

**BOARD OF GOVERNORS**  
**August 6-7, 2015**  
**Colorado State University-Pueblo, Occhiato University Center**

**WEDNESDAY, August 5, 2015**

Chancellor's Reception, Waterfront on the Riverwalk, 101 South Main, Suite 400, Pueblo (*social event*) 5:30 p.m.

**THURSDAY, August 6, 2015**

Board of Governors Breakfast (*Ballroom 109*) 7:30 a.m. – 8:00 a.m.

- CSU-Pueblo Student Housing Overview

Tour of Student Housing 8:00 a.m. – 9:00 a.m.

**COMMENCE BOARD MEETING – CALL TO ORDER** (*Ballroom 109*) **9:00 a.m. – 5:00 p.m.**

**1. PUBLIC COMMENT** (*15 min.*) 9:00 a.m. – 9:15 a.m.

**2. AUDIT AND FINANCE COMMITTEE** – Nancy Tuor, Chair (*2.5 hrs.*) 9:15 a.m. – 11:45 a.m.

- CSU-Pueblo Housing Presentation (*30 min.*)
- State Budget – TABOR Briefing (*10 min.*)
- Higher Education Funding and Tuition Control Update (HB-1319) (*10 min.*)
- Discussion on CSU and CSU-Pueblo Peer Groups (*10 min.*)
- Tuition Discussion and Review (*20 min.*)
- Campus Budget Presentations (*10 min.*)
- Adoption of Program Plan for CSU Pueblo IT Project (*action*) (*5 min.*)
- Treasury Investment Committee Update (*action*) (*15 min.*)
- Approval of Institutional Plan for Student Fees (*consent*) (*10 min.*)
- CSU System Foundation Update (*10 min.*)
- FY 2016 Audit Plan Review and Update (*15 min.*)
- Other Issues (*5 min.*)

**3. REAL ESTATE/FACILITIES COMMITTEE** – Scott Johnson, Chair (*15 min.*) 11:45 a.m. – 12:00 p.m.

- Approval of Acceptance of Naming Opportunity for CSU (*action*)

Lunch 12:00 p.m. – 12:30 p.m.

**4. EXECUTIVE SESSION** (*45 min.*) 12:30 p.m. – 1:15 p.m.

**5. EVALUATION COMMITTEE** – Rico Munn, Chair (*executive session*) (*3.75 hrs.*) 1:15 p.m. – 5:00 p.m.  
(*Cottonwood Room*)

**Board of Governors Dinner**, Pueblo Country Club, 3200 Eighth Avenue, Pueblo (*social event*) 6:00 p.m.

**FRIDAY, August 7, 2015**

Board of Governors Breakfast with CSU-Pueblo Non-Tenure Track Faculty Leadership 7:30 a.m. – 9:00 a.m.  
(*Middle Ballroom 109B*)

**RECONVENE BOARD MEETING** (*Ballroom 109*) **9:00 a.m. – 2:30 p.m.**

**6. BOARD CHAIR'S AGENDA** (*20 min.*) 9:00 a.m. – 9:20 a.m.

- Presentation of Excellence in Undergraduate Teaching Award – CSU-Pueblo
- National Western Center Resolution in Support of City of Denver Referendum (*action*)

**7. STRATEGIC MAPPING UPDATE** (*20 min.*) 9:20 a.m. – 9:40 a.m.

Colorado State University System  
Board of Governors Meeting Agenda  
August 6-7, 2015

- 8. ACADEMIC AND STUDENT AFFAIRS COMMITTEE** – Jane Robbe Rhodes, Chair (2 hrs.) 9:40 a.m. – 11:40 a.m.
- Approval of Revised Policy 314 (*consent*)
  - Approval of Degree Candidates for AY2015-16 (*consent*)
  - Approval of CSU Manual Changes (*consent*)
  - Approval CSU 2015-16 Program Review Schedule (*consent*)
  - Approval of CSU Graduate Certificates (*consent*)
  - Report on CSU-Global Campus Student Conduct Code
  - Report on CSU-Global Campus Degree Program Changes
  - Approval of CSU-Pueblo 2015-16 Program Review Schedule (*consent*)
  - CSU-Pueblo Degree Candidates
  - Approval of CSU-Pueblo Posthumous Request (*consent*)
  - Approval of CSU-Pueblo Faculty Handbook Change (*consent*)
  - Campus Reports:
    - ♦ Faculty Activity and Promotion and Tenure
    - ♦ Academic Integrity
- 9. APPROVAL OF CONSENT AGENDA** (5 min.) 11:40 a.m. – 11:45 a.m.
- A. Colorado State University System
- Minutes of the June 18-19 2015 Board Retreat and Board and Committee Meetings
  - Institutional Student Fee Plan and Policy
  - Amendment to Board Policy 314
  - Degree Candidates for Academic Year 2015-16
- B. Colorado State University
- Faculty Manual Change – Section D.2.1
  - Faculty Manual Change – Section F
  - Faculty Manual Change – Section I.15
  - Faculty Manual Change – Appendix 1
  - Program Review Schedule 2015-2016
  - Graduate Certificates
- C. Colorado State University-Pueblo
- Program Review Schedule 2015-2016
  - Posthumous Degree
  - Faculty Handbook Change – Section 1.2.6.4
- Break/Working Lunch 11:45 a.m. – 12:00 p.m.
- 10. FACULTY AND STUDENT REPORTS** (1 hr.) 12:00 p.m. – 1:00 p.m.
- A. Faculty Reports
- CSU-Pueblo – Presented by Michael Mincic (10 min.)
  - CSU-Global Campus – Presented by Robert Deemer (10 min.)
  - CSU-Fort Collins – Presented by Paul Doherty (10 min.)
- B. Student Reports
- CSU-Pueblo – Presented by Sarah Zarr (10 min.)
  - CSU-Global Campus – Presented by Megan Schulze (10 min.)
  - CSU-Fort Collins – Presented by Jason Sydoriak (10 min.)
- 11. CHANCELLOR AND PRESIDENTS' REPORTS** (45 min.) 1:00 p.m. – 1:45 p.m.
- Chancellor and Colorado State University President's Reports – Presented by Tony Frank (25 min.)
  - Colorado State University-Pueblo – Presented by Lesley Di Mare (10 min.)
  - Colorado State University-Global Campus – Presented by Becky Takeda-Tinker (10 min.)

Colorado State University System  
Board of Governors Meeting Agenda  
August 6-7, 2015

**12. SYSTEM WIDE REPORTS** (40 min.)

1:45 p.m. – 2:25 p.m.

- Campus Athletic Reports
  - ♦ Colorado State University-Pueblo – Presented by Joe Folda, Athletic Director (25 min.)
  - ♦ Colorado State University – Presented by Joe Parker, Athletic Director (15 min.)

**13. BOARD MEETING EVALUATION** (5 min.)

2:25 p.m. – 2:30 p.m.

**ADJOURNMENT**

**2:30 p.m.**

**Next Board of Governors Board Meeting:** October 1-2, 2015, CSU, Fort Collins

**APPENDICES**

- I. Board Correspondence
- II. Construction Status Reports
- III. Higher Education Readings

# Section 1

## *Public Comment*

Statement to the Colorado State University Board of Governors

Jane M Fraser

6 August 2015

My name is Jane Fraser. I am president of the CSU-Pueblo chapter of AAUP, the American Association for University Professors. The AAUP is one voice for faculty on this campus.

The university has focused recently on the recruitment and retention of students. That focus has had mixed success. Retention is up, but enrollment of new first year students is down 24% compared to the same time last year.

Efforts to recruit and retain students depend crucially on the ability of the university to recruit and retain the faculty who design and deliver the academic programs. We in the AAUP do not have data on the turnover of faculty, but many faculty members have told us that morale is low and turnover is high.

In fall 2013, President Di Mare charged the University Board for Diversity and Equality to conduct a Campus Climate Survey of all employees at CSU-Pueblo. Some commonly expressed opinions from that survey were that the university does not prioritize academics or faculty, that faculty salaries are low, and that it is hard to recruit and retain faculty. Indeed, the CSU-Pueblo faculty have received one raise in the last 8 years.

We believe that recruitment and retention of high quality faculty is essential to the success of our students. A focus on recruitment and retention of students without a matching focus on faculty is not a sustainable and successful strategy.

In order to support a focus on faculty at CSU-Pueblo, we request that the Board take action by asking the CSU-Pueblo administration for (1) information on faculty turnover in the last five years and (2) a plan to improve the recruitment and retention of faculty. We also ask for (3) a commitment by the Board to provide resources to support raises for faculty at CSU-Pueblo whenever faculty members at CSU-Fort Collins receive raises.

Thank you.

# Section 2

## *Audit and Finance Committee*

**BOARD OF GOVERNORS OF THE  
COLORADO STATE UNIVERSITY SYSTEM  
AUDIT and FINANCE COMMITTEE MEETING AGENDA  
August 2015**

Finance

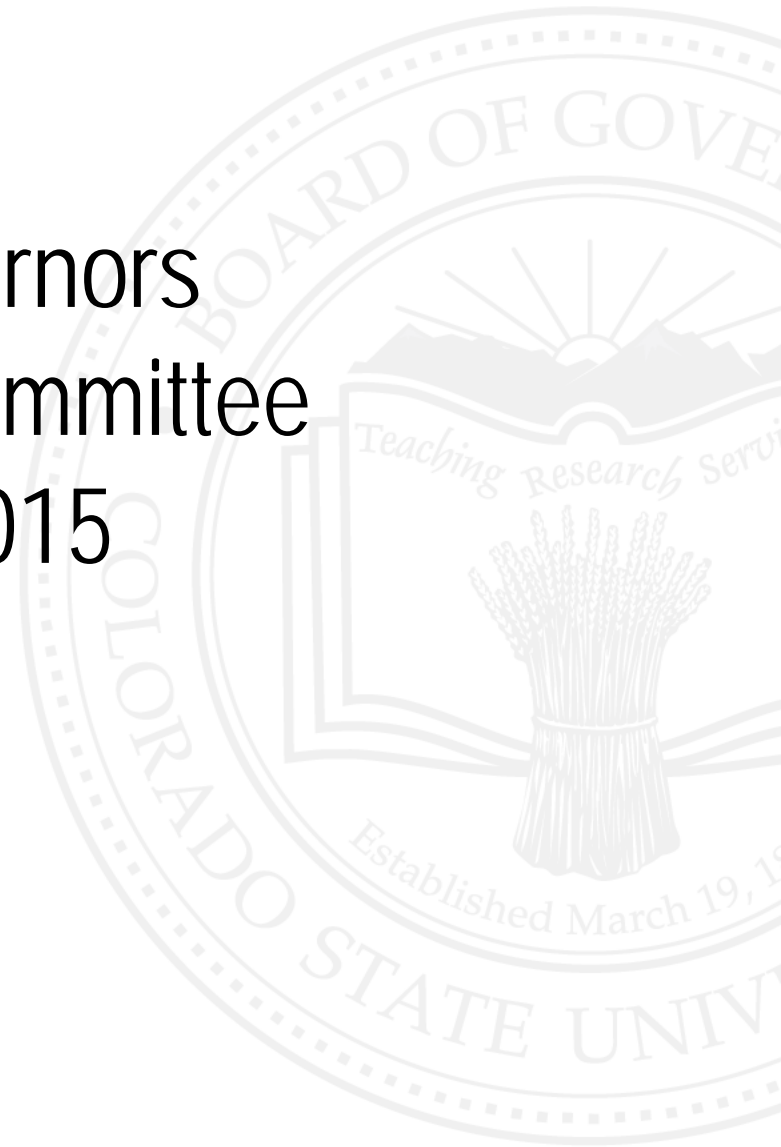
1. **Discussion/Presentation** – CSU Pueblo housing presentation **30 min.**
2. **Discussion/Presentation** – State Budget – TABOR briefing **10 min.**
3. **Discussion/Presentation** – Higher Education funding and tuition control update (HB-1319) **10 min.**
4. **Discussion/Presentation** – Peer groups for CSU and CSU-Pueblo **10 min.**
  - a. How are they determined by CCHE
  - b. Why are they developed
5. **Discussion/Presentation** – Tuition discussion and review **20 min.**
  - a. National peers
  - b. State peers
  - c. Student debt
6. **Discussion/Presentation** – Campus budget presentations **10 min.**
7. **Discussion/Presentation/Action** Adoption of Program Plan for CSU Pueblo IT project **5 min.**
8. **Discussion/Presentation/Action** – Approval of certain Investment Committee members for treasury operations and performance review information for local HE foundations **15 min.**
9. **Discussion/Presentation/Action** – Institutional Plan for Student Fees and certain CSU fees and cap approvals **10 min.**
10. **Discussion/Presentation** – Update on CSU System Foundation **10 min.**

Audit

11. **Discussion/Presentation/Action** – Review and update on audit plan **15 min.**
12. **Discussion/Presentation** – Other issues **5 min.**

Board of Governors  
Audit/Finance Committee  
August 6, 2015

**BOARD OF GOVERNORS** *of the*  
**COLORADO STATE UNIVERSITY SYSTEM**





Item #1  
CSU Pueblo Housing Presentation  
(Supplemental Information in Appendix)

# Item # 2

## State Budget Update – TABOR Briefing

# OSPB June Economic Forecast

## OSPB

- General Fund revenue is expected to be \$48.2 million, or 0.5 percent, higher in FY 2014-15 than forecasted in March. However, \$15 million of this increase is from SB 15-255 which credits up to the first \$20 million in severance taxes collected in May and June of this year to the General Fund. The forecast for FY 2015-16 is essentially unchanged from the previous forecast.
- Under this forecast, the State's General Fund reserve is projected to be \$35.6 million above its required amount for FY 2014-15. For FY 2015-16, the reserve is projected to be \$69.0 million below its required amount. This shortfall is mostly due to projections for full transfers to transportation and capital construction under SB 09-228 that were not projected in March.
- TABOR revenue is projected to exceed the Referendum C cap by \$190.4 million in FY 2014-15, \$76.2 million in FY 2015-16, and \$385.2 million in FY 2016-17, meaning that a refund to taxpayers will occur for each of those years under this forecast, unless voters allow the State to retain the revenue. The projected TABOR refunds in FY 2015-16 are below the level that would trigger a reduction in the SB 09-228 transfers to transportation and capital construction. However, as a result of the expected size of the TABOR refunds in FY 2016-17, SB 09-228 transfers are projected to be eliminated.

# Legislative Council June Economic Forecast

- **General Fund and TABOR Outlook**
- **FY 2014-15.** The General Fund will end the year with an estimated \$18.6 million more than required to fully fund the budget and required reserve. Expectations for General Fund revenue increased \$175.8 million relative to March on the strength of individual income tax estimated payments.
- The TABOR refund obligation, however, increased by \$151.2 million to \$220.9 million. This money will be refunded via the earned income tax credit (\$83.6 million) and a sales tax refund (\$137.3 million) on individual income tax returns filed for tax year 2015.
- **FY 2015-16.** General Fund revenue is expected to be \$180.7 million, or 1.8 percent, lower than the amount budgeted to be spent and saved in the required reserve in FY 2015-16. This amount of revenue is sufficient to allow General Fund operating appropriations to increase
- 3.9 percent. In addition:
  - Expectations for General Fund revenue were decreased \$211.5 million, or 2.1 percent, relative to March. Of this, \$43.5 million is a half-year impact resulting from the earned income tax credit becoming permanent in tax year 2016, one year earlier than expected in March.
  - Revenue subject to TABOR will be an estimated \$28.1 million *lower* than the TABOR limit.
  - Full Senate Bill 09-228 transfers to the Capital Construction Fund (\$50.5 million) and the Highway Users Tax Fund (\$201.8 million) will occur.

# TABOR

- The OSPB Colorado Outlook – June 19, 2015 - Taxpayer's Bill of Rights: Revenue Limit
- Background on TABOR – Provisions in the Taxpayer's Bill of Rights (TABOR) – Article X, Section 20 of the Colorado Constitution – limit the growth of a large portion of State revenue to the sum of inflation plus population growth in the previous calendar year. Revenue collected above the TABOR limit must be returned to taxpayers, unless voters decide the State can retain the revenue.
- In November 2005, voters approved Referendum C, which allowed the State to retain all revenue through FY 2009-10 during a five-year TABOR "time out." Referendum C also set a new cap on revenue starting in FY 2010-11. Starting with FY 2010-11, the amount of revenue that the State may retain under Referendum C (line 9 of Table 7 found in the Appendix) is calculated by multiplying the revenue limit between FY 2005-06 and FY 2009-10 associated with the highest TABOR revenue year (FY 2007-08) by the allowable TABOR growth rates (line 6 of Table 7) for each subsequent year.
- Most General Fund revenue and a large portion of cash fund revenue are included in calculating the revenue cap under Referendum C. Revenue that is not subject to TABOR includes revenue exempted by Colorado voters, federal money, and revenue received by entities designated as enterprises, such as public universities and colleges. Table 7 found in the Appendix summarizes the forecasts of TABOR revenue, the TABOR revenue limit, and the revenue cap under Referendum C.
- **TABOR refunds are projected in all three years of this forecast** – TABOR revenue is projected to exceed the Referendum C cap by \$190.4 million in FY 2014-15, \$76.2 million in FY 2015-16, and \$385.2 million in FY 2016-17. Consequently, a refund to taxpayers will occur in all three years under this forecast, unless voters allow the State to retain the revenue. Colorado law currently specifies three mechanisms by which revenue in excess of the cap is refunded to taxpayers: a sales tax refund to all taxpayers ("six-tier sales tax refund"), the Earned Income Tax Credit to qualified taxpayers, and a temporary income tax rate reduction. The refund amount determines which refund mechanisms are used. Figure 37 shows the anticipated refund that will be distributed through each mechanism according to the revenue projections in this forecast and the statutorily defined refund mechanisms.

## Item # 3

### HB 1319 - Higher Education Funding & Tuition Control Update

- The CCHE will consider a new tuition setting policy at its August retreat based on recommendations from the Cost Driver and Analysis team.
- As part of the HB 1319 legislation, the DHE established a Cost Driver and Analysis team to provide the CCHE with a thorough analysis of what is driving costs of higher education in Colorado.
- Overall, the analysis shows that Colorado's public institutions have fewer resources to support their basic operations as compared to similar institutions in most other states.
- Colorado's colleges and universities are doing a good job holding costs down and are already far more efficient than comparable public institutions.

# HB 1319 - Higher Education Funding & Tuition Control Update

## Continued

- Because such a large portion of institutional revenue comes from tuition, setting tuition rates has become political and is strongly impacted by changes in state funding.
- The Cost Driver team, in its recommendation to the CCHE, has emphasized that Governing Boards need to retain flexibility in setting tuition and that a policy that is predictable for students, families and institutions is critical.
- The team has recommended a continuation of the current tuition policy set forth in SB 10-003 which allows governing boards to set resident, undergraduate tuition rates within a set rate and any thing above the set rate would need approval through a Financial Accountability Plan proposal.

## Item # 4

### Peer Groups for CSU and CSU Pueblo

- In 2007, the CCHE adopted a set of peer institutions for each of the 26 public colleges and universities.
- CCHE uses peers in its analysis for the state's master plan and institution performance contracts comparing of a specific institution's performance against that of similar or "peer" institutions.
- The purpose of these peer lists was to develop a funding allocation model for the state.
- With some modifications, these peer lists remain in tact today.



# Item # 5

## Tuition Discussion & Review



Peer Institution, Tuition Only Academic Year 2015-16

Institution	Tuition		
	Resident	Nonresident	
Colorado State University	\$ 8,301	\$ 25,010	
Iowa State University	6,648	19,768	
Kansas State University	6,814	18,077	
Michigan State University	10,848	29,088	
North Carolina State U.	6,220	22,571	
Oklahoma State University*	7,778	20,977	
Oregon State University*	6,888	21,957	
Purdue University	9,208	28,010	
Texas A & M University	9,428	28,020	
U.C. Davis*	11,784	35,808	
University of Colorado	9,312	32,346	
University of Illinois, Urbana	12,036	27,196	
University of Tennessee	10,678	28,868	
Virginia Tech	10,496	26,536	
Washington State University	11,418	24,500	
<b>Average</b>	<b>9,254</b>	<b>25,980</b>	

\*Trimester system tuition and fees - AY based on Autumn/Fall, Winter, Spring quarters.

Colorado Four-Year Institution Tuition, Academic Year 2015-16 (student share after COF)

Institution	Tuition		
	Resident	Nonresident	
Colorado State University	\$ 8,301	\$ 25,010	
Adams State University	5,448	15,960	
Colorado Mesa University	5,748	14,832	
Colorado School of Mines	15,225	32,700	
CSU - Pueblo	5,486	16,491	
Fort Lewis	5,856	16,072	
Metropolitan State College†	5,222	18,859	
U. of Colorado, Colo. Spgs.	6,384	16,680	
U. of Colorado, Denver	7,272	22,416	
Univ. of Northern Colorado*	6,072	17,118	
University of Colorado, Boulder	9,312	32,346	
Western State Colo University	5,844	16,848	
<b>Average</b>	<b>7,079</b>	<b>20,029</b>	

\*UNC switched to define full-time tuition rate at 12 credit hours, from 13 last year. This explains a slight reduction in cost.



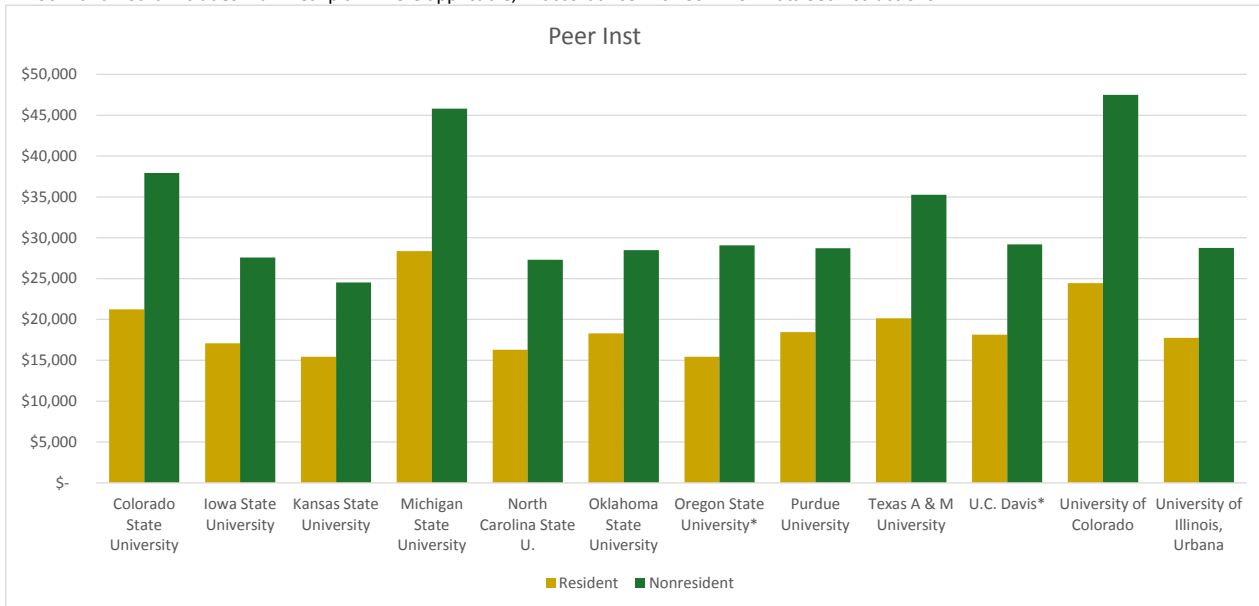
Peer Institution Tuition, Fees, Room & Board† - Academic Year 2015-16

Based on 12 credit hours per term

Institution	Tuition		Fees	Room and Board†	Total	
	Full-Time Undergraduate Resident	Nonresident			Resident	Nonresident
Colorado State University	\$ 8,301	\$ 25,010	\$ 2,133	\$ 10,794	\$ 21,228	\$ 37,937
Iowa State University	6,648	19,768	1,088	8,457	16,193	29,313
Kansas State University	6,814	18,077	833	8,430	16,076	27,339
Michigan State University	10,848	29,088	56	10,074	20,978	39,218
North Carolina State U.	6,220	22,571	2,331	10,311	18,862	35,213
Oklahoma State University	7,778	20,977	2,526	10,230	20,534	33,733
Oregon State University*	6,888	21,957	1,572	11,457	19,917	34,986
Purdue University	9,208	28,010	794	10,030	20,032	38,834
Texas A & M University	9,428	28,020		10,338	19,766	38,358
U.C. Davis*	11,784	35,808	2,731	14,916	29,431	53,455
University of Colorado	9,312	32,346	1,961	13,194	24,467	47,501
University of Illinois, Urbana	12,036	27,196	3,590	11,010	26,636	41,796
University of Tennessee	10,678	28,868	1,758	10,090	22,526	40,946
Virginia Tech	10,496	26,536	1,990	8,290	20,776	37,420
Washington State University	11,418	24,500	1,050	11,356	23,824	36,906

\*Trimester system tuition and fees - AY based on Autumn/Fall, Winter, Spring quarters.

† Room and Board includes max meal plan where applicable, in accordance with Common Data Set instructions



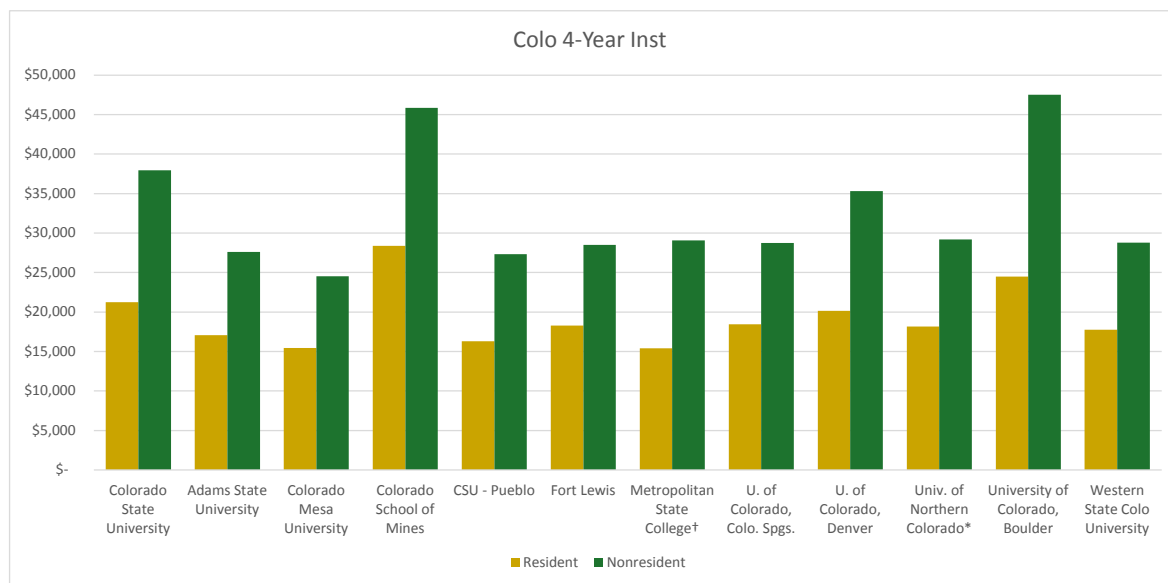


## Colorado Four-Year Institution Tuition, Academic Year 2015-16 (student share after COF)

Institution	Tuition				Total	
	Full-Time Undergraduate		Fees	Room and Board†	Resident	Nonresident
	Resident	Nonresident				
Colorado State University	\$ 8,301	\$ 25,010	\$ 2,133	\$ 10,794	\$ 21,228	\$ 37,937
Adams State University	5,448	15,960	3,124	8,500	17,072	27,584
Colorado Mesa University	5,748	14,832	658	9,042	15,448	24,532
Colorado School of Mines	15,225	32,700	2,128	11,008	28,361	45,836
CSU - Pueblo	5,486	16,491	1,698	9,124	16,308	27,313
Fort Lewis	5,856	16,072	1,744	10,680	18,280	28,496
Metropolitan State College†	5,222	18,859	1,198	9,000	15,420	29,057
U. of Colorado, Colo. Spgs.	6,384	16,680	1,308	10,740	18,432	28,728
U. of Colorado, Denver	7,272	22,416	1,232	11,640	20,144	35,288
Univ. of Northern Colorado*	6,072	17,118	1,706	10,360	18,138	29,184
University of Colorado, Boulder	9,312	32,346	1,961	13,194	24,467	47,501
Western State Colo University	5,844	16,848	2,607	9,307	17,758	28,762

\*UNC switched to define full-time tuition rate at 12 credit hours, from 13 last year. This explains a slight reduction in cost.

