UTAH SYSTEM OF HIGHER EDUCATION
Building a Stronger State of Minds

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July 12, 2017

MEMORANDUM

TO: State Board of Regents

FROM: David L. Buhler

SUBJECT: Technology Initiative Advisory Board - Funding Allocations from the 2017 Legislative Session

Issue

This item requests approval to allocate $4,000,000 of Utah's Engineering and Computer Technology Initiative funding that was appropriated by the 2017 Legislature. In accordance with state statute, institutional allocations of new Engineering and Computer Technology Initiative appropriations are recommended by the Technology Initiative Advisory Board (TIAB) and approved by the Board of Regents.

Background

The 2001 legislature approved SB61: *Enhancements to the State Systems of Public and Higher Education*. This legislation established an Engineering and Computer Technology Initiative within the Utah System of Higher Education (USHE) to increase the number of students graduating from engineering, computer science, and related technology programs. During the last 16 years, the Engineering and Computer Technology Initiative has been successful in increasing the number of graduates in these areas within USHE. Key provisions of SB61 and a list of the TIAB members are included in the attachment.

The TIAB, appointed by the Governor, was established to recommend funding allocations to the Board of Regents. During the 2017 legislative session, $4,000,000 of on-going funds were appropriated to the initiative for distribution to USHE institutions commencing with the 2017-2018 fiscal year (FY18).

The following table gives a summary of funding over the life of the initiative (FY02 through FY18):

Engineering and Computer Technology Initiative
Funding History
FY 02 – FY18

	Funds Appropriated		
Year	Ongoing	One time	Loan Forgiveness*
2001-02	1,000,000	2,500,000	500,000
2002-03	2,000,000	1,000,000	0
2003-04	500,000	0	50,000
2004-05	500,000	500,000	0

2005-06	1,500,000	500,000	0
2006-07	500,000	700,000	0
2007-08	3,000,000	2,000,000	0
2008-09	0	250,000	0
2009-10	0	2,000,000	0
2010-11	0	0	0
2011-12	0	0	0
2012-13	2,500,000	0	0
2013-14	0	0	0
2014-15	0	0	0
2015-16	3,500,000	1,000,000	0
2016-17	0	0	0
2017-18	4,000,000	0	0
Total	19,000,000	10,450,000	550,000

**In 2001, SB 61 established a loan forgiveness fund to assist students in obtaining degrees in engineering and computer science. In 2009, SB105 changed the loan forgiveness program to a scholarship program for the purpose of recruiting, retaining, and training engineering and computer science and related technology students. Scholarship funds were part of the $2,500,000 appropriation during the 2012 legislative session.*

Since inception, over 32,000 degrees targeted by the initiative have been awarded by institutions within USHE. According to the most recent data available the following degree completions show growth at key points in time.

Degree Category	FY00- Prior to Initiative	FY14- Last Funding Appropriation (effective FY15)	FY16- Latest Year Graduation Data Available
Engineering	862	1321	1626
Computer Science	513	958	1312
Total	1375	2279	2938

In making the current $4,000,000 appropriation the legislature specified the following intent language:

> The Legislature intends that the funds appropriated for the Engineering Initiative be allocated to institutions based on the increases in graduates from engineering, computer science, and technology degree programs since Fiscal Year 2014. The Legislature further intends that Engineering Initiative funds support undergraduate programs that meet workforce needs for the highest demand occupations. Recommendations for appropriation and follow up reporting on program success are to be reviewed by the Business, Economic Development, and Labor Appropriations Subcommittee and the Higher Education Appropriations Subcommittee.

The TIAB used legislative intent language to guide its recommended allocation of funds. Specifically, the TIAB considered: 1) Graduation increase since 2014 in areas targeted by the initiative, and 2) High demand occupations. The University of Utah, Utah State University and Weber State University had the most graduates since 2014 and also had the highest rates of graduation increases. Consistent with the intent language, the highest funding recommendations were made to these three institutions.

Requests from institutions exceeded the amount of available funds. To match allocations to the $4,000,000 of available funding, the TIAB focused its recommendations on requests for new faculty only. Requests for one-time funds and requests for on-going staff positions were not considered. Faculty requests were limited to programs that prepare students for the highest demand occupations. Based on data from the Utah Department of Workforce Services and the Economic Development Corporation of Utah, the four highest demand occupations that were also part of institutional proposals included: 1) Computer Science, 2) Mechanical Engineering, 3) Electrical/Computer Engineering, and 4) Civil Engineering. The TIAB recommended that institutions use funding from this new appropriation to increase the number of faculty members in programs that currently exist within these disciplines.

Given the considerations indicated above, the TIAB provided a unanimous recommendation that funding from the 2017 Legislature be allocated and distributed to the institutions effective FY18 consistent with legislative intent language as follows:

Institution	Graduation Growth Increase from FY14 to FY16	Percent of Total Graduation Growth	On-going Funds	Maximum Number of Positions Funding will Support with 50% Match*	Number of Positions Requested by Institution
University of Utah-College of Engineering	163	24.73	$1,540,000	25	29
Utah State University	127	19.27	$900,000	15	18
Weber State University	168	25.49	$840,000	14	16
Southern Utah University	24	3.64	$60,000	1	2
Snow College	20	3.04	$60,000	1	1
Dixie State University	5	0.76	$60,000	1	8
Utah Valley University	66	10.02	$480,000	8	10
Salt Lake Community College	86	13.05	$60,000	1	1
Total	659	100.00	$4,000,000	66	85

*Actual number of faculty hired to be determined by institutions given funding allocations, unique qualifications of each faculty member hired, etc.

Policy Issues

State statute requires the TIAB to recommend funding allocations to the Board of Regents. The process to recommend funding allocations has been followed consistent with state statute and legislative intent language.

Commissioner's Recommendation

The Commissioner recommends the Board of Regents approve the allocation of Engineering and Computer Technology Initiative funds appropriated by the 2017 Legislature as recommended by the Technology Initiative Advisory Board and that these funds be distributed to institutions effective with the 2017-2018 fiscal year with expectation that funds are matched in accordance with Utah Code 53B-6-105.9.

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David L. Buhler
Commissioner of Higher Education

DLB/BKC
Attachment

Attachment

Key provisions of SB61:

1. Established a goal to triple the number of graduates from USHE institutions in engineering, computer science, and related technology.
2. Directed the Regents to establish rules providing the criteria for those fields of study that qualify as "related technology."
3. Provided supplemental funds for equipment purchases to improve the quality of instructional programs in engineering, computer science, and related technologies.
4. Established a student scholarship to encourage enrollment in programs included in the initiative.
5. Provided funding for USHE institutions to hire and retain qualified faculty to teach in initiative programs.
6. Increased program capacity by funding new and renovated capital facilities, and funding for new engineering and computer science programs.
7. Created a Technology Initiative Advisory Board to make recommendations to the Board of Regents in its administration of the initiative. Required that the advisory board be composed of individuals appointed by the Governor from business and industry who have expertise in the areas of engineering, computer science, and related technologies.

Technology Initiative Advisory Board Members

- John Sutherland (Chair) , Brigham Young University
- Susan Johnson (Co-Chair), Futura Industries
- Reed Brown , Mathnasium
- Vance Checketts , Dell EMC
- Roland Christensen , Applied Composite Technology
- Ed Ekstrom , Quail Creek Capital
- Ed Espe r, Utah Capital Investment Corporation
- Mark Ripke , Boeing
- Chuck Taylor , SyberJet Aircraft
- J. Howard, VanBoerum , VanBoerum & Frank