February 19, 2021

Engineering and Computer Technology Initiative Annual Report from the Technology Initiative Advisory Board

In 2001, the Utah Legislature approved S.B.61, *Enhancements to the State Systems of Public and Higher Education*, which established the Engineering and Computer Technology Initiative. The purpose of the initiative was to address a statewide need to increase the number of students graduating from engineering, computer science, and related technology programs. The legislation created the Technology Initiative Advisory Board with membership appointed by the Governor and requires it to report annually to the Board of Higher Education. The initiative has had a significant impact on the growth and health of Utah's economy. Below are key highlights from the TIAB.

Highlights from this year's activities:

- The TIAB set a goal to grow engineering and computer technology graduates by 400. Participating institutions exceeded the goal. Total graduates were up by nearly 100 more than the estimate made in the summer of 2020:
  - Graduates increased by 434, from 3,283 in 2018 to 3,717 in 2020.
  - UVU had a significant growth in graduates with a 144 increase.
  - SUU increased by 49 graduates.
  - Snow College increased 82% in graduates, growing from 34 in 2018 to 62 in 2020.
- The TIAB is predicting continued growth in graduates in the coming two years. COVID-19, caused budget and hiring freezes across institutions. Due to the pandemic response, some of the 2019 appropriated dollars were not fully expended. Therefore, the Technology Initiative Advisory Board is not asking for additional funding in 2021.
- The TIAB plans to work with the Commissioner to include potential appropriation requests for the Engineering Initiative in the 2022 legislative session.

Commissioner's Recommendation

This is an information item only; no action is required.

Appropriated Funds

The following table summarizes funding appropriated to the initiative between FY2002 and FY2020.

	Engineering and Computer Technology Initiative Funding History 2002-2020		
	Funds Appropriated		
Year	**Ongoing**	**One time**	**Scholarship***
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
2018-19	$0	$0	$0
2019-20	$5,000,000	0	0
Total	**$24,000,000**	**$10,450,000**	**$550,000**

In 2001, SB61 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. At that time scholarship funding was $39,200 annually. In FY13 an additional $300,000 of ongoing scholarship funding was allocated to institutions by the Board of Regents from the FY13 $2,500,000 appropriation. This $300,000 of scholarship funding did not roll into the previously legislated scholarship funding program but went directly to institutions.

Degree Completion Results

The TIAB set a goal to grow Engineering and Computer Technology graduates by 400 in the 2018 – 2020 academic years. Participating institutions exceed this goal. Although the initiative has been underway since 2001, base year comparisons measured graduation counts since FY2018.

	Comparison of Degree Completions for the Engineering and Computer Technology Initiative							
	FY2018 (Base Year)			**FY2020**			**Change from FY2018 to FY2020**	
	CS	**Eng.**	**Total**	**CS**	**Eng.**	**Total**	**Change**	**Percent Change**
Total	1553	1730	3283	1758	1959	3717	434	13.22%

For reporting purposes, programs that qualify for the initiative are grouped into two categories, namely, engineering and computer science. The 1,959 engineering degrees awarded in FY2020 is more than double the 862 engineering degrees awarded in FY2000, and the 1,758 computer science degrees awarded in FY2020 is more than triple the 513 computer science degrees awarded in FY2000. There has been a consistent increase in total number of degrees awarded in the targeted areas. Since the initiative began, a total of 50,242 computer science and engineering degrees have been awarded. This initiative has resulted in a positive cumulative impact for the state. It is believed that this targeted investment has made a significant difference for Utah.

Completions by Institution

FY2018 – FY2020				
Engineering and Computer Science Discipline Graduation Count				
Institution	**FY2018**	**FY 2020**	**Increase**	**Percent Increase**
University of Utah	1,353	1376	23	1.70%
Utah State University	671	741	70	10.43%
Weber State University	431	494	63	14.62%
Southern Utah University	61	110	49	80.33%
Snow College	34	62	28	82.35%
Dixie State University	41	56	15	36.59%
Utah Valley University	481	625	144	29.94%
Salt Lake Community College	211	253	42	19.91%
Total	3,283	3,717	434	13.22%

The TIAB will use information provided in this report to determine possible future requests for legislative funding and to recommend allocation of any additional funding received in accordance with legislative intent that specifies funds should be allocated based on graduation increases in targeted areas and in high demand occupations.