† Metro State is a commuter campus. Room and Board is represented by a private residential facility that also provides board options. The facility is linked on the Metro State website: ("The Regency" <http://www.msudenver.edu/contact/faq/housing/>). Also, as of FA15 CU Denver no longer requires students to reside at "Campus Village". However, costs reported are for Campus Village





CSU-Pueblo  
Office of Institutional Research and Analysis

Peer Institution Tuition, Fees, Room & Board† - Academic Year 2015-2016

Based on 12 credit hours per term

**Resident**

Institution	Tuition & Fees	Room and Board†	Cost of Attendance (TF+RB)
<b>Colorado State University - Pueblo</b>	\$7,184	\$8,342	<b>\$15,526</b>
California State University-Stanislaus	\$6,704	\$11,327	<b>\$18,031</b>
Emporia State University	\$6,138	\$7,966	<b>\$14,104</b>
Midwestern State University	\$6,522	\$7,070	<b>\$13,592</b>
Missouri Western State University	\$5,465	\$8,346	<b>\$13,811</b>
The University of Tennessee-Martin	\$8,326	\$5,896	<b>\$14,222</b>
The University of Texas at Tyler	\$6,022	\$9,012	<b>\$15,034</b>
University of Colorado-Colorado Springs	\$7,692	\$9,690	<b>\$17,382</b>
University of Michigan-Flint	\$10,034	\$8,178	<b>\$18,212</b>
University of South Carolina-Upstate	\$10,893	\$7,322	<b>\$18,215</b>
Washburn University	\$6,350	\$7,907	<b>\$14,257</b>

**Non-Resident**

Institution	Tuition & Fees	Room and Board†	Cost of Attendance (TF+RB)
<b>Colorado State University - Pueblo</b>	\$18,189	\$8,342	<b>\$26,531</b>
California State University-Stanislaus	\$15,632	\$11,327	<b>\$26,959</b>
Emporia State University	\$18,726	\$7,966	<b>\$26,692</b>
Midwestern State University	\$8,082	\$7,070	<b>\$15,152</b>
Missouri Western State University	\$10,392	\$8,346	<b>\$18,738</b>
The University of Tennessee-Martin	\$22,270	\$5,896	<b>\$28,166</b>
The University of Texas at Tyler	\$15,561	\$9,012	<b>\$24,573</b>
University of Colorado-Colorado Springs	\$17,988	\$9,690	<b>\$27,678</b>
University of Michigan-Flint	\$19,490	\$8,178	<b>\$27,668</b>
University of South Carolina-Upstate	\$21,543	\$7,322	<b>\$28,865</b>
Washburn University	\$14,222	\$7,907	<b>\$22,129</b>

† Room and Board includes minimum cost of a 'double', and maximum meal plan

# Item # 5

## Colorado State University

### Tuition, Applications, Headcount

	Res. UG Tuition	% Change In Tuition	Applications (Fall)	% Change In Applications	Headcount (Fall)	% Change In Headcount
FY 2011	4,822		17,157		26,356	
FY 2012	5,256	9.0%	20,006	16.6%	26,735	1.4%
FY 2013	6,307	20.0%	21,233	6.1%	26,769	0.1%
FY 2014	7,494	18.8%	21,366	0.6%	27,034	1.0%
FY 2015	7,868	5.0%	19,895	-6.9%	27,086	0.2%
FY 2016 Projected	8,301	5.5%	22,096	11.1%	27,586	1.8%
*Applications are for First Time Freshmen and Undergraduate Transfers						
*Headcount includes Undergraduate, Graduate and PVM						

# Item # 5

## Colorado State University - Pueblo

### Tuition, Applications, Headcount

	Res. UG Tuition	% Change In Tuition	Applications (Fall)	% Change In Applications	Headcount (Fall)	% Change In Headcount
FY 2011	3,880		3,264		5,152	
FY 2012	4,382	12.9%	3,377	3.5%	5,230	1.5%
FY 2013	4,894	11.7%	3,147	-6.8%	4,868	-6.9%
FY 2014	4,894	0.0%	3,038	-3.5%	4,669	-4.1%
FY 2015	5,188	6.0%	4,236	39.4%	4,535	-2.9%
FY 2016 Projected	5,486	5.7%	6,150	45.2%	4,390	-3.2%
*Applications are for First Time Freshmen						
*Headcount includes Undergraduate and Graduate						



## Educational appropriations per FTE (constant adjusted 2014 dollars)

	FY2008	FY2009	FY2013	FY2014	1 yr % change	FY2014 index to US average	5 yr % change	% change since recession	FY 2008 rank	FY 2009 rank	FY 2013 rank	FY 2014 rank	FY2014 difference from Colorado
ALABAMA	\$9,278	\$6,888	\$5,694	\$5,673	-0.4%	0.87	-17.6%	-38.9%	12	29	27	27	\$2,651
ALASKA	\$13,214	\$13,650	\$13,188	\$13,978	6.0%	2.13	2.4%	5.8%	2	2	2	2	\$10,956
ARIZONA	\$8,046	\$7,736	\$5,056	\$5,171	2.3%	0.79	-33.2%	-35.7%	24	22	33	36	\$2,149
ARKANSAS	\$8,123	\$7,987	\$7,731	\$7,653	-1.0%	1.17	-4.2%	-5.8%	23	17	7	10	\$4,631
CALIFORNIA	\$8,825	\$7,938	\$7,252	\$7,509	3.5%	1.15	-5.4%	-14.9%	17	19	11	13	\$4,487
<b>COLORADO</b>	<b>\$4,173</b>	<b>\$4,514</b>	<b>\$2,822</b>	<b>\$3,022</b>	<b>7.1%</b>	<b>0.46</b>	<b>-33.0%</b>	<b>-27.6%</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>48</b>	<b>\$0</b>
CONNECTICUT	\$9,763	\$9,192	\$6,509	\$7,192	10.5%	1.1	-21.8%	-26.3%	8	7	19	15	\$4,170
DELAWARE	\$6,682	\$6,476	\$4,954	\$5,052	2.0%	0.77	-22.0%	-24.4%	37	35	34	37	\$2,030
FLORIDA	\$8,494	\$7,320	\$4,879	\$5,798	18.9%	0.88	-20.8%	-31.7%	20	23	37	24	\$2,776
GEORGIA	\$9,496	\$8,497	\$6,836	\$7,297	6.7%	1.11	-14.1%	-23.2%	9	14	15	14	\$4,275
HAWAII	\$10,129	\$10,255	\$7,532	\$7,618	1.1%	1.16	-25.7%	-24.8%	7	4	8	11	\$4,596
IDAHO	\$10,520	\$10,266	\$6,676	\$7,004	4.9%	1.07	-31.8%	-33.4%	5	3	18	18	\$3,982
ILLINOIS	\$8,187	\$8,223	\$9,626	\$12,293	27.7%	1.88	49.5%	50.2%	22	16	3	3	\$9,271
INDIANA	\$5,236	\$5,321	\$4,501	\$5,005	11.2%	0.76	-5.9%	-4.4%	46	45	43	38	\$1,983
IOWA	\$6,739	\$6,810	\$5,112	\$5,335	4.4%	0.81	-21.7%	-20.8%	36	30	31	33	\$2,313
KANSAS	\$6,924	\$6,711	\$5,745	\$5,648	-1.7%	0.86	-15.8%	-18.4%	35	32	26	28	\$2,626
KENTUCKY	\$9,034	\$8,428	\$6,884	\$6,824	-0.9%	1.04	-19.0%	-24.5%	13	15	14	20	\$3,802
LOUISIANA	\$9,426	\$9,096	\$5,625	\$5,606	-0.3%	0.86	-38.4%	-40.5%	11	8	29	29	\$2,584
MAINE	\$7,170	\$6,920	\$6,096	\$6,252	2.5%	0.95	-9.7%	-12.8%	32	28	22	22	\$3,230
MARYLAND	\$8,583	\$7,926	\$7,022	\$7,512	7.0%	1.15	-5.2%	-12.5%	18	20	13	12	\$4,490
MASSACHUSETTS	\$7,898	\$6,805	\$5,785	\$6,073	5.0%	0.93	-10.8%	-23.1%	25	31	25	23	\$3,051
MICHIGAN	\$6,179	\$5,905	\$4,564	\$4,765	4.4%	0.73	-19.3%	-22.9%	39	39	41	43	\$1,743
MINNESOTA	\$7,007	\$6,680	\$4,814	\$5,327	10.7%	0.81	-20.2%	-24.0%	34	33	39	34	\$2,305
MISSISSIPPI	\$8,534	\$7,775	\$6,274	\$6,514	3.8%	0.99	-16.2%	-23.7%	19	21	20	21	\$3,492
MISSOURI	\$7,335	\$7,172	\$5,311	\$5,297	-0.3%	0.81	-26.1%	-27.8%	31	26	30	35	\$2,275
MONTANA	\$5,205	\$5,274	\$4,379	\$4,939	12.8%	0.75	-6.4%	-5.1%	47	46	44	39	\$1,917
NEBRASKA	\$8,300	\$7,976	\$7,503	\$7,840	4.5%	1.2	-1.7%	-5.5%	21	18	9	9	\$4,818
NEVADA	\$10,140	\$9,678	\$6,826	\$7,016	2.8%	1.07	-27.5%	-30.8%	6	5	16	17	\$3,994
NEW HAMPSHIRE	\$3,536	\$3,483	\$1,724	\$2,360	36.8%	0.36	-32.3%	-33.3%	49	49	50	50	-\$662
NEW JERSEY	\$7,698	\$7,206	\$5,658	\$5,520	-2.4%	0.84	-23.4%	-28.3%	27	24	28	31	\$2,498
NEW MEXICO	\$10,530	\$8,985	\$8,269	\$8,029	-2.9%	1.23	-10.6%	-23.7%	4	9	5	7	\$5,007
NEW YORK	\$8,868	\$8,659	\$8,129	\$8,454	4.0%	1.29	-2.4%	-4.7%	16	13	6	5	\$5,432
NORTH CAROLINA	\$10,933	\$9,619	\$8,851	\$8,562	-3.3%	1.31	-11.0%	-21.7%	3	6	4	4	\$5,540
NORTH DAKOTA	\$5,736	\$5,420	\$6,688	\$7,888	17.9%	1.2	45.5%	37.5%	44	44	17	8	\$4,866
OHIO	\$5,638	\$5,777	\$4,249	\$4,314	1.5%	0.66	-25.3%	-23.5%	45	40	45	45	\$1,292
OKLAHOMA	\$8,998	\$8,951	\$7,193	\$7,080	-1.6%	1.08	-20.9%	-21.3%	15	10	12	16	\$4,058
OREGON	\$5,972	\$5,587	\$3,952	\$4,214	6.6%	0.64	-24.6%	-29.4%	42	43	46	46	\$1,192
PENNSYLVANIA	\$5,836	\$5,645	\$3,633	\$3,654	0.6%	0.56	-35.3%	-37.4%	43	41	47	47	\$632
RHODE ISLAND	\$6,172	\$5,169	\$4,547	\$4,690	3.2%	0.72	-9.3%	-24.0%	40	47	42	44	\$1,668
SOUTH CAROLINA	\$7,705	\$6,092	\$4,891	\$4,894	0.0%	0.75	-19.7%	-36.5%	26	38	36	40	\$1,872
SOUTH DAKOTA	\$6,034	\$5,618	\$4,872	\$4,878	0.1%	0.74	-13.2%	-19.2%	41	42	38	41	\$1,856
TENNESSEE	\$9,029	\$8,875	\$6,266	\$6,959	11.0%	1.06	-21.6%	-22.9%	14	12	21	19	\$3,937
TEXAS	\$9,444	\$8,895	\$7,366	\$8,050	9.3%	1.23	-9.5%	-14.8%	10	11	10	6	\$5,028
UTAH	\$7,406	\$6,648	\$5,106	\$5,506	7.8%	0.84	-17.2%	-25.7%	30	34	32	32	\$2,484
VERMONT	\$3,166	\$2,889	\$2,708	\$2,816	4.0%	0.43	-2.5%	-11.0%	50	50	49	49	-\$206
VIRGINIA	\$6,469	\$6,215	\$4,635	\$4,779	3.1%	0.73	-23.1%	-26.1%	38	37	40	42	\$1,757
WASHINGTON	\$7,616	\$7,178	\$4,945	\$5,700	15.3%	0.87	-20.6%	-25.2%	28	25	35	26	\$2,678
WEST VIRGINIA	\$7,463	\$6,319	\$5,887	\$5,530	-6.1%	0.84	-12.5%	-25.9%	29	36	24	30	\$2,508
WISCONSIN	\$7,071	\$7,100	\$5,990	\$5,786	-3.4%	0.88	-18.5%	-18.2%	33	27	23	25	\$2,764
WYOMING	\$16,428	\$17,123	\$16,800	\$15,561	-7.4%	2.38	-9.1%	-5.3%	1	1	1	1	\$12,539
U.S.	\$8,081	\$7,553	\$6,215	\$6,552	5.4%		-13.3%	-18.9%					\$3,530

Data taken from SHEF: FY 2014 State Higher Education Finance

This is a report from the State Higher Education Executive Officers Association (SHEEO)

[www.sheeo.org](http://www.sheeo.org)

Additions are five columns at far right (ranks and FY2014 difference with CO)

# Item # 6

## Campus Budget Presentations

**FY17 Incremental E&G Budget - V.1.0**  
**Colorado State University - Fort Collins**  
Tuesday, July 28, 2015

### New Resources

<b>Tuition</b>		<b>\$ 17,316,500</b>
Undergraduate-Enrollment Growth (Net Discounts/Scholarships of \$4.1M)	\$7,900,000	
Undergraduate Rate Increase		
<b>Resident - 3%</b>	<b>4,021,000</b>	
Non-Resident 3%	2,950,000	
All Other	2,445,500	
<b>State Funding Impact</b>		<b>0</b>
<b>Other</b>		-
		<u>\$ 17,316,500</u>

### New Expenses

<b>Financial Aid</b>		<b>\$ 1,519,200</b>
Resident Financial Aid - Commitment to Colorado (20% of Resident Increase)	\$ 804,200	
Scholarship Inflation/Athletics	350,000	
Graduate School Tuition Pool for GTA/GRAs	365,000	
<b>Salaries &amp; Benefits</b>		<b>13,330,000</b>
<b>Salaries and benefits (includes Adjuncts related to Enrollment Growth and SC) - 3%</b>	<b>11,420,000</b>	
Faculty Promotions	410,000	
Fringe Benefit Enhancement - DCP 1% increase	1,500,000	
Other Mandatory Costs (utilities for new facilities and debt service)		3,513,000
Commitments/Quality Enhancements:		8,437,688
Academic Capacity Building (from Enrollment Growth)	<b>6,503,688</b>	
Enrollment Growth Colleges - 1/2	3,950,000	
Enrollment Growth Provost - 1/6	1,317,000	
Deployment of Differential Tuition and Graduate Program Charges	700,000	
Academic Tuition Sharing (PVM)	536,688	
Existing - Multi-Year Commitments	<b>1,934,000</b>	
Funds Available for FY17 New Commitments/Quality Enhancements	-	
		<u>\$ 26,799,888</u>
<b>Net</b>		<b>\$ (9,483,388)</b>

#### Base Assumptions

Resident Undergraduate 3%

Non-Resident Undergraduate 3%

Resident Graduate 3% and Resident Professional Veterinary Medicine 5%

Non-Resident Graduate 3% and Non-Resident Professional Veterinary Medicine 1%

Salary Increases Faculty/AP/SC 3%

Fees around X%

**FY17 Incremental E&G Budget - V.1.0**  
**Colorado State University - Fort Collins**

Tuesday, July 28, 2015

prepared by: Office of Budgets

Tuition Rate		Tuition Rate - Student Share		
RUG	Tuition	RUG	Tuition	Change
<u>FY16</u>		<u>FY16</u>		
5.5%	\$ 7,174,000	5.5%	\$ 8,301	
<u>FY17</u>		<u>FY17</u>		
1%	\$ 1,341,000	1%	\$ 8,384	\$ 83
2%	2,680,000	2%	8,467	166
3%	4,021,000	3%	8,550	249
4%	5,362,000	4%	8,633	332
5%	6,703,000	5%	8,716	415

Note: A 1% rate increase will equate to the following incremental increases

RUG = \$1.3M

NRUG = \$1M

RG = \$100K

NRG = \$200K

Salary & Benefit Increase	
Rate	Amount
1%	\$ 3,808,000
2%	7,611,000
3%	11,420,000

**FY17 Incremental E&G Budget - V.1.0****Colorado State University - Pueblo**

Tuesday, July 28, 2015

**New Resources**

<b>Tuition</b>		<b>\$ 810,000</b>
Undergraduate Rate Increase		
<b>Resident: 3% increase</b>	<b>582,579</b>	
Non-Resident: 3% increase	77,754	
All Other	149,667	
<b>State Funding Impact</b>		-
<b>Other</b>		-
		<b>\$ 810,000</b>

**New Expenses**

Institutional Financial Aid Inflationary Increase		\$ 138,000
<b>Salaries &amp; Benefits</b>		<b>1,335,500</b>
<b>Salaries and benefits: 3% increase</b>	<b>1,059,000</b>	
Faculty Promotions	100,000	
Fringe Benefit Rate Increase	176,500	
Other Mandatory Costs (utilities, debt service, and misc. inflation)		767,500
Commitments/Quality Enhancements:		300,000
Contingency Funds	300,000	
Funds Available for FY17 New Commitments/Quality Enhancements	-	
		<b>\$ 2,541,000</b>

**Net** **\$ (1,731,000)**

**Base Assumptions**

Resident Undergraduate 3%

Non-Resident Undergraduate 3%

Resident Graduate, Nonresident Graduate 3%

Western Undergraduate Exchange 3%

Salary Increases Faculty/AP/SC 3%

Fees around 0% (to be adjusted after student fee governing board meets in Fall 2015)

**FY17 Incremental E&G Budget - V.1.0****Colorado State University - Pueblo**

Tuesday, July 28, 2015

Tuition Rate			Tuition Rate - Student Share		
RUG	Tuition		RUG	Tuition	Change
<u>FY16</u>			<u>FY16</u>		
5.75%	\$	1,055,896	5.5%	\$ 6,159	
<u>FY17</u>			<u>FY17</u>		
1%	\$	194,193	1%	\$ 6,220	\$ 62
2%		388,386	2%	6,282	123
3%		582,579	3%	6,343	185
4%		776,772	4%	6,405	246
5%		970,965	5%	6,466	308

Note: A 1% rate increase will equate to the following incremental increases

RUG = \$194k

NRUG = \$58k

RG = \$7K

NRG = \$5K

Salary & Benefit Increase		
Rate	Amount	
1%	\$	353,000
2%		706,000
3%		1,059,000

## FY17 Incremental Educational & General Budget | As of July 2015



### New Resources

#### Tuition (net)

Undergraduate- Retention Growth .....	\$9,049,647
Undergraduate- New Student Enrollment Growth .....	\$1,288,872
Graduate- Retention Growth .....	\$2,262,412
Graduate- New Student Enrollment Growth .....	\$322,218
Enterprise Revenue .....	\$289,151
<b>Total .....</b>	<b>\$13,212,300</b>

### New Expenses

Academic Support and Student Services .....	\$7,642,670
Instruction .....	\$2,771,956
Institutional Support & Facility Operations .....	\$656,885
Institutional Scholarships/Grants for Students .....	\$265,644
<b>Total .....</b>	<b>\$11,337,155</b>

### Net

<b>Total .....</b>	<b>\$1,875,145</b>
--------------------	--------------------

8,600

New student enrollment target

75%

Average annual retention rate

\$350/\$500

New student undergrad/grad  
tuition rate per credit

80:20

Undergrad to grad ratio

2.50%

Percentage of gross tuition revenue for  
bad debt estimate

## Item # 7

# Adoption of Program Plan for CSU Pueblo IT Project

Program Plan in the Appendix



The Board of Governors of the  
 Colorado State University System  
 Meeting Date: August 7, 2015  
 Action Item

MATTER FOR ACTION:

Approval of the Colorado State University - Pueblo Program Plan for Phase II of Information Technology Campus Access and Classroom Enhancements

RECOMMENDED ACTION:

MOVED, that the Board of Governors of the Colorado State University System approve Colorado State University – Pueblo’s Program Plan for Phase II of the Information Technology Campus Access and Classroom Enhancements.

EXPLANATION:

Presented by Karl Spiecker, Vice President for Finance and Administration.

The University needs one-time assistance in the completion of upgrading antiquated voice and data networks by bringing on board sustainable cutting-edge technologies which will transform the institution with enhanced use of the Internet. This request if approved will enhance improvements funded in the FY 2015 legislative session. The additional bandwidth and access speed will allow modern workflow and on-line processes to be put into place. Additionally, the back-up Containerized Data Center will complement the Primary Containerized Data Center that was funded last year. Our plan would be to start work and ordering of necessary equipment and professional services immediately upon receiving these one-time funds. The goal would be the encumbrance of all state funds within six months of project approval, and completion of all aspects of project within three years. The total cost of the request is for \$3,944,430. The request for funding of the project was included in the Board Approved FY 2017 CSU System Capital Construction funding request to be considered for approval in the upcoming legislative session.

\_\_\_\_\_  
 Approved

\_\_\_\_\_  
 Denied

\_\_\_\_\_  
 Board Secretary

\_\_\_\_\_  
 Date

## Item # 8

# Approval of Certain Investment Committee Members for Treasury Operations and Performance Review Information for Local HE Foundations

The Board of Governors of the  
Colorado State University System  
Meeting Date: August 7, 2015  
Action Item

Stretch Goal: N/A

Strategic Initiative: N/A

**MATTERS FOR ACTION:**

Appointment of Board members to the CSU System Treasury Investment Advisory Committee.

**RECOMMENDED ACTION:**

MOVED, that the Board of Governors of the Colorado State University System hereby appoints Board member Nancy Tuor in her capacity as Board Treasurer and Board member Dorothy Horrell as the Board's appointee to the CSU System Treasury Advisory Committee. Board members Tuor and Horrell are authorized to work with the CSU System Chancellor, Chief Financial Officer (CFO) and General Counsel to select nominees for three representatives of the financial community to serve on the Investment Advisory Committee. A list of nominees shall be presented to the Board at its October meeting. Further, the CSU System Chancellor in consultation with the Chief Financial Officer and General Counsel shall prepare a proposed investment policy for review by the Board at its October meeting. The System CFO is designated as the System staff to the Investment Advisory Committee.

**EXPLANATION:**

Presented by Richard Schweigert, the System Chief Financial Officer and Michael D. Nosler, General Counsel.

At its February 5, 2015 meeting, the Board approved the formation of the Colorado State University System Treasury. Pursuant to C.R.S. Section 23-30-106; 23-30-121 and 122, the Board is authorized to create its own System Treasury and Investment Advisory Committee. The Investment Advisory Committee is made up of the System Treasurer and one additional Board member along with three representatives of the financial community. Further, C.R.S. 23-30-123 requires that the Board develop and annually review a written investment policy which shall include the following provisions:

- a. An acknowledgement by the board of governors of the board's fiduciary responsibility with respect to oversight of the investment policy of the system; and
- b. The establishment of performance benchmarks for each investment manager hired by the board of governors pursuant to sections 23-30-121 and 23-30-122.

Once the Investment Advisory Committee is appointed by the Board and the Investment policy is approved, the Investment Advisory Committee will be tasked with selecting investment managers through the competitive bidding process (C.R.S. 23-30-123(2)).

\_\_\_\_\_  
Approved

\_\_\_\_\_  
Denied

\_\_\_\_\_  
Board Secretary

\_\_\_\_\_  
Date

## Item # 9

# Institutional Plan for Student Fees

- CSU and CSU-Pueblo must annually provide a plan on how student fees will be handled to CCHE
- This is required by statute and policy
- The attached plans are similar to last year's plans.
- The board must approve these plans by resolution
- Student Fee Plans found in the Appendix

The Board of Governors of the  
Colorado State University System  
Meeting Date: \_\_\_\_\_  
Consent Item

\_\_\_\_\_  
Approved

Stretch Goal or Strategic Initiative: N/A: Board approval of this administrative action is required by statute, CCHE, Board, or university policy.

**MATTERS FOR ACTION:**

CSU and CSU - Pueblo: Institutional Student Fee Plan and Policy

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the Institutional Student Fee Plan and Policy for Fiscal Year 2015-16, as follows for CSU and CSU-Pueblo.

FURTHER MOVED, that the Board of Governors approve establishing a cap of 18 credit hours as the maximum number of credit hours against which the University Facility Fee increase in FY15-16 of \$5.75/credit hour will be assessed for Professional Veterinary Medicine graduate students at CSU.

FURTHER MOVED, that the Board of Governors approve a fee waiver for CSU Professional Veterinary Medicine students participating in the Alaska 2+2 program.

EXPLANATION:

Presented by [Tony Frank, President] [Rick Miranda, Executive Vice President/Provost]

1. Institutional Fee Policy and Plan. In accordance with C.R.S. §23-5-119.5 and CCHE Policy VI-C-3.01, the Board is required to adopt a Student Fee Policy and to annually approve an Institutional Student Fee Plan. This document is organized according to the statutory requirements and provides all required information regarding Student Fees currently being charged, and to be charged in FY2016, by Colorado State University.
2. Professional Veterinary Medicine graduate students are required to take a course load of 24 credit hours per semester, a significantly higher load than for other programs. These students have requested that the FY15-16 incremental increase of \$5.75/credit hour for the University Facility Fee be assessed only as to the first 18 credits so as to more equitably compare to students in other disciplines. The University and the Student Fee Review Board support this request.
3. PVM students participating in the Alaska 2 + 2 Program will spend their first two years at the University of Alaska – Fairbanks and their third and fourth year at CSU. As these students will not be on campus, CVMBS is requesting that they be exempted from the following university fees assess to all PVM students: General fees, University Technology Fee, College Technology Fee, and University Facility Fee.

# Item # 10

## Update on CSU System Foundation

Verbal update from General Counsel

# Item # 11

## Review and Update on Audit Plan

**Colorado State University System  
Department of Internal Audit  
Proposed Audit Plan for FY 2015-2016**

Institution	Audit Area	Reporting Area	Status
<b>Carried Forward from FY 2014-2015</b>			
CSU	CASA (carryforward)	VP Student Affairs	Report 15-12
CSU	Data Centers (IT) (carryforward)	VPIT	Fieldwork
CSU	Social Media (IT) (carryforward)	VP External Relations	
CSU	Disaster Preparedness (IT) (carryforward)	VPIT	
CSU	Equine Reproduction Lab (carryforward)	CVMB/Provost	Fieldwork complete; report and workpapers in review
CSU	Athletics (Compliance areas)	President	Fieldwork nearing completion
CSU	Agriculture Experiment Stations	College of Agricultural Sciences/Provost	Fieldwork nearing completion
CSUP	Athletics (General review)	President	Fieldwork
<b>New for 2015-2016</b>			
CSU	CEMML	WCNR/Provost	
CSU	Risk Management Office	VP University Operations	Planning
CSU	Athletics (Compliance areas) FY 15-16	President	
CSU	Recharge & Gen Opr Funds (21/22)	Business & Financial Svcs/VPUO	
CSU	Colorado Water Institute	VP Engagement	Entrance conference 7/23/15
CSU	Natural Resources Ecology Lab	WCNR/Provost	
CSU	Occupational Therapy Dept	College Health & Human Sci/Provost	
CSU	Electrical & Computer Engineering Dept	College of Engineering/Provost	
CSU	Confucius Institute	VP International Affairs	
CSU	Purchasing	VP University Operations	Planning
CSU	Conflict of Interest	Provost	Planning
CSU	College of Business - transition	COB/Provost	
CSU	Project to be added mid-year		
CSU	Special Projects		
CSUP	Housing	VP Student Services & Enrollment Mgt.	
CSUP	Cashier Office	VPFA	
CSUP	Special Projects		



# Item # 12

## Audit – Other Issues



Audit of Accounts Payable – Colorado State University

EXECUTIVE SUMMARY

May 11, 2015

**Background Information**

The accounts payable department is an administrative unit of Colorado State University. It is tasked with the responsibility *“to disburse organizational funds in a timely and justifiable manner in compliance with State rules and regulations and University policies and procedures”*.

It operates with ten employees including two supervisors and a manager shared with another administrative unit. In Fiscal Year 2014, it disbursed \$422M with 123,260 payments. This was a rate of about 495 payments per day.

Without additional staffing, in fiscal year 2015, it also began processing payments for Colorado State University-Pueblo. In the last 30 days, it processed payments of 556 per day. Currently, it is overseeing the testing of a new University travel system. If determined to be viable, accounts payable would be integrally involved in the travel system’s implementation.

**Scope and Objectives**

The audit covered the University accounts payable process for the 18 month period July 2013 through December 2014. The objectives of the audit were to:

1. Determine if operational and administrative policies exist to assure accurate and timely disbursements.
2. Evaluate whether internal controls exist and are operating effectively to assure compliance with State, University and auditee policies.

3. Determine if an objectives setting and strategic planning process exists that is regularly evaluated and is integrated with the University plan.

**Results and Conclusions**

The initial risk assessment process calculated this as HIGH risk operation. During the audit, we assessed controls, processes and procedures designed to mitigate risks. Based on the audit, we concluded that the risk mitigation activities provide a MEDIUM residual risk level.

Based on the audit objectives listed above, we made the following recommendation, based on the audit finding:

1. Accounts Payable should review support for *all* disbursement transactions it processes for payment or it should mitigate the risk with a compensating control.
2. Accounts Payable should develop a conflict of interest management plan. The plan should minimize the number of payments processed by an accounts payable employee and a relative. The accounts payable manager should monitor compliance with the plan.

We have discussed the finding and recommendation with management, and are satisfied that completion of the proposed action will mitigate the issues noted. Details may be found in Audit Report 15-10 issued the same date as this Executive Summary.

We would like to express our appreciation to the Accounts Payable staff for their assistance and cooperation during the audit.

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Allison A. Horn – Director, Internal Auditing



Audit of Tuition Revenue – Colorado State University

EXECUTIVE SUMMARY

May 29, 2015

**Background Information**

Colorado State University’s (CSU) land grant mission includes educating students, conducting research for the benefit of society, and extension of its educational and research capacity to areas of statewide need. As a part of this mission, CSU collects tuition for the purpose of educating students and to help pay for its operating costs. The Annual Accountability Report explains that CSU has collected tuition in the following amounts for the last five years:

2014*	2013*	2012*	2011**	2010**
\$300,714,000	\$275,345,000	\$202,425,000	\$222,625,000	\$173,461,000

\*Without Fees \*\*With Fees

As a part of the annual budgeting process, the Board of Governors for the CSU System approves tuition rates and fees for students attending its universities. The approved rates are reflected in ARIES (the student information system), and they are published on CSU’s public website.

