-engineering program
- Increase AI and robotics components of CS and other sciences
- Develop partnerships with local technology industry such as PNNL and DSquared Development, Inc.

Investment Description

Enhance existing labs and related equipment. Previous ETIC funds provided the CS program with a significant amount of new equipment, such as replacement software and servers for the labs, a 12-processor parallel computing server, and digital circuit board kits for the Computer Architecture course. Much of the equipment has a limited useful life and requires periodic replacement.

Increase number of full-time faculty. The CS program needs to expand the elective course offerings in order to attract top quality students, and this requires skilled faculty to teach the additional courses. In addition, we have identified robotics and AI as an excellent vehicle for outreach and recruitment in the surrounding rural area, and wish to increase our offerings and add new courses. One important reason is the increasing opportunity for the use of robotics and AI in modern agricultural and other emerging applications (such as renewable energy resources). Another is to prepare potential mentors for FIRST robotics teams in the Eastern Oregon region; FIRST robotics appears to generate a great deal of enthusiasm for technological study among pre-college learners.

In addition, the EOU CS, Math and Physics programs have begun jointly working on curriculum such as computer architecture and an open source software development project. EOU has just received a substantial grant to continue work on the Rural Economic Development Center here in Eastern Oregon. The CS program is significantly involved in this important initiative, through our work in spatial mapping and GIS systems along with AI applications and other yet-to-be determined areas.

Results and Benefits

We believe that improved pre-college outreach such as Girls in Science and the existing FIRST Lego League Tournament and future FIRST tournaments should improve enrollments in computer science, engineering and physics. These outreach activities appeal to students of both sexes and from many ethnic backgrounds, providing a means of breaking the traditional viewpoint of technological study as a white-male-only endeavor. Whether these students attend EOU or another institution, the outreach efforts will be beneficial.

For those students who do elect to attend Eastern, an expanded, full-time, tenure track faculty dedicated to excellence in education will help them complete their degrees and proceed into useful, creative positions across the state. Up-to-date facilities and challenging courses will be essential for student achievement.

During the 2007–2009 biennium we anticipate increasing the FLL outreach to cover the 11-county area and making the first steps to prepare for mentoring FIRST teams in this region. We anticipate steady growth in the number of students enrolled as CS majors and a differential increase in female and minority students. We also anticipate the development of contacts with local technology firms such as PNNL for potential partnerships and student internship opportunities.

Proposed Investment and Private Support Forecast (\$M)

		2007-2009 Biennium
1		
2	Proposed State investment (\$M)	
3	Existing programs (2)	\$ 0.45
4	New Programs	\$ -
5	Subtotal	\$ 0.45
6	Expected private support (\$M) (4)	\$ 0.89
7	Other	\$ -
8	Total (\$M) (7)	\$ 1.34
9	Personnel supported (FTE) (5)	
10	Existing faculty (1)	1.0
11	New faculty(6)	1.0
12	Existing staff (1)	0.0
13	New staff(6)	0.0
14	Total	2.0
15	Uses of proposed investment	
16	New facilities (7)	\$ 890,000
17	Improvements to facilities (8)	\$ 50,000
18	Laboratory equipment	\$ -
19	Other equipment (9)	\$ 150,000
20	Other one-time expenses (10)	\$ 50,000
21	Existing faculty salaries & benefits (1)	\$ 85,000
22	New faculty salaries & benefits (6)	\$ 85,000
23	Existing staff salaries & benefits (1)	\$ -
24	New staff salaries & benefits (6)	\$ -
25	Services & supplies (11)	\$ 30,000
26	Total (7)	\$ 1,340,000
	Notes/instructions. (Delete these notes and replace with your own in the document you submit.)	
	(1) FTE - Hired with ETIC funds through June 2007. Includes 44%	
	(2) Programs started with ETIC funds through June 2007.	
	(4) Consistent with ETIC Private Support Policy dated 1-23-02.	
	(5) FTE expressed as percent of full time over 2 years of biennium. For instance, a new full-time faculty member hired on 7/1/08 would be counted as 0.5 because he/she joined half way through the biennium.	
	(6) To be hired with ETIC funds during 2007-2009 biennium.	
	(7) Regional rural development center at EOU, funded through ED	
	(8) upgrades to existing UNIX and network security labs	
	(9) additional lab (current facility only has 24 seats, some of our classes are double this size)	
	(10) develop and implement K-12 outreach programs and training	
	(11) includes software for faculty and labs, conference travel and presentations	

Metrics Forecast (for programs/departments receiving ETIC funding):

	Baseline	Projected			
	AY 99 (1)	AY09	AY11	AY13	AY20
Undergraduate student credit hours	0	2050	2250	2450	3320
Graduate student credit hours (2)	0	tbd	tbd	tbd	tbd
Bachelor's degrees granted (3)	0	12	14	15	20
Master's degrees granted (4)	0	tbd	tbd	tbd	tbd
Externally-funded research expenditures (5)	0	\$50,000	\$50,000	\$100,000	\$100,000
Notes/instructions					
<p>(1) The EOU CSMM program began in 1999. In 2004, the first year for which detailed statistics are available, we had 64 CSMM majors (students actually taking classes on campus) who took 254 classes for a total of 814 credit hours. Since many non-majors take courses offered by the program, the total number of undergraduate student credit hours taught in the program was 1660.</p>					
<p>(2) Although we intend to explore offering an MS in CS, new professional faculty will be necessary before a graduate program could be offered. At this point, we do not know when that will be possible, but expect to have a plan in place by the beginning of the next biennium.</p>					
<p>(3) Estimated on the basis of a 4.5% annual increase.</p>					
<p>(4) Estimated on the basis of a 4.5% annual increase. In 2005, we granted 10 BS degrees.</p>					
<p>(5) Currently, EOU has initiated an Office of Research Grants and Contracts. We expect to receive at least one and perhaps more grants in the next biennium. Note that the primary focus of our institution is teaching and not</p>					