A student’s tuition is a calculation dependent on several variables: the student’s academic program, number of credits enrolled, the students undergraduate or graduate level, the student’s residency status, and whether non-resident students (undergraduate and graduate students) qualify for reduced out-of-state tuition under student exchange programs sponsored by the Western Interstate Commission for Higher Education (WICHE) and the Western Undergraduate Exchange (WUE).

Permanent student records are all maintained in ARIES. Tuition and fee assessment tables, set up in ARIES, perform the calculation of tuition based on the input variables described above. ARIES posts the tuition to the student’s accounts receivable balance. Access to ARIES provides personnel with the ability to change the assessment table and to change input variables that impact the calculation of tuition.

**Scope and Objectives**

The objectives of this audit were to ensure tuition revenue rates are accurately and consistently charged for resident and non-resident students;

and to ensure there are adequate internal controls related to student residency, revenue rates, and tuition charges.

**Results and Conclusions**

The initial risk assessment process calculated this as HIGH risk operation. During the audit, we assessed controls, processes and procedures designed to mitigate risks. Based on the audit, we concluded that the risk mitigation activities provide a MEDIUM residual risk level.

Based on the audit objectives listed above, we made the following recommendations, based on the audit findings:

1. Giving recognition to current B&FS efforts to document the process for setting up and maintaining tuition and fee assessment tables and to the importance of this issue, the Controller should identify a completion date for this action.
2. The Registrar should ensure that all staff members complete a confidentiality/ conflict of interest agreement and disclosure annually.
3. The Registrar should review the business necessity for broad access to modify student tuition assessment, and use the “fine grain access control” to ensure that personnel have access to modify only those assessment attributes related to their job responsibilities.

We have discussed the findings and recommendations with management, and are satisfied that completion of the proposed action will mitigate the issues noted. Details may be found in Audit Report 15-11 issued the same date as this Executive Summary.

We would like to express our appreciation to the staff of Business and Financial Services, the Registrar’s Office, and Student Financial Services for their assistance and cooperation during the audit.

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Allison A. Horn – Director, Internal Auditing



## Audit of the Center for Advising and Student Achievement – Colorado State University

## EXECUTIVE SUMMARY

June 24, 2015

**Background Information**

The Center for Advising and Student Achievement (CASA) is a department at Colorado State University that reports both to Academic Affairs and Student Affairs. Programs offered are focused on students including Orientation and Transition Programs, Key Learning Communities, Undeclared Advising, Health Profession Advising, and Outreach and Support Programs. CASA is a dynamic organization that integrates the curricular and co-curricular experiences for students and creates inclusive communities that have positively impacted their academic success, retention and graduation.

Over the past five years, CASA has enhanced services in Orientation and Transition Programs for second year, transfer and Spring start students; Key Communities added three new learning communities and coordination of all University Learning Communities; Opportunity Scholar Programs expanded services for two scholarship programs and foster care students; Outreach and Support greatly expanded University coordination of outreach to at-risk students; Undeclared Student Advising created more structured programs for probation students; and Health Profession Advising transitioned its staff from full Academic Advisors to focusing only on health profession advising.

**Scope and Objectives**

The audit scope included information related to CASA financial activity and policies and procedures for fiscal years 2014 and 2015. The audit objectives were to:

- Determine whether CASA's mission, goals and objectives are measurable, evaluated and that they significantly support University strategic objectives regarding student recruitment, retention, and graduation, and
- Evaluate CASA's system of internal controls and whether the system is currently functioning as designed.

**Results and Conclusions**

The initial risk assessment process calculated this as HIGH risk operation. During the audit, we assessed controls, processes and procedures designed to mitigate risks. Based on the audit, we concluded that the risk mitigation activities provide a MEDIUM residual risk level.

We observed that CASA's mission, goals and objectives are measurable; they are periodically evaluated; and they support University strategic objectives regarding student recruitment, retention, and graduation. The system of internal controls within CASA is well established, currently functioning properly as designed, and generally adequate. The tone at the top was one of promoting excellence in student experiences while ensuring fiscal responsibility in financial and administrative operations. Some opportunities for improvement to further strengthen internal controls were explored with management (detailed information was provided to them in a separate memo), but we did not identify any findings resulting in formal recommendations during this audit. Details may be found in Audit Report 15-12 issued the same date as this Executive Summary.

We would like to express our appreciation to the staff of CASA for their assistance and cooperation during the audit.

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Allison A. Horn – Director, Internal Auditing



# All Overdue Recommendations

Monday, July 27, 2015  
10:18:34 AM

Audit Number	Audit Name	Institution	Rec. No.	Recommendation	Audit Report Response	Target Completion Date	Revised Target Completion	Current Response
13-07	Warner College of Natural Resources	CSU	1	Update the WCNR strategic plan.	Agree. WCNR will begin strategic planning in Fall 2013 and intend to have a plan completed by June 2014.	6/30/2014	12/31/2015	
15-06	Tuition Revenue	CSUP	2	The Registrar should work with the Provost and VP of Finance to develop a mandatory University-wide attendance policy that identifies students attending CSU-Pueblo, including short-term and summer courses as well.	Agree. The Registrar will work in collaboration with Finance to develop an effective attendance policy.	5/30/2015	7/31/2015	
15-06	Tuition Revenue	CSUP	4	The Controller and Admissions Director should review user access on a periodic basis to ensure only necessary users have access to change the residency status, major and student level fields.	Agree. The Admissions Office regularly reviews user access to electronic file systems to make sure no current or former employees, regular or student, have unnecessary access to the systems. The Controller will implement a similar process.	4/30/2015	7/31/2015	The Admissions area has completed their review of EMAS user access. The Registrar will review access to AIS by 6/15/15.
15-06	Tuition Revenue	CSUP	5	The Admissions Director should establish written criteria for the New Mexico reciprocity program, and then consult with OGC to ensure the documentation complies with the governing rules and regulations.	Agree. The Admissions Director is currently developing written criteria for the New Mexico reciprocity program, which will then be reviewed by legal counsel before its formal adoption.	6/30/2015	N/A	

Audit Number	Audit Name	Institution	Rec. No.	Recommendation	Audit Report Response	Target Completion Date	Revised Target Completion	Current Response
15-06	Tuition Revenue	CSUP	9	The Controller should update and enforce the cash handling policies and procedures and document procedures for the cashier duties.	Agree. Although the Departmental Cash Handling Policy was written and approved two years ago, we have had complete turnover in all of the accounting staff that the policy as never fully implemented or enforced, but will be.	6/30/2015	8/31/2015	
15-09	OSP Cost Transfers	CSU	1	Work with the University Controller to facilitate the development of a training program for University staff to educate them on the importance of compliance with Federal Cost Principles.	Agree. Additional training around Federal Cost Principles is appropriate.	6/30/2015	N/A	

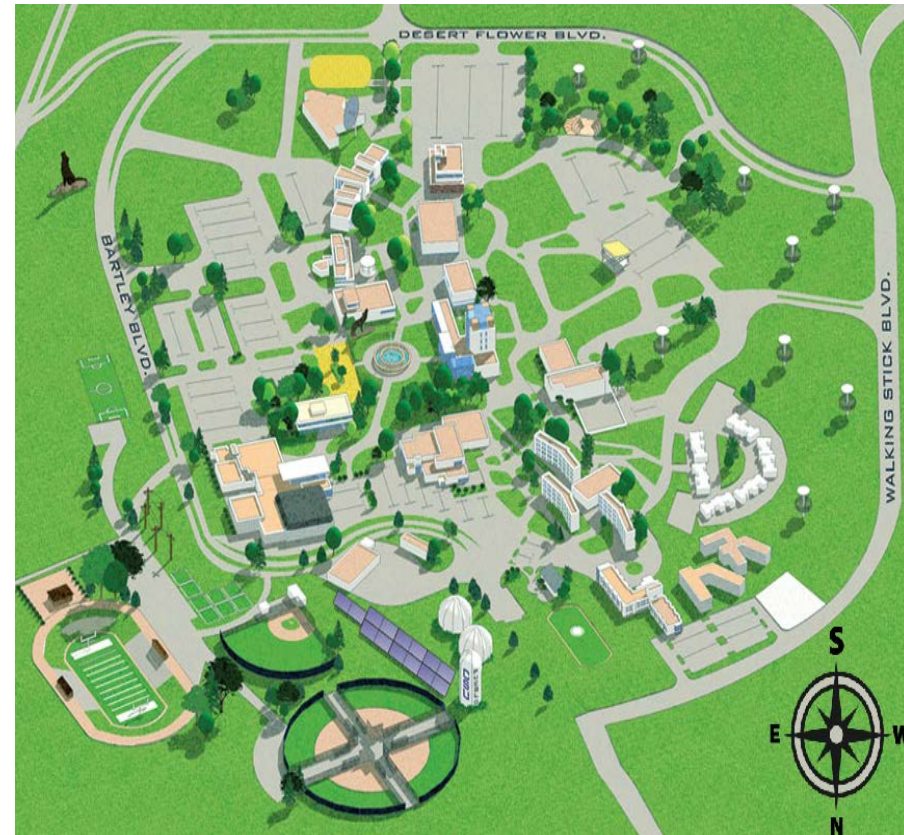
# APPENDIX

# CSU-Pueblo Housing



# Residence Hall Overview

- 4 total residence halls
  - Belmont built in 1966
  - 3 new residence halls built in 2008/2009
- University Village at Walking Stick apartments acquired in 2011



# Belmont Residence Hall

- Built in 1966
- Traditional residence hall (community bathrooms)
- Co-ed floors
- 277 rooms (544 beds at full capacity), currently a number of rooms are not useable
- Utilizing only one of the three wings due to occupancy
- Unencumbered / no bond payments
- Significant maintenance issues due to age
- Needs to be replaced/remodeled in the next 2-3 years



# Crestone Residence Hall

- Built in 2008
- Suite style rooms/ no communal bathroom
- 132 rooms (251 beds at full capacity and current configuration)
- Originally financed with the 2009A bonds



# Culebra Residence Hall

- Built in 2009
- Suite style rooms / no communal bathroom
- 131 rooms (235 beds at full capacity and current configuration)
- Originally financed with the 2009A Bonds



August 6, 2015

DRAFT - June 30, 2015

# Greenhorn Residence Hall

- Built in 2009
- Suite style rooms / no communal bathrooms
- 136 rooms (261 beds at full capacity and current configuration)
- Originally financed with the 2009A Bonds



August 6, 2015

DRAFT - June 30, 2015

# University Village at Walking Stick Apartments

- Acquired in 2011
- Financed with the 2012A Bonds
- Townhome style apartments
- 151 beds



August 6, 2015

DRAFT June 30, 2015

# Bond History

- 2009A bonds financed the three new residence halls
- Original amount financed - \$54,870,000
- Rate 2.5%
- Payments
  - 2009 \$2,574,656 (interest only)
  - 2010 \$2,702,263 (interest only)
  - 2011 \$2,912,263 (interest & principal)
  - 2012 \$2,995,963 (interest & principal)
  - Payments increase until a final payment of \$5,003,250 in 2039
  - Total of payments \$113,958,681

# Bond History (cont'd)

- 2009A residence hall bonds were refinanced in 2013 with the 2013A bonds
- Refinanced amount \$53,165,000 (orig. amount \$54,870,000)
- Rate 2.5%
- Payments
  - 2013      \$2,698,171
  - 2014      \$2,697,350
  - 2015      \$2,700,100
  - 2016      \$2,857,700
  - 2017      \$3,071,100
  - Payments increase to \$3.5MM in 2018, \$3.9MM in 2020 and remain stable – final payment is in 2043
  - Total of payments      \$106,665,421



# Bond History (cont'd)

- 2012A bonds financed the acquisition of University Village at Walking Stick apartments
- Rate 2.41%
- Finance amount \$3,025,000
  - 2012 \$142,900 (interest only)
  - 2013 \$142,900 (interest only)
  - 2014 \$197,900
  - 2015 \$201,800
  - 2016 \$199,400
  - Payments remain stable @ \$200,000. Final payment is in 2042
  - Total of payments \$5,881,350

# CSU-Pueblo Program Plan for IT Project

# Program Plan Colorado State University – Pueblo Information Technology Campus Access and Classroom Enhancements

*FY 2016-2017 Capital Budget Request – August 1, 2015*



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<b>Page 4</b>	<b>Project Details</b>
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## PREFACE

Higher education decision makers are eyeing ways to better understand, plan for, and execute around the technology trends that will impact their organizations both today and in the future. IT is the strategic vehicle in which many of these business or educational needs are satisfied. The increasing use of computer technology in the classroom and for distance learning has gained broad acceptance at Colorado State University – Pueblo. Multimedia access over the network has become an instructional need as the use of the Internet has grown to provide important educational resources. New academic uses of technology are putting demands on campus infrastructures that those systems were not designed to support. Our administrators, faculty, staff, and students expect the University’s IT systems to be like other utilities...always available. This level of service requires our systems to be built using high reliability and redundant techniques. Colorado State University - Pueblo is committed to providing such “always on” services.

This plan strives to support the CSU-Pueblo Strategic Plan and its many goals. Additionally, Colorado Department of Higher Education and State goals have been taken into consideration and are addressed by this program plan. Fulfilling needs such as full access to network resources specifically for Southern Colorado is an ongoing goal as well the enhancement of classrooms and the learning experience. As a Hispanic Serving Institution (HSI), CSU-P’s role as a means to promote opportunities for our students in Colorado is vital. New infrastructure addresses digital library requirements, electronic student services, security, as well as the support of larger outreach and distance learning needs all urgently required by our workforce.

## PROBLEM STATEMENT

Colorado State University – Pueblo has an aging data and voice infrastructure and increasing demands from its constituents to provide “always on” access to the internet and to internal and external data sources. The students, faculty and staff at CSU-P are challenged to thrive in a digital world with tools and systems that are often 10, 15 or even 20 years old. In many instances this antiquated technology has impacted enrollment, administrative efficiencies and even the ability to compete. The University is tasked with feeding qualified future employees and professionals into Colorado’s dynamic and technologically savvy workforce. Satisfying the needs outlined in detail in this Program Plan fully addresses the requirements for student access to the internet, modern computers and software, network and system security, technology enhanced classrooms, electronic student services, and digital library resources. Additionally, the increased bandwidth and throughput capabilities will allow for community outreach and distance learning, ultimately supporting and adapting to the quickly changing workforce needs of Colorado. For this purpose we have the following initiatives.

Initiative #1 – New Redundant Containerized Datacenter

Initiative #2 – Campus Network and System Security

Initiative #3 – Provide Digital Technology to all Classrooms

Initiative #4 – Integrate Unified Messaging Throughout Campus

Initiative #5 – Purchase New Fiber Truck

The University needs one-time assistance in the completion of upgrading these antiquated voice and data networks by bringing on board sustainable cutting-edge technologies which will transform the institution with enhanced use of the Internet. This request if approved will enhance improvements funded in the FY 2015 legislative session. The additional bandwidth and access speed will allow modern workflow and on-line processes to be put into place. Additionally, the back-up Containerized Data Center will complement the Primary Containerized Data Center that was funded last year. Our plan would be to start work and ordering of necessary equipment and professional services immediately upon receiving these one-time funds. The goal would be the encumbrance of all state funds within six months of project approval, and completion of all aspects of project within three years.

## PROJECT DETAIL

### **Initiative #1 – Install New Containerized Datacenter**

#### **Project Description**

The request includes installing one (1) new containerized datacenter to provide a redundant site for failover and disaster recovery. A containerized datacenter is a purpose-engineered module designed to provide a self-contained environment for housing servers and other critical computer hardware. The unit includes lighting, fire suppression, monitoring, power distribution, and critical cooling. It is a standalone unit and does not need to be contained within an existing building. CSU-Pueblo is currently installing the primary containerized unit on campus.

#### **Background and Justification**

The CSU-Pueblo datacenter was constructed when mainframes were the primary computing system used on the campus. The campus suffered from an extended outage in 2012 during the Spring finals as there was no provision for disaster failover when an equipment failure happened in the primary datacenter. This resulted in the complete loss of campus computing for seven (7) days and caused significant disruptions to the campus operations.

The campus is in the process of installing a new primary containerized datacenter to replace the aging datacenter facilities. There is not an adequate secondary datacenter that allows for a complete failover for maintenance or disaster recovery. Audits conducted by both CSU- Ft Collins and by outside IT specialists following the 2012 outage concluded that the CSU-Pueblo campus did not have adequate computing infrastructure to provide continuous computing service in case of an issue in the primary datacenter.

This project would provide a mirror image of the primary containerized datacenter in a geographically different location on campus to provide failover and disaster recovery in case of an issue in the primary datacenter. Existing equipment would be split between the primary and redundant datacenters to provide a 1+1 system for operation. No new networking or server systems would need to be purchased as the current systems were designed with this configuration as the intended configuration.

#### **Cost-Benefit Analysis and Project Alternatives**

One alternative to the proposed redundant datacenter would be to reuse the current out of date datacenter in the Administration Building, The Heating, Ventilation, and Air Conditioning System (HVAC) to handle the necessary loads has been quoted at \$400,000 to only upgrade the existing cooling system.

Reuse of the existing datacenter would be expensive as the datacenter would still need additional work to the electrical system, the raised floor system, and flood mitigation work to protect the existing datacenter from internal plumbing. This was deemed to be not an efficient option as the building is not configured to handle the new equipment and would be more expensive to retrofit when compared to a modular system.

Movement to the cloud of campus systems was also researched. The campus is moving non-essential computing activities to the cloud but the redundant datacenter would still be needed to house the networking, firewalls, and servers that would be need to connect to the cloud systems.

Not funding the redundant modular datacenter would significantly increase the probability of another major outage on campus. The lack of a redundant datacenter has been determined to be an issue in previous audit and this would provide a mirror to the primary datacenter.

### **Consequences if not Funded**

This would leave the campus with one datacenter and thus it would still be susceptible to a failure like the one that occurred in 2012. As stated before in this document the existing datacenter is not able to handle what is currently in it and using a backup would require a significant amount of expenditure. The other significant issue facing the campus is that the IT resources are expected to behave as a utility and should be available 24/7. This is not currently possible with the existing systems.

### **Assumptions for Calculations**

Containerized Datacenter	\$625,000
Datacenter Architectural & Engineering	\$50,000
Structural Concrete Pad	\$75,000
Electrical / Network Datacenter Connectivity	\$150,000
Campus Exterior Improvements	\$75,000
Training	\$10,000
Project Cost	\$985,000

**Timeline**

Design – 3 months  
Construction - 6 months  
Implementation – 3 months  
Total – 12 months

**Initiative #2 – Campus Network and System Security****Project Description**

The network and system security is a collection of tools and monitoring systems that proactively monitor and log data entering into and out of the campus network. The campus security systems are directed by The Critical Security Controls for Effective Cyber Defense set forth by the Council on CyberSecurity which is the security program that the OIT follows. The security system looks for patterns of suspicions or malicious activity and records machine data for analysis and logging. The systems provide secure connections to vital resources such as DNS and encrypted traffic while at the same time inspecting the traffic for hackers attempting to steal data or phish personal information.

**Background and Justification**

Students, staff and faculty are connected to more systems outside of CSU-Pueblo than ever before. But with this connectivity comes the increased threat of data breaches and the loss of personal information as the systems that are required to conduct day to day operations are also connected to the outside world. The ever increasing threats from hackers and cybercriminals are requiring robust information security programs and tools to combat the threats. The OIT's Office of Information Security has provided guidance and leadership in combating these threats and CSU-Pueblo is striving to model their information security plan after the OIT's Office of Information Security security plans.

The campus network and system security upgrade is to install systems and tools that follow The Critical Security Controls for Effective Cyber Defense set forth by the Council on CyberSecurity (Otherwise known as the CSC 20 rules). This is the security framework that the OIT's Office of Information Security has been successful in implementing to minimize the threats present in today's information technology landscape.

The first upgrade would be software and systems that allow the Critical Security Control Rule 11: Limitation and Control of Network Ports, Protocols, and Services to be implemented. This is the limiting of ports, protocols, and services with validated business needs and host-based firewalls or port filtering tools on end systems. The main tool in this area would be secure DNS



servers to prevent man in the middle attacks and network analysis tools to inspect traffic in real time for malicious activity and port spoofing.

The next area would be to cover Critical Security Control Rule 14: Maintenance, Monitoring, and Analysis of Audit Logs. This would be software to aggregate machine data and analyze and identify anomalies in logs. This software is known as Security Incident and Event Management software (SEIM) or log analytic tools for log aggregation and consolidation from multiple machines and for log correlation and analysis.

The final area that would be covered in this upgrade would be to tools and software to cover CSC Rule 3: Secure Configurations for Hardware and Software on Mobile Devices, Laptops, Workstations, and Servers and CSC 4: Continuous Vulnerability Assessment and Remediation. At present the CSU-Pueblo campus does not have any way to quickly and effectively audit the security position of the campus and these tools would allow the requirements of the above rules to be met.

### **Cost-Benefit Analysis and Project Alternatives**

The network and security system is based completely on cost avoidance. A security industry report determined that a security breach is three (3) times more expensive than the security controls that would have prevented it. Recent high profile breaches such a Target, Anthem and the multitude of others has shifted the focus of the campus to protect the information of its customers, employees, and stakeholders.

This project is to align with the OIT Office of Information Security's goal to have all new systems evaluated and monitored in real time.

There were no alternatives to this project other than to continue on with the current systems which are known to be inadequate. This program is a cost avoidance issue and also contains the intangibles of damage to the credibility of CSU-Pueblo.

### **Consequences if not Funded**

The consequences of not placing resources into security are the loss of confidence in the customers and the cost of remediating the damage from a breach. Unfortunately there are significant financial gains for the hackers and cybercriminals so this threat will be persistent and only get more complex as the resources of the hackers get better.

**Assumptions for Calculations**

Security Software	\$305,000
Training and Implementation	\$50,000
Project Cost	\$355,000

**Timeline**

Design with OIT – 3 months  
 Implementation, Training, Documentation – 18 months  
 Total – 24 months

**Initiative #3 – Provide Digital Technology to all Classrooms****Project Description**

Digital Classrooms are technology enhanced classrooms that provide opportunities in the classroom by integrating learning technology, such as computers, specialized software, audience response technology, assistive listening devices, networking, and audio/visual capabilities. The Digital classrooms are equipped with ceiling mounted projectors and projection screen, laptop / desktop connectivity, enhanced sound system, touchscreen control system, telecommunications, and video recording capabilities.

**Background and Justification**

CSU-Pueblo has 130 classrooms that are outfitted with a desktop computer, an analog controller, and at least 1 projector. The initiative would be to upgrade the teaching podiums to a standard digital system that would allow the use of devices independent of the manufacture and thus allow, faculty, students, and guest speakers to present and interact with students in the classroom. Additionally select classrooms would be upgraded to video telepresence enabled classrooms that would allow content to be streamed into or out of the classroom for distance learning and collaboration.

At present time the systems are connected via analog connections and do not support new technology such as iPads, Apple computers, or other digital inputs. Presentations and teaching must either be conducted via whiteboards in the classroom or via the computer in slides and presentations. This initiative would upgrade all of the classrooms to digital media connections that would allow the faculty and staff to connect to the classroom audio and video equipment

via multiple digital sources. Requests are ever increasing from both faculty and students that new teaching methods such as hybrid classes or experiential teaching and thus this is difficult to accomplish as the current classrooms do not support the technology required to teach the classes.

### **Cost-Benefit Analysis and Project Alternatives**

One of the alternatives reviewed was to not offer the enhanced learning experience of smart classrooms, and using more traditional non-internet and technology based teaching. Over the past couple of years there has been an increase in the number of instructors wanting to teach hybrid classes and those that did had difficulties in doing so as the classrooms are not equipped to support that type of instruction. Other alternatives such as complete online learning have been explored but research by Rutgers and other universities have shown that a mixture of digital delivery and face to face interaction has been shown to be preferred by both faculty and staff.

### **Consequences if not Funded**

Not funding the digital equipment upgrades will prevent the university from taking advantage of 21st century technology. Faculty, staff, and students all have an increased reliance on technology in terms of availability, confidentiality, and integrity. Upgrading these components will allow all university constituents to work more efficiently and also help attract and retain students to campus. Higher education has become a very competitive market and any decreases in enrollment will have a significant impact on the financial stability of the campus.

### **Assumptions for Calculations**

130 classrooms to upgrade

Digital cabling 130 rooms	\$195,000
Digital equipment, media, audio video 130 rooms	\$1,189,500
Project Cost	\$1,384,500

## Timeline

Design – 3 months

Implementation, Training, Documentation – 9 months

Total – 12 months

## **Initiative #4 – Unified Messaging Implementation Across Campus**

### **Project Description**

A Unified Messaging system integrates traditional telephone systems with communications media (e-mail, fax, video messaging, etc.) technologies into a single interface, accessible from a variety of different devices. Unified messaging solutions enhance and improve business productivity while decreasing communication issues. It also reduces the need to travel for communication and extends the campus out to other geographic areas not limited to Pueblo.

### **Background and Justification**

The unified messaging initiative is to replace separate and end of life equipment with a single communication system that allows end users the ability to interact via voice, video, and instant messaging from a common system that is available on a variety of devices. The current communication systems at CSU-Pueblo is a traditional PBX phone system, Microsoft Exchange for email, and various standalone implementations on video teleconferencing. The Fujitsu XL 9600 PBX phone system is 15 years old and is not VoIP capable. In, addition, it has not been supported by the manufacturer for over five years. Parts and spares are difficult to obtain and reliable operation of the system is at risk if critical components need to be replaced. The implementation of a unified communication system will reduce long distance costs by its use of the campus WAN connection to the outside world. It will also improve video teleconferencing capability on campus via the use of the University's LAN.

### **Cost-Benefit Analysis and Project Alternatives**

The options that were reviewed were to continue to use the existing systems and attempt to obtain replacement parts or look to using a third party or hosted solution for VoIP telephone service. Typical hosted messaging solutions cost approximately \$10 per subscriber line and the system is subject to the availability of the internet as that is how it is delivered. CSU-Pueblo looked at what other state agencies have done such as the Colorado Department of Transportation and the savings that they have reported in travel costs and messaging costs determined that the unified messaging was the best choice.

### **Consequences if not Funded**

The campus is already behind many other state institutions with regards to messaging and technology and this would put the campus further behind. CSU-Pueblo is one of the last campuses to still use a PBX phone system and thus is not able to take advantage of many of the features and efficiencies that unified communications provides.

### **Assumptions for Calculations**

System would replace about 1000 PBX handsets

Software and licensing	\$288,600
Servers, storage, peripherals	\$427,500
Life safety power backup	\$96,000
Implementation	\$90,000
 Project Cost	 \$902,100

### **Timeline**

Design – 3 months

Implementation, Training, Documentation – 9 months

Total – 12 months

### **Initiative #5 – Purchase New Fiber Optic Truck**

#### **Project Description**

CSU-Pueblo is responsible for maintaining the CDOT fiber in southern Colorado as part of an MOU for using the fiber. The current splicing truck is over 20 years old, and is in need of replacement with a new and more reliable unit. The truck and equipment it contains is constantly in demand for campus telecommunications and fiber optic splicing needs for both emergency and non-emergency situations. The truck is required as higher education is allowed to use the fiber owned by the Colorado Department of Transportation in exchange for maintenance and repair of that fiber.

#### **Background and Justification**

This initiative is to purchase a truck to replace that aging truck used for fiber optic repairs and splices which connects the CSU-Pueblo campus to the rest of the state. Currently there are only two (2) fiber optic repair vehicles in the state of Colorado and they are located at the CSU-

Pueblo campus and the CSU-Ft Collins campus. CSU-Pueblo has a memorandum of understanding with CDOT that we are allowed to use the CDOT fiber for our internet traffic in exchange for splice and repair work for CDOT on the lines. The CSU-Pueblo splice truck provides fiber repair and new connections for UC-Colorado Springs, CSU-Pueblo, Colorado School of Mines, CDOT, UCAR and the FRGP.

### **Cost-Benefit Analysis and Project Alternatives**

The alternative to purchasing a new fiber truck was to contract out to have the work performed. The average cost for a vendor to perform a splice or repair is \$2500. On average the fiber truck is used four (4) times per month. Performing the calculations of having a vendor perform the splice and repair work shows that the campus could expect to pay about \$120,000 per year for fiber repair. This would increase the cost to the university as this would have to be paid for with operating budgets. Based on the amount the truck would be used the ROI on the truck would be two (2) years.

### **Consequences if not Funded**

The ability to repair the fiber for CDOT in the southern part of the state is part of an agreement between higher education and the CDOT for the use of the fiber optic lines to connect campuses across the state. The inability to repair the fiber would require CSU-Pueblo to contract out the work at a much higher expense and with a longer time to repair.

### **Assumptions for Calculations**

Fiber splice truck	\$130,000
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### **Timeline**

Procurement, configuration, and delivery – 3 months

Total – 3 months

## **Summary of Infrastructure Improvement Costs**

Description	Total Cost
Initiative #1 – New Redundant Containerized Datacenter	\$985,000
Initiative #2 – Campus Network and System Security	\$355,000
Initiative #3 – Provide Digital Technology to all Classrooms	\$1,384,500
Initiative #4 – Unified Messaging Throughout Campus	\$902,100
Initiative #5 – Purchase New Fiber Truck	\$130,000
Contingency at 5%	\$187,830
<b>TOTAL</b>	<b>\$3,944,430</b>

### CDHE and State of Colorado Technology Goals

This Program Plan purposefully takes into account all Department of Higher Education and State Technology goals, which are also listed below. The Information Technology Campus Connectivity and Classroom Enhancements speak directly to improved access, more modern computers and technology, electronic services and workflow, and most important an enhanced learning experience that will positively impact student employability and support demands of Colorado employers.

#### DHE

- a) Provides full access to campus networks
- b) Provides access to modern computers and software
- c) Ensures minimum Internet access to faculty, students, and administration
- d) Provides network support to accommodate demand
- e) Provides for technology-enhanced classrooms and labs
- f) Provides for training and development to ensure proficient use of information technology
- g) Provides for electronic student services
- h) Supports efficient use of information for administrative workflow processing, decision-making, and reporting both within the institution and with DHE
- i) Provides digital library resources
- j) Provides systems to support outreach
- k) Supports distance learning to increase student access to instruction
- l) Promotes the coordination of distance learning development within governing board system and within institution
- m) Supports the workforce needs of Colorado employers
- n) Other

#### STATE

- a) Makes use of the Multi-use Network
- b) Makes use of the Beanpole Fund – Not Applicable
- c) Streamlines service to the beneficiaries
- d) Implements cutting-edge technologies
- e) Transforms the institution by implementing uses of the Internet for e-commerce and new management efficiencies
- f) Replaces costly, cumbersome procedures with paperless, on-line methods
- g) Builds on Colorado's world-recognized leadership in the development of telecommunications technology
- h) Other



## University Mission Statement and Strategic Plan

The University's name, mission and role were changed by the Colorado Legislature effective July 1, 2003. House Bill 02-1324 (Section 23-55-101) of May 2002, establishes Colorado State University – Pueblo University's Mission Statement as:

***Section 23-55-101. University established – role and mission.***

*There is hereby established a University at Pueblo, to be known as Colorado State University – Pueblo, which shall be a regional, comprehensive university, with moderately selective admissions standards. The University shall offer a broad array of baccalaureate programs with a strong professional focus and firm grounding in the liberal arts and sciences. The University shall also offer selected Masters-level graduate programs.*

The University's Strategic Plan 2015-2020 contains technology and technology-related goals that guide the work of Information Technology Services (ITS) and technology decisions across campus. The plan identifies four major goals of the University, each of which requires development and support of campus technology. Goal 4 directly addresses technology needs:

***Goal Four: Supportive Student Life***

*We will provide our students a supportive student life experience that addresses their academic, social, physical, and technological needs.*

***Objectives:***

- 1. Enhance/increase co- and extra-curricular opportunities for involvement and engagement for students.***
- 2. Provide opportunities for networking, leadership, and mentoring opportunities for students both on and off-campus.***
- 3. Provide modern and relevant campus facilities and technology.***
- 4. Create Sophomore Experience Program.***
- 5. Improve campus residential life.***

***Objective Three - Provide modern, comfortable, and safe campus facilities and technology to support student learning***

*Modern, comfortable, safe facilities play an important role in attracting new students as well as improving the quality of life for all students, faculty, and staff. Reliable and current technology is crucial to providing an academic environment that supports teaching, learning, and research and creative activity.*

**1. Measure:** *Provide a totally wired/wireless campus by 2020.*

**A. Strategy:** *Promote an environment for academic success by increasing connectivity campus wide.*

**B. Strategy:** *Maintain and update computer labs across campus as necessary.*

The mission of Information Technology Services at Colorado State University-Pueblo is to provide a broad spectrum of support for the planning, development, deployment, and integration of state-of-the-art facilities, infrastructure, and services to support the information technology needs of the academic, research, and administrative functions of Colorado State University-Pueblo. This unit provides oversight, management, coordination, integration, and staffing of Technology Support Services, Network and Systems Support Services, Information Support Services, Instructional Development and Educational Technology Support Services, and Telephone and Network Services.

## SUMMARY

In this digitally dynamic 21st century, technology will play an ever increasing critical role in higher education. Institutions will need to adopt technologies that will change the way students learn, communicate, produce, collaborate, and study, as well as improve interactions between faculty, staff, and students. Creating innovative services from these technologies requires a powerful, reliable, expandable, and secure IT infrastructure that has adequate bandwidth, quality of service (QoS), and storage. Many colleges and universities have already developed short and long term plans to ensure success in meeting their current and future needs. Colorado State University – Pueblo is no different in this regard and we have our own short and long term approaches to these challenges, which we are currently addressing or planning to implement.

This specific state funds request for a campus network infrastructure upgrade with key technology needs such as a back-up containerized data center, network and system security, digitally connected classrooms, a modern unified messaging system. Additionally, it will give the platform with the new infrastructure needed for any future change of major administrative and academic support applications, such as a Student Information System (SIS) or Enterprise Reporting Platform (ERP).

In order to keep pace with our peer institutions and the demands of higher education, as well as satisfy Colorado Department of Higher Education and State goals, we need to complete the required infrastructure and business continuity for the CSU-P campus. This will make the university a respected credible partner of choice in delivering Colorado's needs in fueling a premier workforce and showcasing Colorado's world recognized leadership in telecommunications.

# CSU Institutional Fee Plan

COLORADO STATE UNIVERSITY  
FY2016 Institutional Student Fee Plan and Policy

Introduction and Purpose:

The purpose of this Institutional Student Fee Plan and Policy (hereinafter “plan”) is to provide information in accordance with C.R.S. § 23-5-119.5 and CCHE Policy VI-C-3.01 requiring the Board to adopt a Fee Policy and annually approve an Institutional Student Fee Plan.

1. Definitions:

As used in this plan, the following terms are defined as follows:

*Academic Course:* A program of instruction, including, but not limited to: academic, vocational, occupational, technical, music, and physical education courses.

*Academic Facilities Construction:* Capital construction, as defined in C.R.S. § 24-75-301, including remodeling and maintenance of physical facilities, buildings and site improvements, and utilities and transportation infrastructure, in or on an Academic Facility.

*Academic Facility(ies):* Academic Facilities, as defined in CDHE Policy §1.50, are those facilities that are core to the role and mission of the institution and may include, but are not limited to, space dedicated to instructional, student services, or administration. If a multipurpose building, the space determination shall be based on the primary usage of the space during the regular academic year. The determination of whether it is an academic facility or space shall be determined based on the function/purpose of the building or space.

*Auxiliary Facility:* As defined in C.R.S. 23-5-101.5 (2) (a), any student or faculty housing facility; student or faculty dining facility; recreational facility; student activities facility; child care facility; continuing education facility or activity; intercollegiate athletic facility or activity; health facility; alternative or renewable energy producing facility, including but not limited to, a solar, wind, biomass, geothermal, or hydroelectric facility; college store; or student or faculty parking facility; or any similar facility or activity that has been historically managed, and was accounted for in institutional financial statements prepared for fiscal year 1991-92, as a self-supporting facility or activity, including any additions to and any extensions or replacements of any such facility on any campus under the control of the governing board managing such facility. “Auxiliary facility” shall also mean any activity undertaken by the governing board of any state-supported institution of higher education as an eligible lender participant pursuant to parts 1 and 2 of article 3.1 of this title, as defined in C.R.S. 23-5-101.5(2)(a).

*Board for Student Organization Funding (BSOF):* A body whose primary purpose is to allocate a portion of the ASCSU Student Fee approved by the Board of Governors of the Colorado State University System to student organizations for educational and cultural programming and to administer relevant provisions of Article VIII of the ASCSU Constitution. BSOF is governed by the BSOF Bylaws.

*Charge for Service:* A charge assessed to certain students to cover the costs of delivering specific services to those students. Charges for service are not mandatory for all students. Charges for service are, however, required for students who meet the criteria for which the charge is being assessed. These may include, but are not limited to: application fees, add/drop fees, fines and penalties, late fees, orientation fees, college technology charges and matriculation fees. Charges for service do not require legislative spending authority appropriation and do not require student approval.

*Contractually-Based Fee:* Any Fee that is (a) required to satisfy any existing contractual obligations, or (b) related to bonds or other debt obligations issued or incurred prior to July 30, 1997. (Fees related to bonds issued on or after July 30, 1997 are *User Fees*).

*Fee(s) or Student Fee(s):* Any amount, other than tuition, that is assessed to all individual students as a condition of enrollment in the university. Fees may be used for academic and non-academic purposes, including, but not limited to: funding registered student organizations and student government; construction, remodeling, maintenance and improvement of student centers, recreational facilities, and other projects and improvements for which the University Facility Fee is approved; intercollegiate and intramural athletics; student health services; technology and infrastructure for which the University Technology Fee is approved; mass transit; parking; Contractually-Based Fees (including bond payments for which Student Fees have been pledged). “Student Fee” excludes tuition, Special Course Fees, User Fees, and Charges for Services. Student Fees may be subject to certain waivers, exceptions or pro-rations.

*Special Course or Program Fee(s):* Mandatory fees that a student must pay to enroll in a specific course or program (e.g., lab fees, music program fees, art fees, materials fees, and telecourse fees). Revenue generated from Special Course or Program Fees cannot be used to fund academic facilities construction. Special Course or Program Fees are not Student Fees.

*Student Fee Review Board (SFRB):* A body comprised of student members and non-student, *ex officio* members that exists for purposes of providing efficient, equitable, and consistent review of Student Fees and the services for which Fees are assessed. SFRB makes recommendations to the Board of Governors regarding Fee proposals, new Fee-funded areas, and changes to existing Student Fees. SFRB is governed by the SFRB Bylaws.

*University Facility Fee:* A Student Fee approved by ASCSU Senate Bill 3540 (2005) to be used for capital improvements at CSU.

*University Facility Fee Advisory Board (UFFAB):* A body comprised of student members and non-student, *ex officio* members, that exists to provide guidance concerning the University Facility Fee to the Vice President of University Operations (VPUO) and/or his or her designees regarding project proposals for allocations of the University Facility Fee, and to ensure that all allocations of the University Facility Fee will be used to provide new facilities and/or to improve current facilities that directly benefit the students of Colorado State University.

*University Technology Fee*: a Student Fee approved by ASCSU and the Board of Governors in 2003, to be used to enhance online student services, replace computers, and to build and maintain the physical improvements needed for computer infrastructure.

*University Technology Fee Advisory Board (UTFAB)*: A body comprised of student members and non-student *ex officio* members to provide guidance and advice in the implementation and application of technology at Colorado State University; to review all allocation requests of the University Technology Fee; and to ensure that all allocations of the University Technology Fee will be used to provide technology that has the potential to benefit as many Colorado State University students as possible.

*User Fee(s)*: A fee collected for purposes of paying any bonds or other debt obligations issued or incurred on or after July 1, 1997, on behalf of an auxiliary facility, from persons using the auxiliary facility, that includes the amount necessary for repayment of the bonds or other debt obligations and any amount necessary for the operation and maintenance of the auxiliary facility. User Fees do not require legislative spending authority appropriation and do not require student approval. Examples of User Fees include (but are not limited to) debt service associated with residence halls, and Fees paid by non-campus users for use of university facilities.

## 2. Types and purposes of Student Fees collected by the institution:

The institution collects Student Fees, User Fees, Special Course and Program Fees, and Charges for Services, as defined above. Student Fees are used for academic and non-academic purposes, including, but not limited to: funding registered student organizations and student government; construction, remodeling, maintenance and improvement of student centers, recreational facilities, and other projects and improvements for which the Fee is approved; intercollegiate and intramural athletics; student health services; technology for which the University Technology Fee is approved; mass transit; parking; and Contractually-Based Fees (including bond payments for which Fees have been pledged).

## 3. Procedures for establishing, reviewing, changing and discontinuing Student Fees:

(a). The Student Fees to be assessed are approved annually by the Board of Governors of the Colorado State University System. The President of the University annually recommends to the Board of Governors the specific Fees and the allocation of Fee revenues, which may be approved, rejected or modified at the Board's discretion. In addition, although it does not restrict the President's discretion, the Bylaws of the Student Fee Review Board (SFRB) set forth the processes by which meaningful student input on Student Fees is provided to the University administration before the President makes a recommendation to the Board of Governors. The budget assumptions on which to base the requests are set by the Operations Committee of the CSU President's Cabinet, consistent with the institution's annual budget process.

(b). Except for Contractually-Based Fees and/or to provide for mandatory cost increases, all new Student Fees, and all increases in existing Student Fees, shall be subject to the Bylaws of the SFRB. Mandatory costs comprise salaries and benefits, debt service, utilities and general and administrative Fees assigned by the University. All requests for new Student Fees, other than

Contractually-Based Fees, shall be initiated through the established SFRB process. This process shall require the SFRB to make recommendations regarding Student Fees in accordance with the SFRB Bylaws and ASCSU Constitution.

(c). Each academic year, an SFRB member will be assigned as a liaison to one or more programs or activities funded by existing Student Fees. The SFRB liaison will work with the Director of the program or activity throughout the academic year to learn about the program and its budget and to review any proposed change or increase to the Fees supporting that program. The Director of the Fee-funded area and the assigned liaison will present the budget and all relevant information for the next fiscal year. The SFRB liaison for a Fee area may advise the SFRB, but shall not cast a vote on Fees for that area. University leadership may also present information to the SFRB regarding institutional priorities and goals. The SFRB shall review and consider all information presented, including student input/Feedback received by each SFRB member, following the specific processes and procedures detailed in the Bylaws of the SFRB. All recommendations for new Fee-funded areas shall be submitted to the SFRB in the form of a proposal as detailed in the SFRB Bylaws. The proposal shall demonstrate that the Fee request is student-sponsored, that sufficient student need for the Fee exists, and that the Fee will be allocated in partnership with a specific University department. Final approval of a new Student Fee rests with the Board of Governors.

(d). After the SFRB has reviewed the information presented by the liaisons, Directors, and University leadership, and evaluated any requests for new Fees, Fee increases or decreases, and Fee extensions, the SFRB forms recommendations and presents them to the ASCSU Senate. The Operations Committee of the President's Cabinet reviews the recommendation and forwards it to the President, who then forwards it to the Board of Governors for final action, along with any additional or different institutional recommendations. The CSU student representative to the Board of Governors attends the meeting at which the Board reviews and approves the Student Fees.

(e). The Board of Governors annually reviews and approves Student Fees. Its review and approval process includes any new Student Fees and increases in existing Fees. Notwithstanding any other provision in the Institutional Fee Plan, or any other governing procedure, rule, bylaw, or policy, the Board of Governors shall provide to students at least thirty days advance notice of a new Fee assessment or Fee increase, which notice, at a minimum, specifies:

- (a) The amount of the new Fee or of the Fee increase;
- (b) The reason for the new Fee or Fee increase;
- (c) The purpose for which the institution will use the revenues received from the new Fee or Fee increase; and
- (d) Whether the new Fee or Fee increase is temporary or permanent and, if temporary, the expected date on which the new Fee or Fee increase will be discontinued.

A decision by the Board of Governors with regard to a Fee shall be final and incontestable either on the thirtieth day after final action by the Board of Governors or on the date on which any evidence of indebtedness or other obligation payable from the Fee revenues is issued or incurred by the Board, whichever is earlier.



4. Procedures by which students may contest the imposition or amount of a Fee and a process for resolving disputes regarding Fees:

The process described above includes direct, meaningful student input on all Fees. Students may contest the imposition or amount of a Fee through the processes set forth in the SFRB Bylaws. A complaint resolution process is detailed in the ASCSU Constitution.

If a student wishes to lodge a complaint about a specific Student Fee (other than a Contractually-Based Fee), the student submits a complaint or request for a Fee waiver to the Vice President for Student Affairs, who may hear the appeal or appoint an appeal officer to hear the appeal and resolve the issues. The decision of the VPSA or appeal officer is final.

5. Plan for addressing reserve fund balances:

Fee-funded areas should maintain a fund balance between 10 and 20 percent of annual revenues, dependent upon contractual and other financial obligations. Auxiliary Fee-funded areas should maintain a similar fund balance along with separate reserves in support of the anticipated capital expenditures and facility master plan.

# CSU-Pueblo Institutional Fee Plan

**COLORADO STATE UNIVERSITY – PUEBLO**  
**Institutional Plan for Student Fees and Charges**

**1. INTRODUCTION AND DEFINITIONS**

The purpose of this Institutional Plan is to provide information on how student fees are proposed, reviewed, approved and implemented at Colorado State University-Pueblo in an open and transparent manner and in accordance with CCHE Policy VI-C.

A. Definitions of Key Terms:

Fees: Any amount, other than tuition, that is assessed to all individual students (where fees apply) as a condition of enrollment in the University. Fees are identified as permanent student purpose and do not include items defined as Charges for Service or User Charges. Fees may be used for academic and non-academic purposes, including, but not limited to:

- Funding registered student organizations and student government
- Construction, remodeling, maintenance and improvement of student centers, recreational facilities, and other projects and improvements for which a facility fee is approved
- Intercollegiate and intramural athletics
- Student health services
- Technology
- Mass transit
- Parking
- Bond payments for which fees have been pledged

Fees do not include Charges for Service, User Charges, and Program or Course fees as defined below.

Charges for Service: These are the assessments to cover the costs of delivering specific services which are incidental to instructional activities, including but not limited to:

- application charges
- add/drop charges
- fines and penalties
- transcript charges
- late charges
- testing charges,
- student identification card charges
- health center charges, and health insurance charges

Charges for Service do not include admissions to events or other such ancillary activities and are not fees as described above.

User Charges: These are assessments against students for the use of an auxiliary facility or service. A User Charge is assessed to only those students using the auxiliary facility or receiving the service. User Charges may include room and board charges and parking registration charges and are not fees as described above.

Program Instructional Fees: These are non-campus-wide fees related to an instructional program, but not to a specific course offering, and may include college specific fees or program specific fees, including program or college specific technology fees.

Course Specific Fees: These are non-campus-wide fees that a student may be assessed to enroll in specific courses (e.g., lab, music, art, and materials fees). Revenue from each Course Specific Fee is restricted for costs directly related to the associated course for which the fee is charged and each section of the associated course must be assessed the same Course Specific Fee.

Student Fee Governing Board: The Student Fee Governing Board (SFGB) is the body at Colorado State University-Pueblo responsible for recommending Permanent Student Purpose Fees, including the activities portion of the Student Affairs Fee. The SFGB shall also review requests for new, elimination of existing or changes in existing, campus-wide, Permanent Student Purpose Fees. The Interim Director of Auxiliary Services will serve as Interim Chair of the SFGB until the VP of Student Services and Enrollment Management appoints the Chair. The Associated Students' Government (ASG) President shall appoint six students to serve on the Board. One faculty/staff member shall be appointed by each of the following: the Provost, the Vice President for Finance and Administration, and the Senior Student Services Officer for a total of three additional members. The six (6) student representatives and three (3) appointed representatives are voting members. The SFGB Chair, working with the SFGB, will maintain all records regarding allocations including, but not limited to, applications, justifications, and SFGB minutes for six years after the date of its recommendation.

## 2. FEE CATEGORIES

Every Fee is classified as to whether its scope is Campus-wide or Non-Campus-wide.

Campus-wide Fees: These are fees assessed to every (all) student at the University as a condition of enrollment, including but not limited to the mandatory fees identified as Permanent Student Purpose Fees.

Non-Campus-wide Fees: These are mandatory assessments to students which are not automatically imposed upon all students as a condition of enrollment, but are

automatically assessed to students from a particular classification. These include, but are not limited to, program specific fees and course specific fees.

### 3. PURPOSE OF FEES

Fee Purpose: Fees at Colorado State University-Pueblo are identified 1) Permanent Student Purpose Fee, 2) an Academic Facilities Fee, 3) an Academic Purpose Fee, or 4) an Administrative Purpose Fee. If a particular fee serves several purposes it shall be categorized within the most dominant purpose. Fee purposes are defined as:

- Permanent Student Purpose Fees: Campus-wide fees assessed to all students which are allocated to specific student programs including student centers, recreation facilities, parking lots, intercollegiate athletics, recreation and outdoor programs, child care centers, campus health clinics, contract health services, student government, general student activities, which are allocated by student government for a specific purpose, and similar facilities and services. This category includes fees pledged to repay bonded indebtedness for student, auxiliary, and athletic facilities. Proposal and approval process for Permanent Student Purpose Fees is specified in Item No. 4.
- Academic Facility Purpose Fees: Campus-wide fees assessed to students and associated with the construction, acquisition, or remodel of academic facilities.
- Academic Purpose Fees: Campus-wide or non-campus-wide fees associated with instruction, technology, and/or academic courses, including program and course fees.
- Administrative Purpose Fees: Campus-wide or non-Campus-wide fees assessed to provide administrative and support services.

Charges for services and user charges are not fees.

### 4. PROPOSAL AND APPROVAL PROCESS

The proposal, review and approval of fees involve students in a significant way. Fee proposals or changes shall occur as agenda items at regularly scheduled meetings of the Board of Governors.

In all cases, when fees are reviewed, the review must conclude with a recommendation for or against the proposed fee.

Permanent Student Purpose Fee: The implementation of a new, elimination of an existing, or change of an existing fee, must be:

- Initiated by the proposing unit;

- Referred to the Chair of the Student Fee Governing Board (SFGB) as a proposal for their review and possible referral to the Associated Students' Government (ASG) Senate;
- If proposed by the SFGB to the ASG Senate in the form of a recommendation for review, then referred to the University President;
- Recommended by the President to the Board of Governors for their consideration; and
- Acted upon by the Board of Governors.

Academic Facilities Purpose Fees: Includes buildings and site improvements or specific space within a multi-use building, including utilities and transportation infrastructure. The determination of whether it is an academic facility or space is determined based on the function/purpose of the building or space. Academic Facilities are those facilities that are core to the role and mission of the University and may include, but not be limited to space dedicated to instruction, student services, or administration. If it is a multi-purpose building, the space determination is based on the primary use of the space during the regular academic year. A proposal for an Academic Facilities Purpose Fee is subject to the following:

- All other financing options have been exhausted before the fee request is presented to the SFGB; the SFGB, at its discretion, initiates a recommendation to the ASG Senate;
- All relevant information concerning the recommendation will be published in the ThunderWolves Howl, and both institutional representatives and student government representatives will hold at least three information sessions to present the issue to the student body;
- The institution and student government representatives will present all relevant information in a fair and balanced manner;
- The student government representative will serve on the University Facility Committee;
- A project to be funded with revenue from the Academic Facility Fee is subject to the procedures of the University Facility Committee.
- If the above conditions are met, an Academic Facilities Purpose Fee will be approved by the process identified for campus-wide Permanent Student Purpose Fees above.

Academic Purpose Fees: A new Academic Purpose Fee is:

- Initiated by the proposing unit in coordination with the appropriate Dean and reviewed by the curriculum committee of the college/school/center;
- Reviewed by the Provost, the appropriate Dean, the Senior Student Services Officer, the two Academic Senators from the proposing unit's school or college, and the Vice President for Finance and Administration;
- Referred to the University President and the Senior Student Services Officer for possible discussion with the SFGB and/or the ASG Senate; and
- If approved by the President, submitted to the Board of Governors for consideration.

Administrative Purpose Fees:

There are no Administrative Purpose Fees in place at CSU-Pueblo. If, in the future, an Administrative Purpose Fee is proposed, the process will be as defined above for the Academic Purpose Fee.

Other Fees, Charges for Service, and User Charges:

Any new fee, Charge for Service, or User Charge not covered above must be (1) initiated by the proposing unit in coordination with the appropriate Dean or Director and consultation with ASG representatives; (2) reviewed by the Provost and the Vice President of Finance and Administration for possible referral to the University President; and (3) approved by the University President, which would then be submitted, if required, to the Board of Governors for consideration.

Proposals Referred to the ASG Senate:

Fee proposals referred to the ASG Senate as a recommendation must 1) be presented at an ASG Senate meeting, 2) clearly indicate the amount of the fee, the purpose of the fee, and indicate if the fee can be used as pledged revenue for financing activities and 3) be phrased in such a manner that an affirmative vote is for the fee proposal and a negative vote is against the fee proposal.

A recommendation, which receives a majority of favorable votes from among those voting on the proposal, shall be deemed as approved by the ASG Senate and sent to the President for consideration. No resolution for a fee increase that is defeated by a vote of the ASG Senate may be resubmitted to the ASG Senate for a vote until the next academic semester (summer excluded).

Normally, the President will only recommend a fee that requires action by the ASG to the Board of Governors if the fee was approved by the Associated Students' Government Senate. Exceptions are: 1) a recommendation is deemed necessary as a condition of a bonded indebtedness agreement, or 2) a recommendation is deemed critical to the institution's mission.

## **5. ADMINISTRATION OF FEES AND CHARGES**

Budget Process for Fees and Charges:

Each fiscal year the Budget Office will be responsible for overseeing a list of fees and charges that are currently in use and proposed for the next fiscal year. Fees should be proposed within the deadlines established by the Provost, the Vice President for Student Services and Enrollment Management, and the Vice President for Finance and Administration. Each year, the Budget Office will develop a calendar of deadlines that includes deadlines for fees. Campus units will make recommendations as to whether the fees or charges in each of their respective areas should be continued, increased, decreased, or eliminated. Cabinet will review fee proposals prior to submitting to the Board of Governors for final approval.

Publication of Fees: The posting of the approved fee schedule on the CSU-Pueblo website constitutes notice regarding the fees.

Assessment of Fees: Fees are assessed and collected through normal accounting procedures. No fees shall be paid directly to academic or non-academic departments or individuals unless specifically authorized. Fees may be prorated for part-time students only if stated in the proposal for the fee.

Itemization of Fees on Billing Statement: Fees are separately identified on the University's student billing statement.

Assessing General And Administrative Costs: Each fee shall be accounted for in the appropriate account for the type of activity associated with the fee. Fees associated with Enterprises or maintained in a separate fund shall be assessed the University's standard General and Administrative (indirect cost) assessment.

Fees related to Bond Issues or Specific University Sponsored Programs: Fees related to bond issues or specific University sponsored programs that are administered by University officials, will be allocated by the Vice President for Finance and Administration with the approval of the President prior to distribution of the Permanent Student Purpose Fee by the Student Fee Governing Board. Each of the specific University sponsored programs is to have an advisory group consisting of a student majority, all of whom shall be approved by the ASG, and shall include an ASG member and faculty/staff representative(s). The advisory group will be responsible for budget review and recommendations to the Vice President for Finance and Administration. If an advisory group is not functional due to unavailability of students, the Director of the specific University sponsored programs will submit the budget to the Vice President for Finance and Administration.

Viewpoint Neutral Criteria Related to Non-University Sponsored Programs and University Chartered Clubs and Organizations: Non-University sponsored programs and University chartered clubs and organizations must submit allocation requests to the Student Fee Governing Board (SFGB) for review. All decisions made by the SFGB are subject to approval by the Vice President for Finance and Administration and the President. The following viewpoint neutral criteria are to be used to determine the funding of the various programs/organizations:

- The program/organization provides a service or adds value to the University student community in relationship to the program's/organization's purpose;
- The program/organization has fixed expenses, such as staff, office expenses, equipment, etc.;
- The program/organization adheres to a planned budget and is accountable for its expenses and also demonstrates familiarity with applicable laws, including, but not limited to, those laws that apply to expenditures and use of state money;
- The program/organization presents a budget with adequate justification for the upcoming fiscal year;

Any further allocations of funds must also meet viewpoint neutral criteria.

## 6. COMPLAINT RESOLUTION PROCEDURE



Any student, who wishes to request a financial statement of a specific student fee account in which income and expenses are detailed, must make such a written request to the Vice President for Finance and Administration.

Appealing Recommendations made by the Student Fee Governing Board (SFGB) and/or the Associated Students' Government (ASG) Senate: Any affected individual or program/organization may appeal the allocation decision of the SFGB and/or ASG Senate to the Vice President for Finance and Administration. Any appeal of an allocation decision must be made in writing within five working days from the date of the letter notifying the individual/program/organization of the SFGB recommendation. Within five working days of receipt of the appeal, the Vice President for Finance and Administration, in consultation with a representative of the ASG, the Provost, and the Senior Student Services Officer, will issue a written decision regarding the appeal. The Vice President for Finance and Administration has the authority to void the decision made by the SFGB and/or ASG Senate and may remand it back to the appropriate body for re-consideration.

Appealing Individual Charges on a Student Account: Any student who is seeking a fee or charge waiver or has a complaint that fees or charges have been assessed against her/him inappropriately may file a written request for review with the University Controller. Such requests will be addressed through a Review Board comprised of the University Controller and two students appointed by the ASG. The recommendation of this Board will be forwarded to the Vice President of Finance and Administration who will make the final decision on any complaint or appeal.

## **7. SPECIAL CONSIDERATIONS FOR REFUNDS IN TIMES OF EMERGENCY**

In times of emergency, certain students (e.g., those in reserve military units, individuals with specialized skills, or firefighters) are called to provide services to the country.

Normal refund, grading and withdrawal policies may not be applicable in this situation, and CSU-Pueblo procedures comply with CCHE Section VI, Part C, 2.03.

# Section 3

## *Real Estate/Facilities Committee*

**BOARD OF GOVERNORS OF THE  
COLORADO STATE UNIVERSITY SYSTEM  
REAL ESTATE/FACILITIES COMMITTEE MEETING AGENDA  
August 6-7, 2015 – Pueblo**

**Committee Chair:** Scott Johnson

**Committee Vice Chair:** Dennis Flores

**Assigned Staff:** Jason Johnson, Deputy General Counsel, CSU System; Kathleen Henry, President/CEO, CSU Research Foundation

**EXECUTIVE SESSION**

**OPEN SESSION**

CSU Naming Action Item

(Tony Frank)

Approval

Board of Governors of the  
Colorado State University System  
Meeting Date: August 2015  
Action Item

\_\_\_\_\_  
Approved

MATTERS FOR ACTION:

CSU: Approval of the Acceptance of Gifts and Naming Opportunities

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the acceptance of gifts and the naming in recognition of gifts relating to the Fermentation Science and Technology Lab in the College of Health and Human Sciences.

EXPLANATION:

Presented by Tony Frank, President, and Brett Anderson, Vice President for University Advancement.

The University allows the naming of specified facilities under its policy outlining the specific qualifications and procedures. The procedures require approval by the President of the University. Once the naming opportunity has been endorsed by the President, the President submits it to the Board of Governors for final approval.

To maintain confidentiality, the donors of the gifts and the specific naming opportunities are not identified at this time. A brief description of the gifts and the naming opportunities has been distributed to the Board members during the executive session.

The announcement of the gifts and the naming will be made by the appropriate unit.

\_\_\_\_\_  
Approved

\_\_\_\_\_  
Denied

\_\_\_\_\_  
Board Secretary

\_\_\_\_\_  
Date

# Section 4

## *Executive Session*

This section intentionally left blank

# Section 5

## *Evaluation Committee*

This section intentionally left blank

# Section 6

## *Board Chair's Agenda*

## 2015 Excellence in Undergraduate Teaching Award



The Board of Governors and its institutions are committed to excellence in undergraduate teaching.

In 1993, to support this commitment, the Board established the

**Board of Governors  
Excellence in Undergraduate  
Teaching Awards.**

Awards are presented annually to a faculty member from Colorado State University, Colorado State University - Pueblo, and Colorado State University - Global Campus.

The Board believes,

***"Excellence in teaching involves creating a process of inquiry that stimulates the curiosity of students and that helps them develop and probe ideas. The teaching function increases motivation, challenges students, and channels inquiry."***

### Dr. David Dillon

Colorado State University-Pueblo

Dr. David Dillon began teaching at CSU-Pueblo as a Visiting Assistant Professor of Chemistry in 1998; in 2005 he decided CSU-Pueblo would become his professional home when he took on a tenure-track position, receiving tenure in 2011. His passion for teaching and mentoring is widely known to both students and faculty; his dedication in serving CSU-Pueblo's students is extraordinary.

Dr. Dillon's primary teaching responsibilities are in the organic chemistry curriculum, a field which sometimes strikes fear in the minds of mid-level science students. In addition to effective instruction in the lecture hall and laboratory, Dr. Dillon holds weekly open study/problem sessions during regular semesters - and daily study/problem sessions during summer courses. Due to Dr. Dillon's meaningful lectures, effectiveness as a teacher, approachability, and almost 24/7 availability, students are able to understand (and enjoy) a complex subject. Dr. Dillon's classes routinely score above the national average in student performance on American Chemical Society standardized exams for organic chemistry. In 2010, Dr. Dillon received the Students' Choice Award from the Associated Students' Government for "Outstanding Service and Transformative Leadership to Students of CSU-Pueblo."

In 2014, Dr. Dillon co-authored a book chapter on organic chemistry in the *Innovative Uses of Assessment for Teaching and Research* that was published by the American Chemical Society. In addition to this book chapter addressing pedagogy in the classroom, Dr. Dillon's scholarly activities include development of and improvements to laboratory exercises for two organic chemistry laboratory courses at CSU-Pueblo. He is constantly looking for ways to optimize his instruction in the lecture and laboratory settings.

Dr. Dillon has also mentored numerous undergraduate and graduate students in the research laboratory - many of whom have gone on to present research results at regional and national meetings. Many former and current students have been inspired by Dr. Dillon to pursue graduate degrees. One nominator wrote "because of [working in the lab with Dr. Dillon], I have decided to pursue graduate school for organic chemistry", and praised "his outstanding ability as a professor [and] mentor and genuine sincerity and commitment to see all students succeed".

Dr. Dillon is a cornerstone of education in the chemical sciences at CSU-Pueblo. As an outstanding teacher and mentor who is well-respected by his peers, he is a deserving recipient of the 2015 Board of Governors Excellence in Undergraduate Teaching Award.



# Section 7

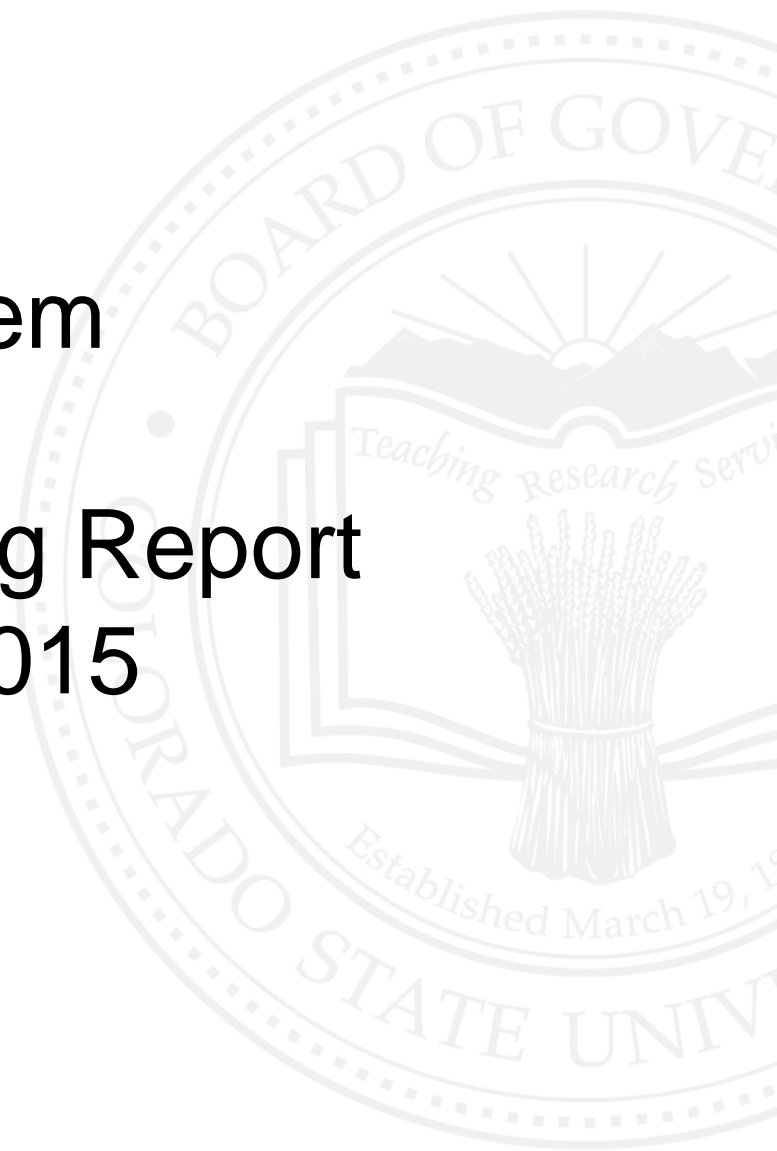
## *Strategic Mapping Update*

# CSU System

## Strategic Mapping Report

### August 7, 2015

**BOARD OF GOVERNORS** *of the*  
**COLORADO STATE UNIVERSITY SYSTEM**



**Mission:** Be the most effective, nimble, and impactful educational system of higher education in the US by delivering high quality resources and results to a broad marketplace to drive human, social, ecological, and technological advances throughout Colorado and the world.



**Capabilities**

<b>Rapidly Respond to the Market through Innovation and Research</b>	<b>Provide Comprehensive Array of Diverse Points of Access and Experiences to a Broad Marketplace</b>	<b>Leverage and Integrate Human Infrastructure Resources Across All Institutions</b>
--	---	--

**Key Performance Indicators**

Meet the demand for Agriculture programs at CSUP by leveraging CSUFtC assets	Create points of integration in the admissions process between CSUFtC and CSUPueblo to maximize the freshman enrollment of all qualified students into the System	Further integrate administrative functions, including purchasing programs, among all three institutions to drive down overall cost of goods and services
<b>Metrics:</b> Creation of new programs and methodologies to deliver Ag education and enrollment of students by Fall of 2016	<b>Metrics:</b> Creation of the system for sharing in FY15 and track number of students referred and enrolled for Fall 2016	<b>Metrics:</b> Accomplish multiple joint RFPs and identify at least 2 other points of administrative shared services
Facilitate credit transfer between CSUGC and CSU-Pueblo with an emphasis on CSU-Pueblo's BS in Construction Management degree program	Extend student benefits and privileges across each institution	Host System-wide meetings in the areas of Veteran's Affairs, and Sustainability to share best practices and identify areas for collaboration
<b>Metrics:</b> Completion of articulation of Gen Ed and 300-level courses.	<b>Metrics:</b> Establish a set of optional fee-based programs for CSU-Global students. Identify cross-privileges for fee-paying students at CSU-Pueblo and CSU-FtC	<b>Metrics:</b> Host at least two sessions in FY15 in each topical area

# Continued

**Capabilities**

**Rapidly Respond to the Market through Innovation and Research**

**Provide Comprehensive Array of Diverse Points of Access and Experiences to a Broad Marketplace**

**Leverage and Integrate Human Infrastructure Resources Across All Institutions**

**Key Performance Indicators**

Launch Extension-Hub in Pueblo to extend and provide access to programs from all three institutions to the communities of southern Colorado

Facilitate the exchange of information among the System institutions on students who leave before graduation so that they may become enrolled and graduate from another CSUS institution that better suits their needs

Examine policies and compliance requirements at all three institutions and leverage the assets at each to ensure consistency where appropriate and provide support for meeting all legal and regulatory requirements, and best practices

**Metrics:** Acquisition of space and hiring of staff in FY15, launching of inaugural programs and developing success metrics for FY16 and beyond

**Metrics:** Establish a “back-up” or re-engagement program driven by CSU-Global for students who did not complete their RN to BSN or their BS in Construction Management degrees from CSU or CSU-Pueblo

**Metrics:** Host at least two sessions in FY15 with policy leaders from the institutions and the System to share best practices and resources

Facilitate faculty exchanges among all three institutions

Expand the Ascend Program to capture the assets of all three institutions and increase engagement with organizations across the state

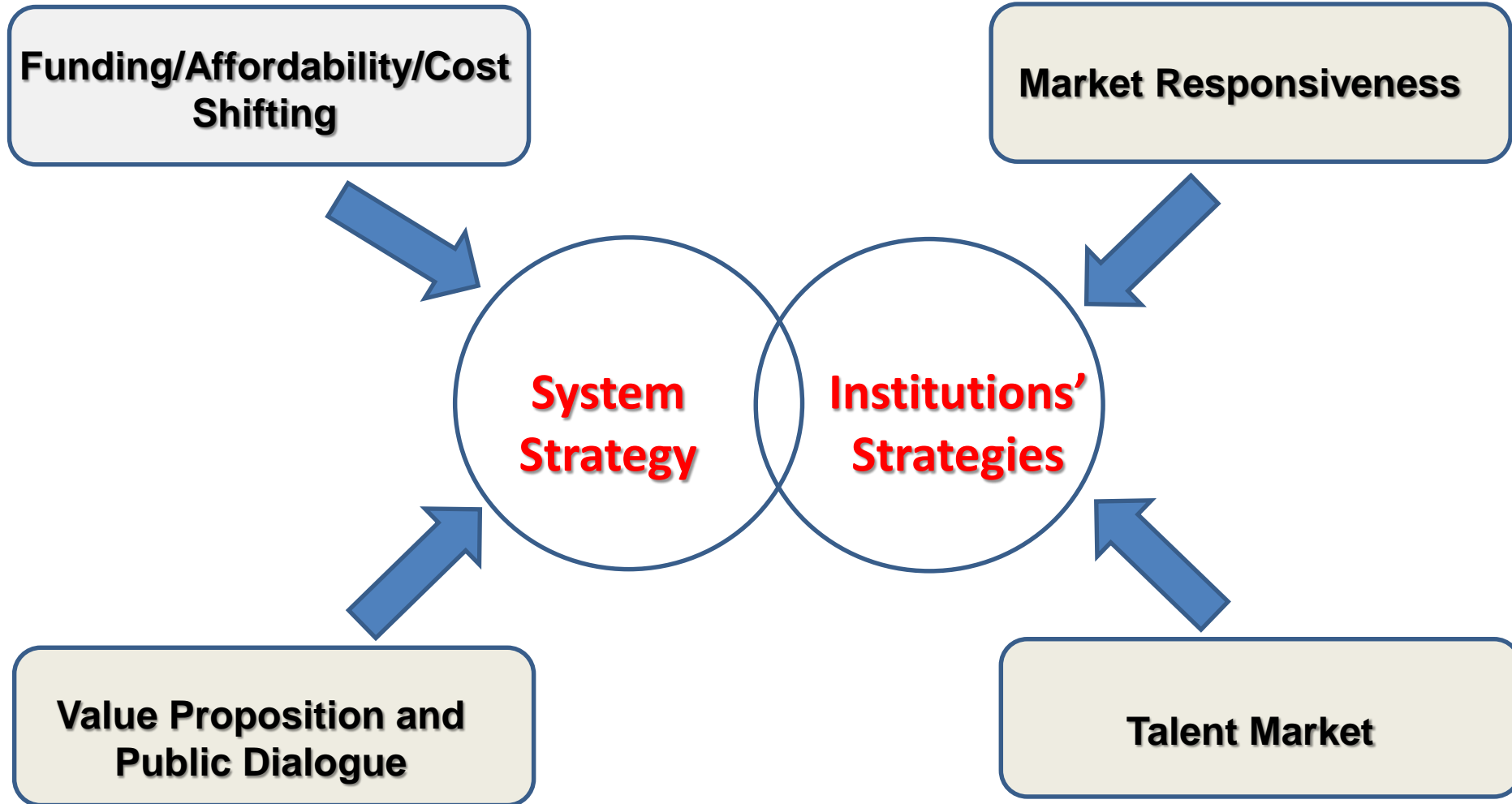
Utilize various CSUFtC off-site locations such as the Mountain Campus, Todos Santos, and NWC for the benefit of educational programs, staff and faculty retreats from CSUP and CSUGC

**Metrics:** Accomplish multiple short term exchanges in FY15 and a plan for both short and long-term dual faculty appointments for FY16

**Metrics:** Include 2-3 CSUGC and CSU-Pueblo assets in the offerings of the program

**Metrics:** Identify multiple opportunities for each institution to engage with the off-site locations and for cross-collaboration of programs

# Brutal Facts/Challenges Influencing Strategy<sup>101</sup>



# Funding/Affordability/Cost Shifting Challenge

Over the past two decades, the costs of a public college education have shifted from the State of Colorado to students and families.

Recent state funding increases have slowed this, but the trend is very likely to lead, ultimately, to a defunding of Colorado public higher education (source: Colorado Futures Center analysis.)

Although our institutional price points remain competitive, there are elasticity issues should trends continue.

Question: How do we maintain quality AND access in this environment?

# Value Proposition and Public Dialogue (perception vs. reality)

The statistics on the economic value of a college degree are clear and compelling when understood.

The anecdotal evidence in contrast to this – dropouts like Bill Gates and the PhD barista – is widely disseminated and too easily accepted as representative.

The “debt crisis” which often includes private and for profit factors also colors this discussion.

The focus on economics/transactional nature of relationship can overlook the societal benefits of an educated populace and workforce.

Question: How can we educate, inform and advocate for a true appreciation of the value of a college degree, and the necessity of affordable, quality public higher education options?

# Market Responsiveness

104

## (market responsive vs. internal culture, constraints)

The number of career shifts new graduates will face in their lifetimes is expected to be at an all-time high. The skills and technical training needed to compete in the workforce is rapidly evolving, while the ability to accurately predict and respond to what is a lasting trend and what is a fad is not precise (an emphasis on QR codes, for example.)

The focus on students getting that first job out of college is real and pervasive, while the data says students need to prepare for many other options down the line.

Question: How do we produce workforce ready graduates to meet the needs of our state and national economies, while also preparing our graduates for the inevitable changes that will occur in their working lives?

Question: How do we help our faculty identify and prepare for emerging trends, while simultaneously keeping the focus on lifelong learning and academic rigor?



# Talent Market

## (for faculty and staff – staying competitive)

The quality of a university is intrinsically linked to the quality of the faculty and staff, and the learning environment and results that they drive.

The support systems necessary to efficiently and effectively educate students are highly regulated and increasingly complex.

Question: How do we recruit and retain the very highest quality faculty and staff, and how do we effectively compete understanding we will not be the most financially advantaged institutions in our market spaces?

# Road Map Ahead



## June Retreat

Review and Update the System strategic plan  
 Discuss and plan for the 10 year outlook and beyond

# Section 8

*Academic and Student Affairs  
Committee*

BOARD OF GOVERNORS OF THE  
 COLORADO STATE UNIVERSITY SYSTEM  
 ACADEMIC AND STUDENT AFFAIRS COMMITTEE MEETING AGENDA  
 August 6 & 7, 2015

**Committee Chair:** Jane Robbe Rhodes

**Committee Vice Chair:** Mark Gustafson

**Assigned Staff:** Dr. Rick Miranda, Chief Academic Officer

I. New Degree Programs

Colorado State University

- none

Colorado State University-Global Campus

- none

Colorado State University-Pueblo

- none

II. Miscellaneous Items

Colorado State University System

- Revised Policy 314: Approval of Degree Candidates (*consent*)
- Approval of Degree Candidates for Academic Year 2015-16 (*consent*)

Colorado State University

- Faculty Manual Change – Section D.2.1 (*consent*)
- Faculty Manual Change – Section F (*consent*)
- Faculty Manual Change – Section I.15 (*consent*)
- Faculty Manual Change – Appendix 1 (*consent*)
- Program Review Schedule 2015-2016 (*consent*)
- Approval of Graduate Certificates (*consent*)

Colorado State University-Global Campus

- Student Code of Conduct
- Change in Three Degree Programs

Colorado State University-Pueblo

- Excellence in Undergraduate Teaching Award (*See Board Chair's Agenda*)
- Program Review Schedule 2015-2016 (*consent*)
- Degrees To Be Awarded 2015-2016
- Posthumous Degree Request (*consent*)
- Faculty Handbook Change – Section 1.2.6.4 (*consent*)

III. Campus Reports

Colorado State University-Fort Collins

- Faculty Activity
- Promotion and Tenure

Colorado State University-Global Campus

- Faculty Activity

Colorado State University-Pueblo

- Faculty Activity
- Promotion and Tenure

Colorado State University-Fort Collins

- Academic Integrity

Colorado State University-Global Campus

- Academic Integrity

Colorado State University-Pueblo

- Academic Integrity

The Board of Governors of the  
Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

Stretch Goal: N/A

Strategic Initiative: N/A

**MATTERS FOR ACTION:**

Approval of Amendment to Board Policy 314, Approval of Degree Candidates (Posthumous degrees).

**RECOMMENDED ACTION:**

MOVED, that Board Policy 314, Approval of Degree Candidates at paragraph 3 is hereby amended to read:

3. "The Board approves in advance all degree candidates who meet the requirements of their respective institutions including posthumous degrees."

**EXPLANATION:**

Presented by Dr. Rick Miranda, System Academic Officer and Michael D. Nosler, General Counsel.

Pre-approval for posthumous degrees awarded by the institutions governed by the Board creates efficiencies in Board governance. Pursuant to Board Policy 100, the General Counsel is charged with the responsibility to periodically review and revise Board policies.

# COLORADO STATE UNIVERSITY SYSTEM

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## Policy and Procedures Manual

SUBJECT: ACADEMIC AFFAIRS

Policy 314: Approval of Degree Candidates

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### **Board Policy:**

Pursuant to CRS 23-30-119, upon recommendation of the Academic Affairs Committee, the Board approves all degree candidates for the institutions it governs.

### **Procedures:**

1. Based on degree requirements established by their respective Faculties, and audited by their Registrars, the Board with the advice of the institutions it governs, grants degrees periodically upon student completion of the various degree programs offered by the institutions.
2. The Board of Governors acknowledges that the institutions have the flexibility to alter or waive certain degree requirements as may be desired, required or deemed necessary, subject to accreditation and other requirements.
3. The Board approves in advance all degree candidates who meet the requirements of their respective institutions including posthumous degrees. This shall be done at least annually. The Board will typically grant approval to all institutions for the upcoming academic year (independent of the frequency with which the institution actually issues the degrees or diplomas).
4. Each institution shall submit to the Board an annual report of degrees granted in the prior year.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

Approval of Degree Candidates for Academic Year 2015-16

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the granting of specified degrees to those candidates fulfilling the requirements for their respective degrees at Colorado State University, Colorado State University – Pueblo, and Colorado State University – Global Campus at the end of the each cohort during the Academic Year 2015-16.

EXPLANATION:

Presented by Michael D. Nosler, General Counsel, and Dr. Rick Miranda, Chief Academic Officer, CSU System

Based on degree requirements established by their respective Faculties, and audited by their Registrars, each CSU System institution grants degrees periodically upon student completion of the various degree programs offered by the institutions. Pursuant to CRS 23-30-119 and in accordance with Policy 314, upon recommendation of the Academic Affairs Committee the Board approves all degree candidates for the institutions it governs at least annually.

Approval of Degree Candidates  
Academic Year 2015-16



Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

2015-16 Academic Faculty and Administrative Professional Manual Revisions: Section D.2.1 – University Benefits Committee

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revisions to the Colorado State University Academic Faculty and Administrative Professional Manual, Section D.2.1 – University Benefits Committee

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

The proposed revision for the 2014-2015 edition of the Colorado State University Academic Faculty and Administrative Professional Manual had been adopted by the Colorado State University Faculty Council. A brief explanation for the revision follows:

With the support of Amy Parsons, Diana Prieto, APC chair, Toni-lee Viney, current and past UBC members; we feel members of this committee should serve 4 year terms. To serve effectively on this committee the member must spend much of his/her first year gaining a solid understanding of: self-funded medical care, fringe, state and federal regulations related to providing benefits, details of employee classifications at CSU, and understanding of how salary funding models can impact benefits for employees. Four years terms would support membership model allowing a “new” faculty an AP member each year since there are 4 each of those member types.

Our committee represents both Administrative Professionals and Faculty in regards to benefits offerings. It makes sense to add APC and FC membership to our group to ensure ongoing, regular communication among groups, and prevent overlap of effort by the different committees on benefits related issues.

Our committee has been “unofficially” referred to as the UBC (University Benefits Committee) for quite some time, so it seems logical to refer to us the way the campus community refers to us.

Board of Governors of the Colorado State University System  
 Meeting Date: August 7, 2015  
 Consent Item

NOTE: Revisions are noted in the following manner:  
 Additions - underlined Deletions - ~~overseored~~

**D.2.1 University Benefits Committee** *(last revised August 8, 2014)*

The University Benefits Committee (UBC) advises the University administration regarding benefit programs for faculty and administrative professionals. The ~~Benefits Committee~~ UBC consists of four (4) faculty members, four (4) administrative professional members, a one (1) retired faculty member or administrative professional member, and four (4) ex officio non-voting members: the Chair or Vice Chair of the Classified Personnel Council (CPC), as decided by the Chair of CPC, the Chair or Vice Chair of the Administrative Professional Council (APC), as decided by the Chair of APC; the Chair or Vice Chair of the Faculty Council (FC), as decided by the Chair of FC; and the Executive Director of Human Resources, as an ex officio non-voting member. At least one (1) representative of the faculty and one (1) representative of the administrative professionals shall be elected each year. Each representative on the ~~Benefits Committee~~ UBC shall serve a ~~three (3)~~ four (4) year term. ~~The retired faculty or administrative professional shall serve a three (3) year term and shall be appointed by the Provost, based on nominations from retirees.~~ Faculty members shall be nominated by the Faculty Council Committee on Faculty Governance who shall provide nominees for election by the Faculty Council. Administrative professionals shall be elected by the Administrative Professional Council. The retired faculty or administrative professional member shall be appointed by the Office of the Provost on the recommendation of the Society of Senior Scholars. Terms of office shall begin on July 1. The Chair of the ~~Benefits Committee~~ UBC shall present an annual report to Faculty Council and the Administrative Professional Council.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

2015-16 Academic Faculty and Administrative Professional Manual Revisions: Section F – Leave Policies

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revisions to the Colorado State University Academic Faculty and Administrative Professional Manual, Section F – Leave Policies.

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

The proposed revision for the 2014-2015 edition of the Colorado State University Academic Faculty and Administrative Professional Manual had been adopted by the Colorado State University Faculty Council. A brief explanation for the revision follows:

These changes are based on a recommendation from Robert Schur (Executive Director, Dept. of Policy, Risk & Environmental Programs) to separate Parental Leave from Catastrophic Leave in order to comply with federal guidelines for fringe reimbursement.

Board of Governors of the Colorado State University System  
 Meeting Date: August 7, 2015  
 Consent Item

NOTE: Revisions are noted in the following manner:  
 Additions - underlined Deletions - ~~overseored~~

### **F.3.16 Parental Leave and ~~Catastrophic Circumstances Leave~~**

Academic Faculty, Administrative Professionals, Post-Doctoral Fellows, Veterinary Interns and Clinical Psychology Interns with an appointment of at least half-time (50%) or greater who satisfy the eligibility requirements for Short Term Disability (STD) are eligible for Parental Leave (see the *Academic Faculty and Administrative Professional Benefits and Privileges Handbook*). An employee who is not in a regular, paid employment status (for example, during a sabbatical or other such absence) or 9-month employees during summer session appointments are not eligible for this leave.

An employee becomes eligible for Parental Leave upon becoming a parent. Parental Leave is not available during the period preceding the birth or placement for adoption, even if absences are due to the expected arrival. Foster care placement is not included; however, foster care as part of adoption is included. Employees may use other types of accrued leave (such as Sick or Annual leave), as applicable, for absences during such periods. Only one Parental Leave benefit per employee is available per birth or adoption. The number of children born or adopted (e.g., twins) does not increase the amount of the Parental Leave benefit. (If both Parents are employees, each is entitled to use his or her Parental Leave benefit for the same event).

Parental Leave consists of 3 work weeks of paid time off, in addition to the employee's accrued Sick and Annual leave (and any STD benefits to which the birth mother is entitled) to be used for the purpose of caring for and bonding with the child. Parental Leave may be taken anytime within the first year after delivery/placement and it runs concurrently with (is considered part of) Family Medical Leave (FML) for the birth or placement for adoption event. It can be combined with use of Sick and/or Annual leave, as appropriate, to provide income replacement for the FML leave period (up to 12 weeks). This policy is intended to ensure adequate time off for employees with a newborn or newly adopted child, in most circumstances, while providing compensation for at least 9 weeks of the birth mother's 12 week FML period (typically 6 weeks of STD eligibility plus 3 weeks of Parental Leave), or 3 weeks for the non-birth parent. If the employee is eligible for STD, Parental Leave shall not commence until after STD benefits are exhausted. Parental Leave is not intended to be used to fulfill the STD elimination period of 10 continuous working days of absence. Once taken, Parental Leave must be used in a contiguous block (not split into intermittent days off). Prior notice of the intent to take Parental Leave is required at least 30 days in advance (unless such notice is impossible, in which case, as soon as possible). Your supervisor is responsible for timely reporting of Parental Leave in accordance with the Leave Reporting Policy. Illustrative examples of Parental Leave are located in Section 2 of the Human Resources Manual at [www.hrs.colostate.edu](http://www.hrs.colostate.edu).

~~The Catastrophic Circumstances Leave may be applicable in extraordinary circumstances where an employee has exhausted all available sick and annual leave and suffers an unforeseen event,~~

Board of Governors of the Colorado State University System

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Consent Item

~~such as a catastrophic natural disaster or casualty that displaces the employee from his or her home. As well, the Catastrophic Circumstances Leave may be applicable in the case of a serious illness of the employee or employee's immediate family member for which no other accrued leave is available, or similar event. A department or unit head may authorize up to two work weeks of paid time off. In the rare case that an employee who is eligible for STD does not have enough leave to cover the STD waiting period, such leave must be granted; all other cases are within the discretion of the department head. Any leave granted under this policy must be designated as FML, as applicable in accordance with federal regulations. This policy is not intended to change or conflict with section F.3.14, Special Leave.~~

Note: The Parental Leave ~~and Catastrophic Circumstances Leave~~ Policy may be reviewed at [policies.colostate.edu](http://policies.colostate.edu).

### **F.3.17 Catastrophic Circumstances Leave**

The Catastrophic Circumstances Leave may be applicable in extraordinary circumstances where an employee has exhausted all available sick and annual leave and suffers an unforeseen event, such as a catastrophic natural disaster or casualty that displaces the employee from his or her home. As well, the Catastrophic Circumstances Leave may be applicable in the case of a serious illness of the employee or employee's immediate family member for which no other accrued leave is available, or similar event. A department or unit head may authorize up to two work weeks of paid time off. In the rare case that an employee who is eligible for STD does not have enough leave to cover the STD waiting period, such leave must be granted; all other cases are within the discretion of the department head.

Any leave granted under this policy must be designated as FML, as applicable in accordance with federal regulations. This policy is not intended to change or conflict with section F.3.14, Special Leave.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

2015-16 Academic Faculty and Administrative Professional Manual Revisions: Section I.15 – Responsibilities of Being a Student Group Advisor

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revisions to the Colorado State University Academic Faculty and Administrative Professional Manual, Section I.15 – Responsibilities of Being a Student Group Advisor.

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

The proposed revision for the 2014-2015 edition of the Colorado State University Academic Faculty and Administrative Professional Manual had been adopted by the Colorado State University Faculty Council. A brief explanation for the revision follows:

The added language provides clarification of the mutual agreement underpinning the selection and retention of a student group advisor.

Board of Governors of the Colorado State University System  
Meeting Date: May 8, 2015  
Consent Item

NOTE: Revisions are noted in the following manner:  
Additions - underlined Deletions - ~~oversecored~~

### **I.15 Responsibilities of Being a Student Group Advisor**

An advisor is selected by a student group and serves upon mutual agreement among the student group, the advisor, and the advisor's administrative head. The role of the advisor is to provide guidance in fiscal matters; assistance in attaining group goals; encouragement of open lines of communication among students, faculty members, and staff; and continuity to the group from year to year. When a faculty member or staff member is confirmed as an advisor to a student group, this role as an advisor will constitute an assigned University duty, which will last at least through the academic year, and may be renewed annually at the discretion of all parties.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

2015-16 Academic Faculty and Administrative Professional Manual Revisions:  
Appendix 1 – Discrimination, Harassment, Sexual Harassment, Sexual Misconduct,  
Domestic Violence, Dating Violence, Stalking, and Retaliation

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revisions to the Colorado State University Academic Faculty and Administrative Professional Manual, Appendix 1 – Discrimination, Harassment, Sexual Harassment, Sexual Misconduct, Domestic Violence, Dating Violence, Stalking, and Retaliation

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

The proposed revision for the 2014-2015 edition of the Colorado State University Academic Faculty and Administrative Professional Manual had been adopted by the Colorado State University Faculty Council. A brief explanation for the revision follows:

The changes are required for the university to be in compliance with Title IX federal regulations and accompanying guidance from the Department of Education, specifically, aligning definitions with the definitions provided in the guidance.



Board of Governors of the Colorado State University System  
 Meeting Date: August 7, 2015  
 Consent Item

NOTE: Revisions are noted in the following manner:  
 Additions - underlined Deletions - ~~oversecored~~

**APPENDIX 1: DISCRIMINATION, HARASSMENT, SEXUAL HARASSMENT, SEXUAL MISCONDUCT, DOMESTIC VIOLENCE, DATING VIOLENCE, STALKING, AND RETALIATION** (*last revised August 8, 2014*)

**Purpose of Policy**

Colorado State University is committed to providing an environment that respects the dignity and worth of every member of its community. The University strives to create and maintain a work and study environment that is fair, inclusive, and responsible so that each member of the University community is treated with dignity and respect and is rewarded for relevant considerations such as ability and performance. The purpose of this policy is to define the types of conduct that are prohibited by the University as a means of achieving these goals and to prevent harm arising from discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking and retaliation.

Colorado State University is committed to providing an environment that is free from discrimination and harassment based on race, age, creed, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity or expression, or pregnancy. Such an environment is necessary to a healthy learning, working, and living atmosphere because discrimination and harassment undermine human dignity and the positive connection among all people at our University. Acts of discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking, and retaliation will be addressed consistent with this policy.

Consistent with state and federal law, reasonable accommodation will be provided to persons with disabilities. This Policy supersedes all prior University Policies on discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking, and retaliation.

**Application of Policy**

This policy applies to all members of the University community who are subject to the jurisdiction and authority of the University with respect to matters of discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking, and retaliation. This includes, without limitation, students, faculty, employees, affiliates, visitors, and (where provided by law or contract) agents, contractors, subcontractors, and grantees of the University. All University business units, wherever located, are covered by this policy.

**Exemptions**

None

**Definitions**

As used in this policy, the following terms are to be understood and applied as follows, unless clearly stated otherwise:

## Board of Governors of the Colorado State University System

Meeting Date: August 7, 2015

## Consent Item

**a. Action or conduct**, as used in this policy, also includes inaction or omission where there is a responsibility to act. Action or conduct that occurs off-campus can be subject to this policy if it involves one or more Covered Persons and (a) causes an impact to any person(s) on campus, (b) reasonably relates to the health, safety and security of the campus or any person(s) on campus, or (c) reasonably relates to the Responding Party's fitness or capacity to act in accordance with his or her obligations and/or the policies of the University (e.g., the Student Conduct Code or any policy or code relating to the conduct of an employee).

**b. Consent** to sexual activity is consent that is informed, knowing and voluntary. Consent is active, not passive, and requires cooperation in act or attitude pursuant to an exercise of free will and with knowledge of the nature of the act. Silence, in and of itself, cannot be interpreted as consent. Sexual activity with someone known, or who should be known, to be mentally or physically incapacitated by alcohol or other drug use, unconscious or in a state of blackout, or otherwise unable to give consent, is not valid consent. A person is considered to be incapable of giving consent when the person lacks the cognitive ability to make an important life decision, and this measure applies even when the same persons have engaged with one another in consensual sex in the past.

**c. Covered Persons** are all Colorado State University students, employees (including faculty), visitors, volunteers, affiliates, and (where provided by law or contract) agents, contractors, subcontractors, and grantees.

**d. Dating violence** means violence committed by a person:

1. who is or has been in a social relationship of a romantic or intimate nature with the impacted party; and
2. where the existence of such a relationship shall be determined based on a consideration of the following factors:
  - i. the length of the relationship;
  - ii. the type of relationship;
  - iii. the frequency of interaction between the persons involved in the relationship.

3. For the purposes of this definition, dating violence includes, but is not limited to, sexual or physical abuse or the threat of such abuse. Dating violence does not include acts covered under the definition of domestic violence.

**e. Discrimination** is conduct that is based upon an individual's race, age, creed, color, religion, national origin, ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity or expression, or pregnancy, and that (a) excludes an individual from participation in, (b) denies the individual the benefits of, (c) treats the individual differently from others in, or (d) otherwise adversely affects a term or condition of an individual's employment, education, living environment or University program or activity. It is unlawful discrimination for an employer to refuse to hire, to discharge, to promote or demote, to harass during the course of employment, or to discriminate in matters of compensation, terms, conditions, or privileges of employment against any person otherwise qualified because of any of these factors. This includes failing to provide reasonable accommodation, consistent with state and federal law, to persons with disabilities.

**f. Domestic violence** includes felony or misdemeanor crimes of violence committed by a current or former spouse or intimate partner of the victim, by a person with whom the victim shares a child in common, by a person who is cohabitating with or has cohabitated with the victim as a spouse or intimate partner, by a person similarly situated to a spouse of the victim under the domestic or family violence laws of the State of Colorado or other jurisdiction in which this policy applies, or by any other person against an adult or youth victim who is protected from that person's acts under the domestic or family violence laws of the jurisdiction.

**g. Harassment** covered under this policy is conduct that demonstrates hostility towards a person (or a group of persons) based upon that person's race, age, creed, color, religion, national origin, ancestry, sex, gender, disability,

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veteran status, genetic information, sexual orientation, gender identity or expression, or pregnancy and has the purpose or effect of:

1. Creating an intimidating or hostile environment in which to work, learn, or participate in a University activity, or unreasonably interfering with or affecting any such activities; or
2. Unreasonably affecting a person's educational or work opportunities. Harassment may take various forms, including name-calling, verbal, graphic or written statements (including the use of electronic means), or other conduct that a reasonable person would find physically threatening, harmful, or humiliating. Harassment does not have to involve the intent to cause harm, be directed at a specific target, or involve repeated incidents in order to be prohibited. Sex-based harassment includes sexual harassment, which is further defined below, and non-sexual harassment based on stereotypical notions of what is female/feminine v. male/masculine or a failure to conform to those gender stereotypes.

**h. Impacted Party/Complainant:** The person who reports, or is reported by another person, as having been subject to acts constituting discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking or retaliation by another.

**i. Responding Party:** The person reported to have been engaging in acts that may constitute a violation of this policy, including discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking or retaliation in violation of this policy.

**j. Retaliation** is any overt or covert act of reprisal, interference, restraint, penalty, discrimination, intimidation, or harassment, against any person or group for exercising rights under this policy, including opposing any practices forbidden under this policy, filing a complaint, testifying, assisting, or participating in any manner in an investigation or proceeding under this policy. This includes action taken against a bystander who intervened to stop or attempt to stop discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking or retaliation. Action is generally deemed retaliatory if it would deter a reasonable person in the same circumstances from opposing practices prohibited by this policy or participating in the complaint processes under this policy.

**k. Sexual harassment** is harassment that is of an implicitly or overtly sexual nature, or is based on a person's actual or perceived sex, gender, sexual orientation, gender identity, or gender expression. Sexual harassment, including sexual assault, can involve persons of the same or opposite sex, and includes any unwelcome sexual advance, request for sexual favors, or other conduct of a sexual nature when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, education or participation in a University activity;
2. Submission to, or rejection of, such conduct by an individual is used as the basis for, or a factor in, decisions affecting that individual's employment, education or participation in a University activity; or
3. Such conduct has the purpose or effect of unreasonably interfering with an individual's employment or academic performance or creating an intimidating, offensive or hostile environment for that individual's employment, education or participation in a University activity.

**l. Sexual misconduct** is any conduct that constitutes sexual assault, sexual exploitation, or sexual violence, as follows:

1. Sexual assault means an actual or attempted sexual contact with another person without that person's consent. Sexual assault includes, but is not limited to:

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- i. Involvement in any sexual contact when the victim is unable to consent.
- ii. Intentional and unwelcome touching of, or coercing, forcing, or attempting to coerce or force another to touch a person's intimate parts (defined as genital area, groin, inner thigh, buttocks, or breast).
- iii. Sexual intercourse without consent, including acts commonly referred to as rape, such as penetration, no matter how slight, of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without the consent of the victim.
- iv. Fondling, including the touching of the private body parts of another person for the purpose of sexual gratification, without the consent of the victim, including instances where the victim is incapable of giving consent because of age or temporary or permanent mental incapacity.
- v. Incest, including sexual intercourse between persons who are related to each other within degrees where marriage is prohibited by law.
- vi. Statutory rape, including sexual intercourse with a person who is under the statutory age of consent.

2. Sexual exploitation occurs when a person takes non-consensual or abusive sexual advantage of another for anyone's advantage or benefit other than the person being exploited, and that behavior does not otherwise constitute one of the other sexual misconduct offenses defined herein. Examples of behavior that could rise to the level of sexual exploitation include:

- i. Prostituting another person;
- ii. Non-consensual visual (e.g., video, photograph) or audio-recording of sexual activity;
- iii. Non-consensual distribution of photos, other images, or information of an individual's sexual activity, intimate body parts, or nakedness, with the intent to or having the effect of embarrassing an individual who is the subject of such images or information;
- iv. Going beyond the bounds of consent (such as letting others hide in the closet to watch you having consensual sex);
- v. Engaging in non-consensual voyeurism;
- vi. Knowingly transmitting a sexually transmitted disease, such as HIV, to another without disclosing your STD status;
- vii. Exposing one's genitals in non-consensual circumstances, or inducing another to expose his or her genitals; and
- viii. Possessing, distributing, viewing or forcing others to view illegal pornography.

3. Sexual violence is a severe form of sexual harassment, and refers to physical sexual acts perpetrated against a person's will or where a person is incapable of giving consent, including but not limited to rape, sexual assault, sexual battery, sexual coercion or similar acts in violation of state or federal law.

**m. Stalking** means engaging in a course of conduct directed at a specific person that would cause a reasonable person to (a) fear for his or her safety or the safety of others, or (b) suffer substantial emotional distress. For the purposes of this definition:

- i. Course of conduct means two or more acts, including, but not limited to, acts in which the stalker directly, indirectly, or through third parties, by any action, method, device, or means, follows, monitors, observes, surveils, threatens, or communicates to or about a person, or interferes with a person's property.
- ii. Reasonable person means a reasonable person under similar circumstances and with similar identities to the victim.
- iii. Substantial emotional distress means significant mental suffering or anguish that may, but does not necessarily require medical or other professional treatment or counseling.

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Examples of behaviors by a person stalking another are:

1. Follow you and show up wherever you are.
2. Send unwanted gifts, letters, cards, or e-mails.
3. Damage your home, car, or other property.
4. Monitor your phone calls or computer use.
5. Use technology, like hidden cameras or global positioning systems (GPS), to track where you go.
6. Drive by or hang out at your home, school, or work.
7. Threaten to hurt you, your family, friends, or pets.
8. Find out about you by using public records or online search services, hiring investigators, going through your garbage, or contacting friends, family, neighbors, or co-workers.
9. Posting information or spreading rumors about you on the Internet, through social media, in a public place, or by word of mouth.
10. Other actions that control, track, or frighten you.

**Statement of Policy Principles**

It is the policy of Colorado State University to maintain an academic and work environment free of discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking and retaliation for students, faculty, and employees. Such conduct is contrary to the standards of the University community and common decency. It diminishes individual dignity, impedes equal employment and educational opportunities and equal access to freedom of academic inquiry, and creates barriers to fulfilling the University's scholarly, research, educational, and service missions. Such conduct will not be tolerated at the University.

Discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking and retaliation also are illegal; they are prohibited in the employment context by Title VII of the 1964 Civil Rights Act, in the education context by Title IX of the Educational Amendments of 1972, and, in both employment and education contexts, by Colorado's anti-discrimination laws, including, but not limited to, C.R.S. §24-34-401, et seq. Such conduct also can violate federal and state criminal laws.

Colorado State University does not discriminate on the basis of race, age, creed, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity or expression, and pregnancy. The University complies with the Civil Rights Act of 1964, as amended, related Executive Orders 11246 and 11375, Title IX of the Education Amendments Act of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, Section 402 of the Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended, the Age Discrimination in Employment Act of 1967, as amended, The Pregnancy Discrimination Act of 1978, Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, the ADA Amendments Act of 2008, the Genetic Information Nondiscrimination Act of 2008, and all civil rights laws of the State of Colorado. Accordingly, equal opportunity of employment and admission shall be extended to all persons. The University shall

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promote equal opportunity and treatment in employment through a positive and continuing affirmative action program for ethnic minorities, women, persons with disabilities, and veterans.

To comply with federal requirements regarding non-discrimination in admissions and operations, the University's approved non-discrimination statement must appear in major University publications such as the General Catalog. A brief required non-discrimination statement also must appear in written advertisements and University publications, including those used to inform prospective students of University programs. The required non-discrimination statements, as well as further information regarding these requirements, are available at the Office of Equal Opportunity.

The University prohibits any act of discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence or stalking by a Covered Person, and any retaliation related to ~~acts or~~ reports of such acts. The University takes all allegations of such misconduct seriously. When allegations of such acts are reported, and a Covered Person is found to have violated this policy, consequences will result, up to and including dismissal from CSU. Any disciplinary action for a tenured faculty member must follow the procedures outlined in Section E.15: Disciplinary Action for Tenured Faculty, of the Faculty and Administrative Professional Manual.

All members of the CSU community are expected to not infringe upon the rights of others. This Policy has been adopted to reaffirm this principle and to provide support and recourse to those who are impacted by discrimination, harassment, sexual harassment, sexual misconduct, domestic violence, dating violence, stalking, or retaliation perpetrated by a member of the University community. When the Responding Party is determined not to be a Covered Person at the time of the report, he or she may nevertheless be subject to this policy in the event that he or she becomes a Covered Person in the future, as well as being subject to other laws and policies.

### **Responsibilities and Procedures**

#### **1. Title IX Sex-Based Discrimination, Harassment, Misconduct and Retaliation Involving Students**

CSU has appointed a Title IX Coordinator and a Deputy Title IX Coordinator to oversee and coordinate its compliance with Title IX of the Education Amendments of 1972, 20 U.S.C. 1681 et seq. (Title IX), and its implementing regulations, 34 C.F.R. Part 106. Title IX prohibits discrimination on the basis of sex in education programs or activities by recipients of federal financial assistance. The Title IX Coordinator is the Executive Director of the Office of Equal Opportunity. The Deputy Title IX Coordinator is the Director of the Office of Support and Safety Assessment.

All CSU employees and volunteers, including faculty, staff and students acting in their employment or volunteer roles, are mandatory reporters of any violations or alleged violations of Title IX. In order to comply with this law and enable the University to proactively respond effectively and stop instances of sex-based discrimination, sexual harassment and sexual misconduct involving students at the University, all University employees must, within 24 hours of receiving the information, report information they have about alleged or possible sex-based discrimination, sexual harassment, sexual misconduct, and retaliation involving students to the Deputy Title IX Coordinator in the Office of Support and Safety Assessment (SSA) or the Office of Equal Opportunity (OEO). Mandatory reporting means that information indicating that a person has allegedly committed or been the target of alleged or possible sex-based discrimination, sexual harassment, and sexual misconduct involving students may not be withheld, even if confidentiality is requested by the reporting party.

Being a mandatory reporter is consistent with having concern for and supporting those involved in violations or alleged violations. It signifies that campus safety is at the forefront of the community's concern. When a Covered Person discloses information, it is best for the employee or volunteer to mention they are a mandated reporter and

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will have to share the information with the University, but that the Covered Person will still always have the choice whether or not to share their story with others at the University whose responsibility it is to investigate. Examples of mandatory reporters include, but are not limited to:

- a. Faculty member to whom a student reveals an incident of sexual harassment or sexual misconduct involving the student or other Covered Persons protected under this policy.
- b. A Resident Assistant who receives information from one of their residents that they were assaulted by another student at an off campus party
- c. A person who is acting as a volunteer at a CSU-hosted activity who observes another person engaging in sexual contact with a child in the program.

Remember, these are just examples. Sex-based discrimination, harassment, misconduct and retaliation must be reported no matter what the circumstances if they involve students. Employees exempt from these mandatory reporting requirements are only those employees who are statutorily prohibited from reporting such information, for example, licensed healthcare professionals acting within the scope of the professional-patient relationship, and Sexual Assault Victim Assistance Team members. If you are unsure whether or not you are exempt, you must contact OEO to determine whether or not an exemption applies. Teachers are not exempt from reporting incidents involving students unless one of these special statutory exemptions applies.

Reports of any violation or suspected violation of the protections of Title IX involving a student may be made to the Deputy Title IX Coordinator, whose name and contact information is always available online at <http://www.supportandsafety.colostate.edu/sexual-harassment> or by calling 970-491-7407.

Upon receiving a report of alleged or possible sex-based discrimination, harassment, sexual harassment, sexual misconduct, sexual assault, or retaliation, the Deputy Title IX Coordinator will evaluate the information received and determine what further actions should be taken. Further action may include contacting the CSU Police Department. If, after such evaluation, it reasonably appears that a violation of this policy by a student or an employee has occurred, SSA will follow the appropriate procedures referenced below.

When the Responding Party is a student, the Deputy Title IX Coordinator will determine what further actions shall be taken, which may include investigation of the report and referral to the Office of Conflict Resolution and Student Conduct Services for possible disciplinary action and imposition of sanctions as set forth under the Student Conduct Code.

## **2. Sexual Misconduct, Domestic Violence, Dating Violence, Stalking and Retaliation Involving Non-Students who are Covered Persons**

The Office of Support and Safety Assessment also handles complaints of sexual misconduct, domestic violence, dating violence, stalking, and related retaliation, involving non-students who are Covered Persons under this policy, and may refer such matters (or receive referrals from the CSU Police Department or other law enforcement agencies). Reports of such incidents should be made to SSA or CSUPD.

## **3. Employment-Related Discrimination, Harassment, and Other Violations**

The Office of Equal Opportunity handles reports of discrimination and harassment in employment or educational opportunity, including sexual harassment complaints involving both students and non-student Covered Persons.

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(Note: student-to-student discrimination and harassment may be reported directly to the Office of Conflict Resolution and Student Conduct Services (CRSCC) at 491-7165).

There are two conditions under which the OEO will take steps, either directly with the Impacted Party or through a reporting employee, to provide information about the University's procedures for filing a complaint:

- a. when the Impacted Party is a student and the Responding Party consists of either faculty, employees, affiliates, or visitors;
- b. when the Impacted Party and the Responding Party are non-students.

The OEO will maintain, publish and follow procedures for the review and resolution of complaints where the Responding Party is not a student.

When the person alleged to have committed the violation is an agent or contractor of the University who is not subject to any disciplinary procedures of the University and it reasonably appears that a violation has occurred, the matter will be referred to the appropriate official or department for further action. This may include, as appropriate, any or all of the following:

- a. The Director of Contracting Services, for action that may be taken under the terms of a university contract, such as contract suspension or termination, demanding a change of personnel working under a contract, or initiation of contractor debarment;
- b. The CSU Police Department, for initiation of a criminal investigation and/or complaint;
- c. An outside law enforcement or governmental agency with actual or apparent jurisdiction over the alleged perpetrator.

#### **4. First Amendment**

The protections of the First Amendment must be considered if issues of speech or artistic expression are involved. Free speech rights apply in the classroom and in all other education programs and activities of public institutions, and First Amendment rights apply to the speech of students and teachers. Great care must be taken not to inhibit open discussion, academic debate, and expression of personal opinion, particularly in the classroom. Nonetheless, speech or conduct of a sexual or hostile nature that occurs in the context of educational instruction may exceed the protections of academic freedom and constitute prohibited harassment or sexual harassment if it meets the definition of harassment or sexual harassment as contained in this policy and (1) is reasonably regarded as non-professional speech (i.e., advances a personal interest of the faculty member as opposed to furthering the learning process or legitimate objectives of the course) or (2) lacks accepted pedagogical purpose or is not germane to the academic subject matter.

#### **5. Affirmative Action**

The University takes affirmative action to employ qualified women, minorities, veterans, and individuals with disabilities. For information on this Affirmative Action commitment and program, contact the OEO at [oeo@colostate.edu](mailto:oeo@colostate.edu) or 970-491-5836.



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### 6. Retaliation

Retaliation against members of the University community for making good faith reports of non-compliance with laws, regulations, or University policies is strictly prohibited, and is subject to disciplinary action up to and including termination or dismissal from employment or enrollment at the University. It is prohibited to discharge, demote, suspend, threaten, harass, intimidate or otherwise retaliate against an individual in the terms or conditions of employment or educational opportunity based on the individual's good faith report of potential non-compliance, or based on the individual's cooperation with an investigation or hearing regarding a report of potential non-compliance. Retaliation includes violation of no contact orders as well as contact with the impacted party/complainant through third parties, such as private investigators. Such retaliation is prohibited regardless of whether the matter reported is substantiated.

Colorado State University protects all participants in the complaint and grievance processes from retaliation. No person shall restrain, interfere with, coerce, attempt to intimidate, or take any reprisal against a participant under these procedures. Failure to comply with this expectation may result in the imposition of University sanctions up to an including termination or dismissal.

Acts or threats of retaliation constitute a serious violation of University policy, and the University encourages prompt reporting of any retaliatory action. Students should report retaliation to OEO, SSA or Conflict Resolution & Student Conduct Services (CRSCS). Employees should normally report retaliation to their supervisor, but, if the supervisor is involved in the matter, or for any reason an individual is uncomfortable speaking with his or her supervisor, the report may be made to the responsible department head, the Office of Equal Opportunity, or by using the CSU System's Compliance Reporting Hotline which may be accessed online (<http://reportinghotline.colostate.edu/>) or by calling, toll-free, 1-855-263-1884. The Hotline allows anonymous reporting if desired.

### 7. Required Training

Federal law requires that all newly hired CSU employees (including faculty) and incoming students participate in primary prevention and awareness programs, and that students and faculty engage in prevention and awareness programs on an ongoing basis. These programs may be offered by OEO, SSA, the President's Commission on Women and Gender Equity (PCWGE), CRSCS, and other University programs. Sexual Harassment Awareness Training is offered by OEO and may be retaken anytime as a refresher by contacting OEO at [oeo@colostate.edu](mailto:oeo@colostate.edu) or by calling 970-491-5836.

### 8. Procedures for Complaints

The University provides fair, understandable, and legally sound procedures for handling all complaints of discrimination, harassment, sexual harassment and sexual misconduct, domestic violence, dating violence, stalking and retaliation. These procedures can vary depending on the nature of the complaint and the status of the persons involved (i.e., student, faculty, employee, or non-employed party). The responsible departments are required to maintain, publish, and follow appropriate procedures.

#### Filing with External Agencies

Persons who believe that they have been subjected to discrimination, harassment, sexual harassment, sexual misconduct, or stalking may be able to file a complaint with the Colorado Civil Rights Division, the U.S. Equal Employment Opportunity Commission or the U.S. Department of Education's Office for Civil Rights. Information regarding filing charges with any of these agencies may be obtained from the Office of Equal Opportunity.

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**Expectations for Members of the University Community**

Cooperation and participation by the members of the University community in the resolution of a complaint under these procedures is necessary. All University community members asked to participate should do so. If an Impacted Party/Complainant does not participate, the University may continue the investigation, invoke necessary interim and permanent remedies, or conclude the complaint. If a Respondent does not participate, the University will move forward with the complaint with the information it is able to collect and ascertain.

The Impacted Party/Complainant(s), Respondent(s), and all witnesses shall be truthful in their testimony. This includes statements made verbally and in writing. Failure to comply with this expectation may result in the implementation of University sanctions.

**References**

- Colorado State University [Student Conduct Code](#)
- [US Department of Education, Office of Civil Rights – Pamphlet on Sexual Harassment](#)
- [Office of Equal Opportunity](#)

**Helpful Resources**

An Impacted Party may report confidentially to the following campus resources that provide support and guidance:

- Sexual Assault Victim Assistance Team (970) 492-4242
- Women and Gender Advocacy Center (970) 491-6384
- Women’s Clinic at CSU Health Network (970) 491-1754
- Counseling Services (970) 491-6053

The following are other campus resources. These resources do not provide complete confidentiality.

- Deputy Title IX Coordinator/Director of Support and Safety Assessment (970) 491-7407
- Colorado State University Police Department (970) 491-6425
- Director of Student Case Management & Referral Coordination (970) 491-8051

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MATTERS FOR ACTION:

Program Review Schedule

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the 2015-2016 program review schedule.

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

In accordance with University policy, as approved by the Board of Governors, every Department or instructional unit must undergo a program review at least once every six years. The following academic program review schedule for the academic year 2015-2016 is submitted for your approval:

College of Engineering

Atmospheric Sciences  
Chemical and Biological Engineering  
Civil and Environmental Engineering  
Electrical and Computer Engineering  
Mechanical Engineering

College of Health and Human Sciences

Construction Management  
Education  
Food Science and Human Nutrition  
Health and Exercise Science  
Human Development and Family Studies  
Occupational Therapy  
Social Work

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College of Natural Sciences

Computer Science  
Statistics

Warner College of Natural Resources

Forestry and Rangeland Stewardship

Special Academic Units

Biomedical Engineering

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MATTERS FOR ACTION:

Graduate Certificates

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the Graduate Certificates.

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

In order to qualify for Title IV funding, graduate certificates awarded by Colorado State University must demonstrate approval by the Board of Governors, the Colorado Department of Higher Education and the Higher Learning Commission. The certificates listed here for which we are seeking approval have received approval from the University Curriculum Committee and the Faculty Council.

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**Graduate Certificates:**

**School of Education**

Evidence-Based Design – 9 credits

**College of Business**

Accounting Ethics and Auditing – 9 credits

Applied Finance – 11 credits

Business Information Systems – 9 credits

Business Intelligence – 9 credits

Information Technology (IT) Project Management – 9 credits

Marketing Management – 9 credits

**School of Social Work**

Advanced Clinical Behavioral Health – 9 credits

Pre K-12 School Social Worker – 9 credits

**Warner College of Natural Resources**

Ski Area Management – 12 credits

**Graduate Certificate**  
**Accounting Ethics and Auditing**

GRADUATE CERTIFICATE CURRICULAR REQUEST

NEW CERTIFICATE

THIS FORM MUST BE TYPED.

PAGE 1 of 4

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

FACULTY CONTACT (Required):

Name Don Samelson Email samelson@lamar.colostate.edu Phone

PREPARER CONTACT (If different from faculty contact):

Name Nicole Olsen Email nicole.olsen@colostate.edu Phone 491-1129

EFFECTIVE DATE (First term and year students may apply for certificate): Fall Spring Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed. Its name may not duplicate that of any other program, graduate or undergraduate. A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above. A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate. Matriculating or non-matriculating students must apply to enroll in a graduate certificate. Students must have completed a bachelor's degree to apply for graduate certificate programs.

1. OFFICIAL CERTIFICATE TITLE: Accounting Ethics and Auditing (maximum 80 characters and spaces, to appear on student's transcript)

2. COLLEGE: CAS COB COE CHHS CLA WCNR CNS CVMBS IU N/A

3. DEPARTMENT, SCHOOL, or SAU: (Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces): To provide advanced coursework in accounting to individuals who already have a background in accounting and wish to increase their expertise and marketability. Completion of the certificate provides increased expertise in accounting ethics, forensic accounting, fraud auditing, and leading best practice information technologies used in organizational accounting systems worldwide. The specific course mix is designed in part to help individuals meet professional licensure requirements in Colorado and certain other states. There are also synergies with other areas of graduate study within the College of Business.

5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces). There are two target audiences. One audience is individuals seeking to meet Colorado (and other states) professional licensure requirements in accounting. The course mix specifically addresses new state regulations. The other audience is individuals in College of Business graduate programs who have backgrounds in accounting and want to increase their expertise in this area.

6. ADMISSIONS CRITERIA (maximum 500 characters and spaces). This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded. Bachelor's degree with a minimum GPA of 3.0; including coursework equivalent to an undergraduate degree in accounting; for international applicants a TOEFL score of 86 or higher or an IELTS score of 6.5 or higher; Not open to students enrolled in Master of Accountancy program.



**NEW GRADUATE CERTIFICATE REQUEST**  
**CERTIFICATE TITLE:** Accounting Ethics and Auditing

**7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):**

There is expected demand for the certificate among target audiences, according to College of Business enrollment staff. It will allow us to serve the needs of stakeholders within the accounting profession, and also to provide an enrichment opportunity for students pursuing graduate programs in College of Business. All courses in the certificate are currently being taught within our existing accounting programs.

**8. LISTING OF CURRICULUM REQUIREMENTS**

- Show all the requirements for the Graduate Certificate below.
- All courses must be 500-level or above.
- Include subject code, number, title, term(s) offered, and number of credits for each course.
- Note superscript capital P after the course number if the course has a prerequisite.
- Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").
- Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).

SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
ACT 540P	Professional Ethics and Responsibilities	F,S	3
ACT 541P	Forensic Accounting and Fraud Auditing	F,S	3
ACT 550P	Accounting Information Technologies	F,S	3
<b>TOTAL CERTIFICATE CREDITS:</b>			9

**9. CATALOG COPY (maximum 500 characters and spaces):** Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

Completion of the certificate provides increased expertise in accounting ethics, forensic accounting, fraud auditing, and leading best practice information technologies used in organizational accounting systems worldwide. The graduate coursework is designed in part to help individuals meet professional licensure requirements in Colorado and certain other states.

NEW GRADUATE CERTIFICATE REQUEST  
CERTIFICATE TITLE: Accounting Ethics and Auditing

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: Graduate Programs Building name: Rockwell North

Room number: 215 Phone number: 491-2461

Contact for certificate information, application, and advising:

Name: Jenny Dittenhofer Email: jenny.dittenhofer@colostate.edu Phone: 491-2641

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Audrey Gramling  
Department Head/Chair (please print)\*\*  
[Signature] Signature  
12-4-14 Date

Don Samelson  
Chair Coll. Curric. Comm. (please print)  
[Signature] Signature  
12-5-14 Date

Ajay Menon David Gilliland  
Dean of College (please print)\*\*  
[Signature] Signature  
12-5-14 Date

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

Paul Mallette  
College Rep. to UCC (please print)  
[Signature] Signature  
12/5/14 Date

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>	
CoSRGE Approval Date <u>1/2 2/5/15</u>	UCC Approval Date <u>2/20/15</u>
Faculty Council Approval Date <u>4/7/15</u>	Approved Effective <u>FA 15</u>

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**College of Business**  
Graduate Certificate in Accounting Ethics and Auditing

**Effective Fall 2015**  
 CoSRGE 2/5/15

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
ACT 540 <sup>P</sup>	<u>Professional Ethics and Responsibilities</u>	<u>3</u>
ACT 541 <sup>P</sup>	<u>Forensic Accounting and Fraud Auditing</u>	<u>3</u>
ACT 550 <sup>P</sup>	<u>Accounting Information Technologies</u>	<u>3</u>
	<b>TOTAL</b>	<b><u>9</u></b>

**PROGRAM TOTAL = minimum 9 credits**

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.

**Graduate Certificate**  
**Business Intelligence**

DEC 12 2014

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### GRADUATE CERTIFICATE CURRICULAR REQUEST

#### NEW CERTIFICATE

THIS FORM MUST BE TYPED.

PAGE 1 of 4

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

**FACULTY CONTACT (Required):**

Name Jon Clark Email jon.clark@business.colostate.edu Phone

**PREPARER CONTACT (If different from faculty contact):**

Name Nicole Olsen Email nicole.olsen@colostate.edu Phone 491-1129

EFFECTIVE DATE (First term and year students may apply for certificate):  Fall  Spring  Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed.
- Its name may not duplicate that of any other program, graduate or undergraduate.
- A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above.
- A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate.
- Matriculating or non-matriculating students must apply to enroll in a graduate certificate.
- Students must have completed a bachelor's degree to apply for graduate certificate programs.

1. OFFICIAL CERTIFICATE TITLE: Business Intelligence (maximum 80 characters and spaces, to appear on student's transcript)

2. COLLEGE:  CAS  COB  COE  CHHS  CLA  WCNR  CNS  CVMBS  IU  N/A

3. DEPARTMENT, SCHOOL, or SAU: (Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

**4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):**

Business intelligence involves harnessing vast data stores to solve problems, enhance decision-making and discover new opportunities. This certificate combines business intelligence with applied data mining and analytics to optimize, forecast, detect, predict, classify and discover new ways of using data to make a business more productive and efficient.

**5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces).**

There are two target audiences. One audience is professionals who require a valuable credential and immediate recognition in the IS/IT field. The other audience is individuals in College of Business graduate programs who have backgrounds in computer information systems and want to increase their knowledge and expertise in the area of business intelligence.

**6. ADMISSIONS CRITERIA (maximum 500 characters and spaces).** This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.

Bachelor's degree with a minimum GPA of 3.0; for international applicants a TOEFL score of 86 or higher or an IELTS score of 6.5 or higher.

7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):

This certificate was previously offered as a Certificate of Completion. Over the past 3 years, the Department has awarded over 30 students the certificate of completion and the demand for the program will continue as Business Intelligence continues to advance the mission and purpose of organizations today. Also, the program will allow the Department to serve the needs of stakeholders within the computer information systems profession, and also to provide an enrichment opportunity for students pursuing graduate programs in College of Business. All courses in the certificate are currently being taught within our existing Computer Information Systems program.

8. LISTING OF CURRICULUM REQUIREMENTS

<ul style="list-style-type: none"> <li>Show all the requirements for the Graduate Certificate below.</li> <li>All courses must be 500-level or above.</li> <li>Include subject code, number, title, term(s) offered, and number of credits for each course.</li> <li>Note superscript capital P after the course number if the course has a prerequisite.</li> <li>Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").</li> <li>Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).</li> </ul>			
SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
CIS 570 <sup>P</sup>	Business Intelligence	F,S,SS	3
CIS 575 <sup>P</sup>	Applied Data Mining and Analytics in Business	F,S,SS	3
CIS 655 <sup>P</sup> OR	Business Database Systems OR	S	3
CIS 576 <sup>P</sup>	Business Data Visualization	S	3
<b>TOTAL CERTIFICATE CREDITS:</b>			<b>9</b>

9. CATALOG COPY (maximum 500 characters and spaces): Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

The Certificate combines business intelligence with applied data mining and analytics to optimize, forecast, detect, predict, classify and discover new ways of using data to make a business more productive and efficient. Completion of the certificate allows students to bring value to companies that have vast quantities of both structured and unstructured data that requires identification, analysis, and transformation into useful data for business optimization and forecasting.

NEW GRADUATE CERTIFICATE REQUEST  
CERTIFICATE TITLE: Accounting Ethics and Auditing

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: CIS Advisor Building name: Rockwell North  
Room number: 215 Phone number: 491-6471

Contact for certificate information, application, and advising:

Name: Jenny Dittenhofer Email: jenny.dittenhofer@colostate.edu Phone: 491-2461

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Jon Clark  
Department Head/Chair (please print)\*\*  
Signature  
Date 12/11/14

Don Samelson  
Chair Coll. Curric. Comm. (please print)  
Signature  
Date 12/10/14

Ajay Menon David Gilliland  
Dean of College (please print)\*\*  
Signature  
Date 12/10/14

Paul Mallette  
College Rep. to UCC (please print)  
Signature  
Date 12/11/14

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>	
CoSRGE Approval Date 11/2 2/5/15	UCC Approval Date 2/20/15
Faculty Council Approval Date 4/7/15	Approved Effective FA 15

**College of Business**  
**Graduate Certificate in Business Intelligence**

**Effective Fall 2015**  
 CoSRGE 2/5/15

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
CIS 570 <sup>P</sup>	Business Intelligence	3
CIS 575 <sup>P</sup>	Applied Data Mining and Analytics in Business	3
CIS 576 <sup>P</sup>	Business Data Visualization	3
<b>OR</b>		
CIS 655 <sup>P</sup>	Business Database Systems	3
TOTAL		9

**PROGRAM TOTAL = minimum 9 credits**

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.



**Graduate Certificate**  
**Pre K-12 School Social Worker**

FEB 17 2015

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### GRADUATE CERTIFICATE CURRICULAR REQUEST

#### NEW CERTIFICATE

THIS FORM MUST BE TYPED.

PAGE 1 of 4

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

**FACULTY CONTACT (Required):**

Name Dorothy Farrel Email dorothy.farrel@colostate.edu Phone (970) 491-0996

**PREPARER CONTACT (If different from faculty contact):**

Name \_\_\_\_\_ Email \_\_\_\_\_ Phone \_\_\_\_\_

EFFECTIVE DATE (First term and year students may apply for certificate):  Fall  Spring  Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed.
- Its name may not duplicate that of any other program, graduate or undergraduate.
- A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above.
- A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate.
- Matriculating or non-matriculating students must apply to enroll in a graduate certificate.
- Students must have completed a bachelor's degree to apply for graduate certificate programs.

1. OFFICIAL CERTIFICATE TITLE: PreK-12 School Social Worker Certificate

(maximum 80 characters and spaces, to appear on student's transcript)

2. COLLEGE:  CAS  COB  COE  CHHS  CLA  WCNR  CNS  CVMBS  IU  N/A

3. DEPARTMENT, SCHOOL, or SAU: Social Work

(Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

**4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):**

Designed for those holding, or in the process of earning a Master of Social Work, this certificate offers a curriculum specifically tailored to the needs of school social workers. This certificate provides social workers the opportunity to obtain the foundation required by the Colorado Department of Education (CDE) to be a special services provider in the PreK-12 setting. In addition, the specialized coursework built into the certificate boosts employment marketability. The objectives include: to become competent as a school social worker, to obtain an understanding of the complexities working with people who have disabilities, and the fundamentals of conflict resolution.

**5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces).**

Individuals who currently have their Masters in Social Work or are working towards obtaining their MSW which is a requirement to obtain a license as a school social worker through the Colorado Department of Education.

**6. ADMISSIONS CRITERIA (maximum 500 characters and spaces).** This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.

An M.S.W from a program accredited by the Council on Social Work Education (must provide transcripts) or currently enrolled in an M.S.W. Program

7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):

For social workers to be employed as a school social worker they must obtain their license through the Colorado Department of Education (CDE). This certificate meets the requirements to obtain the license in addition to having the supplemental courses. It is an ongoing and popular certificate that has been offered through Online-Plus since 2008. In 2014, 17 students obtained this certificate.

8. LISTING OF CURRICULUM REQUIREMENTS

- Show all the requirements for the Graduate Certificate below.
- All courses must be 500-level or above.
- Include subject code, number, title, term(s) offered, and number of credits for each course.
- Note superscript capital P after the course number if the course has a prerequisite.
- Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").
- Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).

SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
SOWK 551 <sup>P</sup>	Fundamentals of Mediation	F, S, SS	3
SOWK 560 <sup>P</sup>	Social Work Practice in Schools	S,SS	3
SOWK 561	School/Community: People with Disabilities	F,SS	3
<b>TOTAL CERTIFICATE CREDITS:</b>			<b>9</b>

9. CATALOG COPY (maximum 500 characters and spaces): Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

This certificate provides Social Workers the opportunity to not only obtain the foundational credentials required by the Colorado Department of Education (CDE) to be a special services provider in the PreK-12 setting, but additional specialized coursework built into the program to boost employment marketability.

NEW GRADUATE CERTIFICATE REQUEST  
CERTIFICATE TITLE: PreK-12 School Social Worker Certificate

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: School of Social Work, CLOE program Building name: Education

Room number: 22/23 Phone number: (970) 491-3297

Contact for certificate information, application, and advising:

Name: Mary Carraher Email: mary.carraher@colostate.edu Phone: (970) 491-3297

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Department Head/Chair (please print)\*\* *Andrew Shillington* Signature *Andrew Shillington* Date 1-16-15

Chair Coll. Curric. Comm. (please print) *MAKELA* Signature *Carole Madala* Date 1/16/15

Dean of College (please print)\*\* *Dale DeVoe* Signature *Dale DeVoe* Date 2/17/15

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

College Rep. to UCC (please print) *MAKELA* Signature *Carole Madala* Date 1/16/15

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>			
CoSRGE Approval Date	<i>DS 3/5/15</i>	UCC Approval Date	<i>3/13/15</i>
Faculty Council Approval Date	<i>4/7/15</i>	Approved Effective	<i>FA 15</i>

College of Health and Human Sciences  
School of Social Work  
Graduate Certificate in PreK-12 School Social Worker

Effective Fall 2015  
COSRGE 3/5/15

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
SOWK 551 <sup>P</sup>	Fundamentals of Mediation	3
SOWK 560 <sup>P</sup>	Social Work Practice in Schools	3
SOWK 561	School/Community: People with Disabilities	3
	TOTAL	<hr/> 9
<b>PROGRAM TOTAL = minimum 9 credits</b>		

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.

**Graduate Certificate**  
**Advanced Clinical Behavioral Health**

GRADUATE CERTIFICATE CURRICULAR REQUEST

NEW CERTIFICATE

THIS FORM MUST BE TYPED.

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

FACULTY CONTACT (Required):

Name Dorothy Farrel Email dorothy.farrel@colostate.edu Phone (970) 491-0996

PREPARER CONTACT (If different from faculty contact):

Name Email Phone

EFFECTIVE DATE (First term and year students may apply for certificate): Fall Spring Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed. Its name may not duplicate that of any other program, graduate or undergraduate. A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above. A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate. Matriculating or non-matriculating students must apply to enroll in a graduate certificate. Students must have completed a bachelor's degree to apply for graduate certificate programs.

1. OFFICIAL CERTIFICATE TITLE: Advanced Clinical Behavioral Health (maximum 80 characters and spaces, to appear on student's transcript)

2. COLLEGE: CAS COB COE CHHS CLA WCNR CNS CVMBS IU N/A

3. DEPARTMENT, SCHOOL, or SAU: Social Work (Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):

The purpose of this certificate is to provide MSW students, social work professionals, and eligible individuals from other disciplines with specialized training in Advanced Clinical Behavioral Health. This certificate will prepare students for the state License of Clinical Social Work, provide ongoing training, and a specialized training in psychopathology, psychopharmacology, and trauma informed care.

5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces).

Individuals who currently have their undergraduate degree and would like to obtain specialized training in Advanced Clinical Behavioral Health, prepare for the state license exam, or continuing education.

6. ADMISSIONS CRITERIA (maximum 500 characters and spaces). This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.

A baccalaureate or equivalent degree.

NEW GRADUATE CERTIFICATE REQUEST  
 CERTIFICATE TITLE: Advanced Clinical Behavioral Health

**7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):**

Students and alumni were presented with a survey which identified a gap in courses addressing behavioral health. Three classes were developed to address this gap in course availability: SOWK675: Psychopathology and Community Health, SOWK676: Psychopharmacology and Community Health, and SOWK677: Trauma Informed Care. The combination of these courses will provide the students and community with practitioners that are prepared to provide advanced behavioral health services, prepare students for state license exams, and address the need for advanced clinical courses.

**8. LISTING OF CURRICULUM REQUIREMENTS**

<ul style="list-style-type: none"> <li>• Show all the requirements for the Graduate Certificate below.</li> <li>• All courses must be 500-level or above.</li> <li>• Include subject code, number, title, term(s) offered, and number of credits for each course.</li> <li>• Note superscript capital P after the course number if the course has a prerequisite.</li> <li>• Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").</li> <li>• Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).</li> </ul>			
SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
SOWK 675 <sup>P</sup>	Psychopathology and Community Health	SS	3
SOWK 676	Psychopharmacology and Community Health	F	3
SOWK 677	Trauma-Informed Care	S	3
<b>TOTAL CERTIFICATE CREDITS:</b>			9

**9. CATALOG COPY (maximum 500 characters and spaces):** Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

The Certificate in Advanced Clinical Behavioral Health will increase the competence and accountability of MSW students, social work professionals, and eligible individuals from other disciplines as they work with clients and interdisciplinary teams around assessment, diagnosis, medication, and trauma.



NEW GRADUATE CERTIFICATE REQUEST  
CERTIFICATE TITLE: Advanced Clinical Behavioral Health

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: School of Social Work, CLOE program Building name: Education

Room number: 22/23 Phone number: (970) 491-0996

Contact for certificate information, application, and advising:

Name: Dorothy Farrel Email: dorothy.farrel@colostate.edu Phone: (970) 491-0996

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Audrey M. Skillington Department Head/Chair (please print)\*\* Signature Date 1-16-15

Carole Makela Chair Coll. Curric. Comm. (please print) Signature Date 2/4/15

Dale Devine Dean of College (please print)\*\* Signature Date 2/2/15

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

Makela College Rep. to UCC (please print) Signature Date 2/2/15

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>			
CoSRGE Approval Date	DS 3/5/15	UCC Approval Date	2/16/15
Faculty Council Approval Date	4/7/15	Approved Effective	SS 15

**College of Health and Human Sciences**  
**School of Social Work**  
Graduate Certificate in Advanced Clinical Behavioral Health

**Effective Summer 2015**  
 CoSRGE 3/5/15

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
SOWK 675 <sup>P</sup>	Psychopathology and Community Health	3
SOWK 676	Psychopharmacology and Community Health	3
SOWK 677	Trauma-Informed Care	3
	<b>TOTAL</b>	9
<b>PROGRAM TOTAL = minimum 9 credits</b>		

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.

**Graduate Certificate  
Evidence-Based Design**

GRADUATE CERTIFICATE CURRICULAR REQUEST

NEW CERTIFICATE

THIS FORM MUST BE TYPED.

PAGE 1

of 4

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

**FACULTY CONTACT (Required):**

Name: Katharine Leigh      Email: katharine.leigh@colostate.edu      Phone: (970) 491-5042

**PREPARER CONTACT (If different from faculty contact):**

Name: \_\_\_\_\_      Email: \_\_\_\_\_      Phone: \_\_\_\_\_

**EFFECTIVE DATE** (First term and year students may apply for certificate):  Fall  Spring  Summer YEAR: 2016

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed.
- Its name may not duplicate that of any other program, graduate or undergraduate.
- A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above.
- A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate.
- Matriculating or non-matriculating students must apply to enroll in a graduate certificate.
- Students must have completed a bachelor's degree to apply for graduate certificate programs.

- OFFICIAL CERTIFICATE TITLE:** Evidence-based Design Research Design  
(maximum 80 characters and spaces, to appear on student's transcript)
- COLLEGE:**  CAS  COB  COE  CHHS  CLA  WCNR  CNS  CVMBS  IU  N/A
- DEPARTMENT, SCHOOL, or SAU:** Design and Merchandising  
(Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

**4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):**

The certificate fills an educational gap for practitioners by providing research skills, knowledge, and application approaches to understand, analyze, and conduct empirical studies informing decision-making for designed environments. Evidence-based Design and Accreditation Certification (EDAC) is available through the Center for Health Design; however, practitioners lack research background necessary to effectively prepare for this certification exam.

**5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces):**

Individuals in design (e.g., interior design, architecture, landscape architecture, planning), healthcare (e.g., medical staff, facility staff, and administrators), education (e.g., researchers, administrators, facility staff), engineering, construction, and product manufacturing whose projects require evidence-based findings for decision-making purposes

**6. ADMISSIONS CRITERIA (maximum 500 characters and spaces).** This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.

Bachelors degree.

**NEW GRADUATE CERTIFICATE REQUEST**  
**CERTIFICATE TITLE:** Evidence-based Design Research

**7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):**

We have identified a niche not being serviced but in demand by diverse professionals to better prepare themselves in their work and/or to take the EDAC certification exam. The certificate will also serve to recruit applicants to the DM graduate program, Interior Design Specialization and create the foundation for the future development of an online Masters degree for the program.

**8. LISTING OF CURRICULUM REQUIREMENTS**

<ul style="list-style-type: none"> <li>• Show all the requirements for the Graduate Certificate below.</li> <li>• All courses must be 500-level or above.</li> <li>• Include subject code, number, title, term(s) offered, and number of credits for each course.</li> <li>• Note superscript capital <sup>P</sup> after the course number if the course has a prerequisite.</li> <li>• Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").</li> <li>• Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).</li> </ul>			
SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
DM 501	Research and Theory -Design and Merchandising	F, SS, S	3
DM 551	Research Methods	F, SS, S	3
INTD 578 P	Trends/Issues in Interior Design	F, SS, S	3
<b>TOTAL CERTIFICATE CREDITS:</b>			9

**9. CATALOG COPY (maximum 500 characters and spaces):** Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

This certificate features skill development, theoretical understanding, and linkage to research approaches, assessment of instruments, exposure to professionals engaged in evidence-based projects, and use of the tools and concepts learned in each course applied to evidence-based research projects in the community. Professionals in design, healthcare, education, engineering, construction, and product manufacturing are the target audience of this sequential cohort-based certificate.

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NEW GRADUATE CERTIFICATE REQUEST  
 CERTIFICATE TITLE: Evidence-based Design Research

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: Design and Merchandising Building name: Aylesworth Hall  
 Room number: 150 SE Phone number: (970) 491-1629  
 Contact for certificate information, application, and advising:  
 Name: Katharine Leigh Email: katharine.leigh@colostate.edu Phone: (970) 491-5042

11. SIGNATURES OF AFFECTED DEPARTMENTS

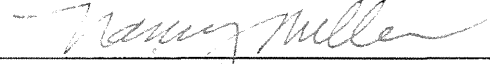
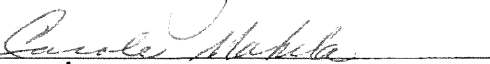
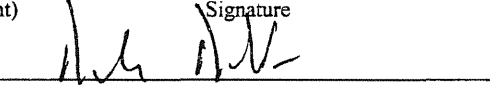

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Nancy Miller Department Head/Chair (please print)**		<u>2/4/15</u>
	Signature	Date
Carole Makela Chair Coll. Curric. Comm. (please print)		<u>2/23/15</u>
	Signature	Date
Dale DeVoe Dean of College (please print)**		<u>3/5/15</u>
	Signature	Date
**Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.		
Carole Makela College Rep. to UCC (please print)		<u>2/23/15</u>
	Signature	Date

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

For Curriculum and Catalog Only	
CoSRGE Approval Date <u>4/2/15</u>	UCC Approval Date <u>APR 10 2015</u>
Faculty Council Approval Date <u>5/5/15</u>	Approved Effective <u>SP16</u>

College of Health and Human Sciences  
Department of Design and Merchandising  
Certificate in Evidence-based Design Research

Effective Spring 2016  
CoSRGE 4/2/15

(The entire certificate is shown.)

<u>Course</u>	<u>Title</u>	<u>Credits</u>
DM 501	<u>Research and Theory-Design and Merchandising</u>	3
DM 551	<u>Research Methods</u>	3
INTD 578 <sup>P</sup>	<u>Trends/Issues in Interior Design</u>	3
TOTAL		<u>9</u>
<b>PROGRAM TOTAL = 9 credits*</b>		

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction of the catalog at <http://catalog.colostate.edu> to see the course prerequisites.

\* Additional coursework may be required due to prerequisites.

**Graduate Certificate**  
**Ski Area Management**



## GRADUATE CERTIFICATE CURRICULAR REQUEST

## NEW CERTIFICATE

THIS FORM MUST BE TYPED.

PAGE 1

of 6

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

## FACULTY CONTACT (Required):

Name: Natalie Ooi Email: Natalie.Ooi@colostate.edu Phone: (970) 291-7292

## PREPARER CONTACT (If different from faculty contact):

Name: Email: Phone:

EFFECTIVE DATE (First term and year students may apply for certificate):  Fall  Spring  Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed.
- Its name may not duplicate that of any other program, graduate or undergraduate.
- A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above.
- A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate.
- Matriculating or non-matriculating students must apply to enroll in a graduate certificate.
- Students must have completed a bachelor's degree to apply for graduate certificate programs.

1. OFFICIAL CERTIFICATE TITLE: Ski Area Management  
(maximum 80 characters and spaces, to appear on student's transcript)
2. COLLEGE:  CAS  COB  COE  CHHS  CLA  WCNR  CNS  CVMBS  IU  N/A
3. DEPARTMENT, SCHOOL, or SAU: Human Dimensions of Natural Resources  
(Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

## 4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):

This certificate addresses an industry-identified need for management, financial, and operational knowledge specific to the ski industry. The aim is to provide students with a holistic understanding of ski area operations and management that can be applied to all types and sizes of ski areas.

See attached supplementary form for certificate objectives.

## 5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces).

This certificate has two target audiences:

- recent graduates who are looking to further their knowledge and career opportunities within the ski industry
- current employees within the ski industry who are looking to increase their opportunities to move into supervisory and management positions.

See attached supplementary form for more information.

## 6. ADMISSIONS CRITERIA (maximum 500 characters and spaces). This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.

This certificate requires a completed bachelor's degree, 3.0 grade point average. Given the online nature of this certificate, students will need to be organized and self-motivated in order to successfully complete this certificate. There are no specific exclusions. Each course will be limited to approximately 20 students.

NEW GRADUATE CERTIFICATE REQUEST  
 CERTIFICATE TITLE:

7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):

This certificate addresses an industry-identified need for improved business knowledge and accumen specific to the ski industry. Currently, there does not exist a graduate-level program in ski area management within North America. This certificate will be designed with industry input on how to best educate prospective ski area supervisors and managers on the management, financial, and operational challenges specific to the ski industry. The online nature of this program and its continuous course offerings will allow current ski area employees to undertake this certificate from their place of work and as suits the seasonal nature of the industry.

8. LISTING OF CURRICULUM REQUIREMENTS

- Show all the requirements for the Graduate Certificate below.
- All courses must be 500-level or above.
- Include subject code, number, title, term(s) offered, and number of credits for each course.
- Note superscript capital P after the course number if the course has a prerequisite.
- Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").
- Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).

SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
NRRT520	Perspectives on Ski Area Management	F, S, SS	2
NRRT521P	Sustainable Ski Area Management	F, S, SS	2
NRRT522P	Ski Area Operations and Human Resources	F, S, SS	2
NRRT523P	Strategic Ski Area Marketing and Management	F, S, SS	2
NRRT524P	Ski Area Finance and Investment	F, S, SS	2
NRRT525P	Ski Area Planning and Development	F, S, SS	2
<b>TOTAL CERTIFICATE CREDITS:</b>			<b>12</b>

9. CATALOG COPY (maximum 500 characters and spaces): Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

The graduate certificate in ski area management is a 6 course, 12 credit offering that provides students with the management, finance, and operational knowledge required for successful ski area management and operations. Principles relating to sustainability, strategic management, marketing, human resource management, finance and investment, and planning and development are examined and applied within a ski area context.

NEW GRADUATE CERTIFICATE REQUEST  
CERTIFICATE TITLE:

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: HDNR Administration Office Building name: Forestry  
Room number: 233 Phone number: (970) 491-6591

Contact for certificate information, application, and advising:

Name: Natalie Ooi Email: Natalie.Ooi@colostate.edu Phone: (970) 491-7292

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Michael Manfredi Department Head/Chair (please print)\*\* Signature Date 11/10/14

Sally J. Sutton Chair Coll. Curric. Comm. (please print) Signature Date 11/17/14

P. de Court Dean of College (please print)\*\* Signature Date 11/17/14

Sally J. Sutton College Rep. to UCC (please print) Signature Date 11/17/14

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>	
CoSRGE Approval Date 12/4/14	UCC Approval Date 12/12/14
Faculty Council Approval Date	Approved Effective FA15

DEC 11 2014  
UPDATED

NEW GRADUATE CERTIFICATE REQUEST  
CERTIFICATE TITLE:

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: HDNR Administration Office Building name: Forestry  
Room number: 233 Phone number: (970) 491-6591

Contact for certificate information, application, and advising:

Name: Natalie Ooi Email: Natalie.Ooi@colostate.edu Phone: (970) 491-7292

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

COLLEGE OF BUS.	SANJAY RAMCHANDER (ASST. DEAN)	[Signature]	12/9/14
Dept. (please print)	Name and Title (please print)	Signature	Date
Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Michael Mantred	[Signature]	11/10/14
Department Head/Chair (please print)**	Signature	Date
Sally J. Sutton	Sally J. Sutton	11/17/14
Chair Coll. Curric. Comm. (please print)	Signature	Date
[Signature]	[Signature]	11/17/14
Dean of College (please print)**	Signature	Date
Sally J. Sutton	Sally J. Sutton	11/17/14
College Rep. to UCC (please print)	Signature	Date

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>	
CoSRGE Approval Date 12/4/14 [Signature]	UCC Approval Date _____
Faculty Council Approval Date _____	Approved Effective _____

## Graduate certificate curricular request – New Certificate

### Supplementary information

#### 4. Purpose and objectives of the certificate

Upon completion of this certificate, students should be able to:

- Demonstrate knowledge of principles relating to sustainability, strategic management, marketing, human resource management, finance and investment, and planning and development, and apply these to a ski area context
- Evaluate various types of ski area operations and management practices around the world
- Explain the opportunities and challenges facing the ski industry around the world
- Identify and discuss the various aspects of ski area operations and the importance of integrated communication and management systems
- Critically examine the future of the ski industry
- Communicate in a professional manner using a variety of mediums and tools relevant to the ski industry

5. This certificate seeks to address an identified need within the ski industry, by industry professionals themselves, regarding a lack of management, financial, and operational knowledge specific to ski areas at a lower-middle management level. This is of concern to ski areas and the industry as a whole, given the age of many senior-level staff, raising questions regarding upper-management succession and the future of the industry. This certificate seeks to address this need for improved education of both current ski area employees looking to rise in the management ranks, as well as those looking to develop a career within the ski industry, with no other graduate-level program in ski area management currently offered within North America.

**Warner College of Natural Resources**  
**Department of Human Dimensions of Natural Resources**  
Graduate Certificate in Ski Area Management

Effective Fall 2014

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
NRRT 520	<u>Perspectives on Ski Area Management</u>	<u>2</u>
NRRT 521 <sup>P</sup>	<u>Sustainable Ski Area Management</u>	<u>2</u>
NRRT 522 <sup>P</sup>	<u>Ski Area Operations and Human Resources</u>	<u>2</u>
NRRT 523 <sup>P</sup>	<u>Strategic Ski Area Marketing and Management</u>	<u>2</u>
NRRT 524 <sup>P</sup>	<u>Ski Area Finance and Investment</u>	<u>2</u>
NRRT 525 <sup>P</sup>	<u>Ski Area Planning and Development</u>	<u>2</u>
	<u>TOTAL</u>	<u>12</u>
<u>PROGRAM TOTAL = 12 credits</u>		

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.

**Graduate Certificate**

**Applied Finance**

DEC 12 2014

## GRADUATE CERTIFICATE CURRICULAR REQUEST

## NEW CERTIFICATE

THIS FORM MUST BE TYPED.

PAGE 1

of 4

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

## FACULTY CONTACT (Required):

Name: John Elder Email: john.elder@colostate.edu Phone: (970) 491-2952

## PREPARER CONTACT (If different from faculty contact):

Name: Nicole Olsen Email: nicole.olsen@colostate.edu Phone: (970) 491-1129

EFFECTIVE DATE (First term and year students may apply for certificate):  Fall  Spring  Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed.
- Its name may not duplicate that of any other program, graduate or undergraduate.
- A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above.
- A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate.
- Matriculating or non-matriculating students must apply to enroll in a graduate certificate.
- Students must have completed a bachelor's degree to apply for graduate certificate programs.

## 1. OFFICIAL CERTIFICATE TITLE:

Applied Finance

(maximum 80 characters and spaces, to appear on student's transcript)

2. COLLEGE:  CAS  COB  COE  CIHS  CLA  WCNR  CNS  CVMBS  IU  N/A

## 3. DEPARTMENT, SCHOOL, or SAU:

Finance and Real Estate

(Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

## 4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):

The purpose of the certificate is to provide students with more in-depth exposure to several specialty topic areas in order to increase their expertise and marketability. Students will have a solid grounding in both corporate finance and investments and can select electives that are most relevant to their needs and/or will complement other areas of graduate study within the College of Business.

## 5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces).

The two target audiences for this certificate are 1) students currently enrolled in one of the MBA programs offered by the College of Business who can use their elective credits to obtain more depth in finance and 2) students in other graduate programs and working professionals who want to increase their expertise in finance to enhance their personal and professional opportunities.

## 6. ADMISSIONS CRITERIA (maximum 500 characters and spaces). This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.

Bachelors degree with a minimum GPA of 3.0; for international students, applicants must have a TOEFL score of at least 86 or an IELTS score of at least 6.5.

Students in the MSBA-FRM program are not eligible to earn the certificate.



7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):

There is expected demand for the certificate among target audiences according to the College of Business enrollment staff. It will provide an enrichment opportunity for students pursuing graduate programs in the College of Business and for members of the community who are interested in advancing their education without having to complete a full graduate curriculum.

8. LISTING OF CURRICULUM REQUIREMENTS

- Show all the requirements for the Graduate Certificate below.
- All courses must be 500-level or above.
- Include subject code, number, title, term(s) offered, and number of credits for each course.
- Note superscript capital P after the course number if the course has a prerequisite.
- Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").
- Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).

SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
BUS 601P	All Certificate Students must take: <del>Business Decision Making</del> <i>Quantitative Business Analysis</i>	S	2
BUS 640P	Financial Principles and Practice	F	2
BUS 641P	Financial Markets and Investments	F	2
	Choose 5 credits from the following:		
FIN 602P	Futures and Options	F,S	1
FIN 603P	Corporate Risk Management	F,S	1
FIN 604P	Employee Benefits	F,S	1
FIN 606P	Fundamentals of International Finance	F,S	1
FIN 607P	Fundamentals of Bond Markets	F,S	1
FIN 608P	<del>Fundamentals of Firm Valuation</del>	F,S	1
FIN 609P	Fundamentals of Personal Finance	F,S	1
FIN 610P	<del>Real Estate Finance</del> <i>Debt Securities Analysis</i>	F,S	1
<b>TOTAL CERTIFICATE CREDITS:</b>			<b>11</b>

9. CATALOG COPY (maximum 500 characters and spaces): Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

Students will obtain a solid background in business finance and investments by completing graduate-level introductory finance courses and more advanced electives in specialized areas of finance. Students can focus in the investments area by taking electives that cover bonds, futures and options, and real estate. Students interested in corporate financial management can focus their studies on corporate risk management, employee benefits, and international finance.

NEW GRADUATE CERTIFICATE REQUEST  
CERTIFICATE TITLE: Finance

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: Graduate Programs Building name: Rockwell North  
Room number: 215 Phone number: 491-2674

Contact for certificate information, application, and advising:

Name: Jenny Dittenhofer Email: Jenny.dittenhofer@colostate.edu Phone: 491-2674

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

John Elder Department Head/Chair (please print)\*\* Signature Date 12/11/14

Don Samelson Chair Coll. Curric. Comm. (please print) Signature Date 12/10/14

Ajay Menon Dave Billiard Dean of College (please print)\*\* Signature Date 12/10/14

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

Paul Mallette College Rep. to UCC (please print) Signature Date 12/10/14

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>			
CoSRGE Approval Date	11/2 2/5/15	UCC Approval Date	2/20/15
Faculty Council Approval Date	4/7/15	Approved Effective	FA 15

**College of Business**  
**Graduate Certificate in Applied Finance**

**Effective Fall 2015**  
**CoSRGE 2/5/15**

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
BUS 601 <sup>P</sup>	Quantitative Business Analysis	<u>2</u>
BUS 640 <sup>P</sup>	Financial Principles and Practice	<u>2</u>
BUS 641 <sup>P</sup>	Financial Markets and Investments	<u>2</u>
	<b>TOTAL</b>	<b>6</b>
<i>Select 5 credits from the following:</i>		
FIN 602 <sup>P</sup>	Options and Futures	<u>1</u>
FIN 603 <sup>P</sup>	Corporate Risk Management	<u>1</u>
FIN 604 <sup>P</sup>	Employee Benefits	<u>1</u>
FIN 606 <sup>P</sup>	Fundamentals of International Finance	<u>1</u>
FIN 607 <sup>P</sup>	Fundamentals of Bond Markets	<u>1</u>
FIN 608 <sup>P</sup>	Fundamentals of Firm Valuation	<u>1</u>
FIN 609 <sup>P</sup>	Fundamentals of Personal Finance	<u>1</u>
FIN 610 <sup>P</sup>	Debt Securities Analysis	<u>1</u>
	<b>TOTAL</b>	<b>5</b>

**PROGRAM TOTAL = minimum 11 credits**

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.

**Graduate Certificate**  
**Information Technology Project Management**

GRADUATE CERTIFICATE CURRICULAR REQUEST

NEW CERTIFICATE

THIS FORM MUST BE TYPED.

PAGE 1 of 4

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

FACULTY CONTACT (Required):

Name Jon Clark Email jon.clark@business.colostate.edu Phone

PREPARER CONTACT (If different from faculty contact):

Name Nicole Olsen Email nicole.olsen@colostate.edu Phone 491-1129

EFFECTIVE DATE (First term and year students may apply for certificate): Fall Spring Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed. Its name may not duplicate that of any other program, graduate or undergraduate. A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above. A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate. Matriculating or non-matriculating students must apply to enroll in a graduate certificate. Students must have completed a bachelor's degree to apply for graduate certificate programs.

Information Technology

1. OFFICIAL CERTIFICATE TITLE: Project Management (maximum 80 characters and spaces, to appear on student's transcript)

2. COLLEGE: CAS COB COE CHHS CLA WCNR CNS CVMBS IU N/A

3. DEPARTMENT, SCHOOL, or SAU: (Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):

Project management is found across the private, public and military sectors especially within the information technology areas. The Certificate includes a deep understanding of the 10 knowledge areas and the 42 grouped processes required by the Project Management Institute®, information technology management, agile project management and other special topics. The Certificate is designed for both technical and non-technical students who want to gain the knowledge and skills relating to software development or information technology project management. Completion of this certificate also prepares the recipient to sit for the PMP® Certification or the CAP-M® Certification exam.

5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces).

There are two target audiences. One audience is for individuals who interface or coordinate with an IT department, have clients or customers in technology fields, or who want an introduction to various areas aspects of information systems. The other audience is individuals in College of Business graduate programs who have backgrounds in computer information systems (CIS) and want to increase their expertise in the area of CIS.

6. ADMISSIONS CRITERIA (maximum 500 characters and spaces). This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.

Bachelor's degree with a minimum GPA of 3.0; for international applicants a TOEFL score of 86 or higher or an IELTS score of 6.5 or higher.

7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):

This certificate was previously offered as a Certificate of Completion. Over the past 3 years, the Department has awarded over 50 students the certificate of completion and the demand for the program will continue as Project Management continues to advance the mission and purpose of organizations today. Also, the program will allow the Department to serve the needs of stakeholders within the computer information systems and systems engineering profession, and also to provide an enrichment opportunity for students pursuing graduate programs in College of Business. All courses in the certificate are currently being taught within our existing Computer Information Systems degree program.

8. LISTING OF CURRICULUM REQUIREMENTS

<ul style="list-style-type: none"> <li>Show all the requirements for the Graduate Certificate below.</li> <li>All courses must be 500-level or above.</li> <li>Include subject code, number, title, term(s) offered, and number of credits for each course.</li> <li>Note superscript capital P after the course number if the course has a prerequisite.</li> <li>Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").</li> <li>Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).</li> </ul>			
SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
Select three courses from the following:	Select three courses from the following:		
CIS 600 <sup>P</sup>	IT and Project Management	F,S	3
CIS 670 <sup>P</sup>	Advanced IT Project Management	F,S,SS	3
CIS 676 <sup>P</sup>	Information Technology Management	S	3
CIS 675 <sup>P</sup>	Agile Management and Product Development	F	3
<b>TOTAL CERTIFICATE CREDITS:</b>			9

9. CATALOG COPY (maximum 500 characters and spaces): Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

In the information technology areas, Project management is found across the private, public and military sectors especially within the information technology areas. The Certificate includes a deep understanding of the 10 knowledge areas and the 42 grouped processes required by the Project Management Institute®, information technology management, agile project management and other special topics. Completion of this certificate also prepares the recipient to sit for the PMP® Certification or the CAP-M® Certification exam.

NEW GRADUATE CERTIFICATE REQUEST  
 CERTIFICATE TITLE:

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: CIS Advisor Building name: Rockwell North  
 Room number: 215 Phone number: 491-2461

Contact for certificate information, application, and advising:

Name: Jenny Dittenhofer Email: jenny.dittenhofer@colostate.edu Phone: 491-2461

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

<u>Jon Clark</u> Department Head/Chair (please print)**	<u>[Signature]</u> Signature	<u>12/11/14</u> Date
<u>Don Samgelson</u> Chair Coll. Curric. Comm. (please print)	<u>[Signature]</u> Signature	<u>12/10/14</u> Date
<u>Dave Gilliland</u> Dean of College (please print)**	<u>[Signature]</u> Signature	<u>12/10/14</u> Date
<u>Paul Mallette</u> College Rep. to UCC (please print)	<u>[Signature]</u> Signature	<u>12/11/14</u> Date

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>			
CoSRGE Approval Date	<u>11/22/15</u>	UCC Approval Date	<u>2/20/15</u>
Faculty Council Approval Date	<u>4/7/15</u>	Approved Effective	<u>FA 15</u>

**College of Business**  
Graduate Certificate in Information Technology Project Management

**Effective Fall 2015**  
 CoSRGE 2/5/15

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
<i>Select 9 credits from the following courses:</i>		
CIS 600 <sup>P</sup>	<u>Information Technology and Project Management</u>	3
CIS 670 <sup>P</sup>	<u>Advanced IT Project Management</u>	3
CIS 675 <sup>P</sup>	<u>Agile Management and Product Development</u>	3
CIS 676 <sup>P</sup>	<u>Information Technology Management</u>	3
<u>TOTAL</u>		<u>9</u>

**PROGRAM TOTAL = minimum 9 credits**

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.



**Graduate Certificate**  
**Business Information Systems**

DEC 12 2014  
GRADUATE CERTIFICATE CURRICULAR REQUEST

## NEW CERTIFICATE

THIS FORM MUST BE TYPED.

PAGE 1 of 4

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

**FACULTY CONTACT (Required):**

Name Jon Clark Email Jon.clark@business.colostate.edu Phone

**PREPARER CONTACT (If different from faculty contact):**

Name Nicole Olsen Email nicole.olsen@colostate.edu Phone 491-1129

**EFFECTIVE DATE** (First term and year students may apply for certificate):  Fall  Spring  Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed.
- Its name may not duplicate that of any other program, graduate or undergraduate.
- A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above.
- A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate.
- Matriculating or non-matriculating students must apply to enroll in a graduate certificate.
- Students must have completed a bachelor's degree to apply for graduate certificate programs.

**1. OFFICIAL CERTIFICATE TITLE:**Business  
Computer Information Systems

(maximum 80 characters and spaces, to appear on student's transcript)

**2. COLLEGE:**  CAS  COB  COE  CHHS  CLA  WCNR  CNS  CVMBS  JU  N/A**3. DEPARTMENT, SCHOOL, or SAU:**

(Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

**4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):**

Business  
This certificate provides students a good foundation of Computer Information Systems knowledge and skills in project management, business intelligence, and IT management. This certificate is also beneficial to non-technical individuals who want to understand the technical environment better and function as part of a technical team.

**5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces).**

There are two target audiences. One audience is for individuals who interface or coordinate with an IT department, have clients or customers in technology fields, or who want an introduction to various areas aspects of information systems. The other audience is individuals in College of Business graduate programs who have backgrounds in computer information systems (CIS) and want to increase their expertise in the area of CIS.

**6. ADMISSIONS CRITERIA (maximum 500 characters and spaces).** This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.

Bachelor's degree with a minimum GPA of 3.0; for international applicants a TOEFL score of 86 or higher or an IELTS score of 6.5 or higher.

NEW GRADUATE CERTIFICATE REQUEST  
 CERTIFICATE TITLE: Computer Information Systems  
 Business

7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):

This certificate was previously offered as a Certificate of Completion. Over the past 3 years, the Department has awarded over 30 students the certificate of completion and the demand for the program will continue as Business Intelligence continues to advance the mission and purpose of organizations today. Also, the program will allow the Department to serve the needs of stakeholders within the computer information systems profession, and also to provide an enrichment opportunity for students pursuing graduate programs in College of Business. All courses in the certificate are currently being taught within our existing Computer Information Systems program.

8. LISTING OF CURRICULUM REQUIREMENTS

<ul style="list-style-type: none"> <li>Show all the requirements for the Graduate Certificate below.</li> <li>All courses must be 500-level or above.</li> <li>Include subject code, number, title, term(s) offered, and number of credits for each course.</li> <li>Note superscript capital P after the course number if the course has a prerequisite.</li> <li>Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").</li> <li>Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).</li> </ul>			
SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
CIS 570 <sup>P</sup>	Business Intelligence	F,S,SS	3
CIS 600 <sup>P</sup>	Information Technology and Project Management	F,SS	3
CIS 676 <sup>P</sup>	Information Technology Management	S	3
<b>TOTAL CERTIFICATE CREDITS:</b>			9

9. CATALOG COPY (maximum 500 characters and spaces): Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

The Certificate combines business intelligence with applied data mining and analytics to optimize, forecast, detect, predict, classify and discover new ways of using data to make a business more productive and efficient. Completion of the certificate allows students to bring value to companies that have vast quantities of both structured and unstructured data that requires identification, analysis, and transformation into useful data for business optimization and forecasting.

NEW GRADUATE CERTIFICATE REQUEST  
 CERTIFICATE TITLE: ~~Computer Information Systems~~ <sup>Business</sup>

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: CIS Advisor Building name: Rockwell North  
 Room number: 215 Phone number: 491-2461

Contact for certificate information, application, and advising:

Name: Jenny Dittenhofer Email: jenny.dittenhofer@colostate.edu Phone: 491-2461

11. SIGNATURES OF AFFECTED DEPARTMENTS

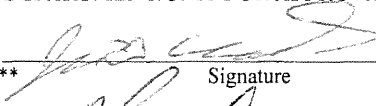
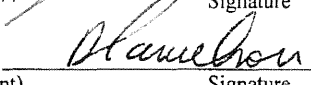


(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Jon Clark Department Head/Chair (please print)**		<u>12/10/14</u>
	Signature	Date
Don Samelson Chair Coll. Curric. Comm. (please print)		<u>12/10/14</u>
	Signature	Date
Dave Gilliland Dean of College (please print)**		<u>12/10/14</u>
	Signature	Date
<b>**Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.</b>		
Paul Mallette College Rep. to UCC (please print)		<u>12/10/14</u>
	Signature	Date

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

For Curriculum and Catalog Only			
CoSRGE Approval Date	<u>11/2 2/5/15</u>	UCC Approval Date	<u>2/20/15</u>
Faculty Council Approval Date	<u>4/7/15</u>	Approved Effective	<u>FA 15</u>

4 of 4

**College of Business**  
Graduate Certificate in Business Information Systems

**Effective Fall 2015**  
 CoSRGE 2/5/15

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
<u>CIS 570<sup>P</sup></u>	<u>Business Intelligence</u>	<u>3</u>
<u>CIS 600<sup>P</sup></u>	<u>Information Technology and Project Management</u>	<u>3</u>
<u>CIS 676<sup>P</sup></u>	<u>Information Technology Management</u>	<u>3</u>
	<b>TOTAL</b>	<u><b>9</b></u>

**PROGRAM TOTAL = minimum 9 credits**

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.

**Samelson,Don**

---

**From:** Mallette,Paul  
**Sent:** Friday, February 20, 2015 12:24 PM  
**To:** Samelson,Don  
**Subject:** Bus Info Sys description

Management methods used to drive IT hardware and software product development, the business models companies adopt when relying on outsourced IT services, and the analysis of quantitative information necessary for making market-based IT decisions.

**Graduate Certificate**  
**Marketing Management**

DEC 12 2014  
GRADUATE CERTIFICATE CURRICULAR REQUEST

NEW CERTIFICATE

*THIS FORM MUST BE TYPED.*

PAGE 1 *of 4*

For assistance completing this form, contact your University Curriculum Committee rep or the Curriculum and Catalog Office, 491-3772.

**FACULTY CONTACT (Required):**

Name Jon Cannon Email joe.cannon@business.colostate.edu Phone 491-6609

**PREPARER CONTACT (If different from faculty contact):**

Name Nicole Olsen Email nicole.olsen@colostate.edu Phone 491-1129

**EFFECTIVE DATE** (First term and year students may apply for certificate):  Fall  Spring  Summer YEAR: 2015

- A certificate is a directed academic qualification used to identify the successful completion of a focused area of study deemed important to a student's career objectives, and has a stand-alone professional or marketable value. The certificate will be transcribed.
- Its name may not duplicate that of any other program, graduate or undergraduate.
- A graduate certificate consists of a minimum of 9 specified credits and not more than 15 total credits at the 500-level or above.
- A student must earn a cumulative GPA of 3.000 or better in the courses in the graduate certificate. Students must earn a minimum of "C" in each course in the certificate.
- Matriculating or non-matriculating students must apply to enroll in a graduate certificate.
- Students must have completed a bachelor's degree to apply for graduate certificate programs.

1. **OFFICIAL CERTIFICATE TITLE:** Marketing Management  
(maximum 80 characters and spaces, to appear on student's transcript)
2. **COLLEGE:**  CAS  COB  COE  CHHS  CLA  WCNR  CNS  CVMBS  IU  N/A
3. **DEPARTMENT, SCHOOL, or SAU:** \_\_\_\_\_  
(Leave blank if certificate is to be housed under the college. Otherwise, specify academic unit responsible for the certificate.)

**4. PURPOSE AND OBJECTIVES OF THE CERTIFICATE (maximum 750 characters and spaces):**

The Graduate Certificate in Marketing Management provides students with a foundation in marketing and the opportunity to acquire an in-depth understanding of marketing topics. The initial required courses introduces marketing concepts, and students develop marketing strategy and planning skills in a second required course. Elective courses allow a student to develop deeper knowledge in areas of interest, including sales management, consumer behavior, services marketing, and market research. The program should benefit current MBA students as well as business people seeking to gain additional marketing knowledge. The program stresses application and targets working managers.

**5. TARGET AUDIENCES AND DOCUMENTED DEMAND (maximum 500 characters and spaces).**

Current and graduated CSU MBA students who desire to have greater depth of knowledge in marketing management. The Certificate will allow students in other graduate programs to gain similar knowledge. The program will also appeal to working professionals seeking more knowledge about marketing. Feedback from current and previous MBA students provides evidence of interest from about a quarter of the 1200+ current MBA students through the course/exit surveys.

**6. ADMISSIONS CRITERIA (maximum 500 characters and spaces).** This information provides the guidelines for who is eligible to apply for a certificate. Certificates are to be additive, not duplicative of approved graduate programs.

*List criteria for admission to this certificate (e.g., academic background, specific coursework completed or in progress, skill set, professional experience) and any students to be excluded.*

Bachelor's degree with a minimum GPA of 3.0; for international applicants a TOEFL score of 86 or higher or an IELTS score of 6.5 or higher.



**7. JUSTIFICATION/REASON FOR REQUEST (maximum 750 characters and spaces):**

There is expected demand for the certificate among the identified target audiences. The Graduate Certificate will allow us to serve the needs of stakeholders including but not limited to current and graduated MBA students who desire a greater depth of knowledge in marketing. All courses in the certificate are currently being taught within our existing graduate business program.

**8. LISTING OF CURRICULUM REQUIREMENTS**

<ul style="list-style-type: none"> <li>• Show all the requirements for the Graduate Certificate below.</li> <li>• All courses must be 500-level or above.</li> <li>• Include subject code, number, title, term(s) offered, and number of credits for each course.</li> <li>• Note superscript capital <sup>P</sup> after the course number if the course has a prerequisite.</li> <li>• Note if a group of courses forms a selection and how many credits required (e.g., "Select 3 credits from the following:" or "Select one course from the following:").</li> <li>• Note total credits at the bottom (minimum of 9 credits, maximum of 15 credits).</li> </ul>			
SUBJECT CODE/ NUMBER	FULL COURSE TITLE	TERM OFFERED (F, S, SS)	CREDITS
BUS 655 <sup>P</sup>	Marketing Management	F	2
BUS 656 <sup>P</sup>	Marketing Strategy and Planning	F	2
MKT 610 <sup>P</sup>	Qualitative Marketing Research Methods	F,S,SS	1
MKT 611 <sup>P</sup>	Quantitative Marketing Research Methods	F,S,SS	1
MKT 661 <sup>P</sup>	Consumer Behavior	F,S,SS	1
MKT 662 <sup>P</sup>	Strategic Selling for Business Customers	F,S,SS	1
MKT 667 <sup>P</sup>	Services Marketing Management	F,S,SS	1
<b>TOTAL CERTIFICATE CREDITS:</b>			9

**9. CATALOG COPY (maximum 500 characters and spaces):** Describe the certificate in a manner to be used in the General Catalog and in promotional materials. Certificates must be described accurately and completely.

Graduate coursework in marketing to provide students with a foundation and in-depth understanding of marketing topics.

NEW GRADUATE CERTIFICATE REQUEST  
CERTIFICATE TITLE: Marketing Management

10. LOCATION AND CONTACT INFORMATION.

Enter information where students may go to apply for the certificate, for advising, as well as appropriate contact person or people responsible for certificate audit.

Office name: Graduate Programs Building name: Rockwell West  
Room number: 110 Phone number: 491-2865

Contact for certificate information, application, and advising:

Name: MBA Advisor Email: mbaadvisor@business.colostate.edu Phone: 491-2865

11. SIGNATURES OF AFFECTED DEPARTMENTS

(Required before submission to University Curriculum Committee)

Affected departments include any unit outside the home department whose course is used in the certificate. Affected departments might also include those offering a program with similar or overlapping content.

This proposal for a new certificate has been reviewed and agreed to by the following affected departments.

Dept. (please print)	Name and Title (please print)	Signature	Date

12. SIGNATURES OF PROPOSING DEPARTMENT/UNIT FOR APPROVAL

Ken Manning  
Department Head/Chair (please print)\*\*  
Signature: *Ken Manning* Date: 12/5/14

Don Samelson  
Chair Coll. Curric. Comm. (please print)  
Signature: *Don Samelson* Date: 12/5/14

Ajay Menon  
Dean of College (please print)\*\*  
Signature: *Ajay Menon* Date: 12/5/14

\*\*Signature indicates approval and a commitment of resources, and a commitment that this certificate will be offered consistent with the information included in this form.

Paul Mallette  
College Rep. to UCC (please print)  
Signature: *Paul Mallette* Date: 12/5/14

Submit completed, signed forms to Curriculum and Catalog, Campus Delivery 1063, Student Services Bldg., Room 217.

<b>For Curriculum and Catalog Only</b>	
CoSRGE Approval Date <u>12/25/15</u>	UCC Approval Date <u>2/20/15</u>
Faculty Council Approval Date <u>4/7/15</u>	Approved Effective <u>FA 15</u>

1/2/11

**College of Business**  
**Graduate Certificate in Marketing Management**

**Effective Fall 2015**  
**CoSRGE 2/5/15**

(The entire program is shown.)

<u>Course</u>	<u>Title</u>	<u>Cr</u>
BUS 655 <sup>P</sup>	<u>Marketing Management</u>	<u>2</u>
BUS 656 <sup>P</sup>	<u>Marketing Strategy and Planning</u>	<u>2</u>
MKT 610 <sup>P</sup>	<u>Qualitative Marketing Research Methods</u>	<u>1</u>
MKT 611 <sup>P</sup>	<u>Quantitative Marketing Research Methods</u>	<u>1</u>
MKT 661 <sup>P</sup>	<u>Consumer Behavior</u>	<u>1</u>
MKT 662 <sup>P</sup>	<u>Strategic Selling for Business Customers</u>	<u>1</u>
MKT 667 <sup>P</sup>	<u>Services Marketing Management</u>	<u>1</u>
	<u>TOTAL</u>	<u>9</u>

**PROGRAM TOTAL = minimum 9 credits**

<sup>P</sup> This course has at least one prerequisite. Check the Courses of Instruction section of the catalog at <http://catalog.colostate.edu/> to see the course prerequisites.

Board of Governors of the  
 Colorado State University System  
 Meeting Date: August 6-7, 2015  
 Consent Item

MATTERS FOR ACTION:

Program Review Schedule

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve and forward to the Colorado Commission on Higher Education the following list of Colorado State University-Pueblo academic programs to be reviewed in academic year 2015-2016 in accordance with the approved Program Review Plan for the CSU System. The CSU-Pueblo program review calendar appears on the next page.

- Athletic Training (BS)
- Biochemistry (MS)
- Biology (MS)
- Chemistry (MS)
- History (MA)
- Mass Communications (BA/MS)
- Nursing (BSN and MS)

EXPLANATION:

Presented by Rick Kreminski, Provost and Executive Vice President for Academic Affairs, CSU-Pueblo.

The list above is in accordance with established review schedule 2015-2016 through 2019-2020 on the next page. To date, none of the programs have submitted formal requests with justification to the CSU-Pueblo Curriculum and Academic Programs Board (CAP Board) to delay their University program review to coincide with their disciplinary accreditation review. Should any delay requests be submitted, the CAP Board will respond to them in September and make recommendation to the President. We request that the Board delegate authority to President Lesley Di Mare to approve any 2015-2016 program review delays.

\_\_\_\_\_  
 Approved

\_\_\_\_\_  
 Denied

\_\_\_\_\_  
 Board Secretary

\_\_\_\_\_  
 Date

### Program Review Calendar

2015-2016	CEEPS: CHASS: CSM:	Nursing (BSN and MS), Athletic Training (BS) Mass Communications (BA/BS), History (MA) Chemistry (MS), Biology (MS), Biochemistry (MS)
2016-2017	CEEPS: CHASS: CSM:	Automotive Industry Management (BS), Construction Management (BS) Liberal Studies (BS), Social Work (BSW) Mathematics (BA/BS), Chemistry (BS)
2017-2018	CEEPS: CHASS: HSB:	Exercise Science and Health Promotion (BS) Political Science (BA/BS), Social Science (BA/BS), English (BA) Computer Information Systems (BS; includes joint BS-CIS/MBA)
2018-2019	CEEPS: CSM: CHASS:	Engineering (Mechatronics, BSE), Industrial Engineering (BSIE), Industrial & Systems Engineering (MS), Civil Engineering Technology (BSCET) Biology (BS), Physics (BS) Art (BA/BFA), History (BA/BS), Psychology (BA/BS), English (MA)
2019-2020	CHASS: HSB:	Music (BA), Sociology (BA/BS), Foreign Languages (Spanish BA) Accounting (BSBA), Business Management (BSBA), Economics (BSBA), Master of Business Administration (MBA, including joint BSBA/MBA)

#### Abbreviations

CEEPS:	College of Education, Engineering and Professional Studies
CHASS:	College of Humanities and Social Sciences
CSM:	College of Science and Mathematics
HSB:	Hasan School of Business

Board of Governors of the  
Colorado State University System  
Meeting Date: August 6-7, 2015  
Consent Item

MATTERS FOR CONSENT:

Approval of degree candidates

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the granting of specified degrees to those candidates fulfilling the requirements for their respective degrees at the end of each cohort within the academic calendar year 2015-2016.

EXPLANATION:

Presented by Rick Kreminski, Provost and Executive Vice President for Academic Affairs, CSU-Pueblo.

The Faculty Senate of Colorado State University-Pueblo recommends the conferral of degrees on those candidates who satisfy all their requirements at the end of each fall, spring and summer semester. Only those individuals who have completed all requirements will receive their degree.

CSU-Pueblo anticipates that approximately 800 undergraduate degrees and 110 graduate degrees should be awarded in the upcoming academic year (i.e. fall 2015, and spring and summer 2016). The table below provides detail on bachelor's and master's degrees awarded in summer 2014, fall 2014 and spring 2015; it also provides the related averages between spring 2009 and fall 2014.

	AY2014-2015 # Bachelor's awarded	AY2014-2015 # Master's awarded	Sp2009-Fa2014 Bachelor's avg	Sp2009-Fa2014 Master's avg
Summer	163	20	166	20
Fall	183	30	179	35
Spring	477	49	435	53

Board of Governors of the  
Colorado State University System  
Meeting Date: August 6-7, 2015  
Consent Item

MATTERS FOR CONSENT:

Colorado State University-Pueblo: Posthumous Degree Candidate

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the presented candidate to receive a Bachelor of Arts degree for her major in Sociology, minor in Psychology, posthumously. The posthumous degree is to be conferred at the end of the summer 2015 term.

EXPLANATION:

Presented by Rick Kreminski, Provost and Executive Vice President for Academic Affairs, CSU-Pueblo.

In May 2005, the Board of Governors approved the policy stating that “In exceptional circumstances, the Board may award degrees posthumously. Recommendations for such an award will only be considered when the student had completed nearly all of the requirements for his or her degree before dying, and when the student’s academic record clearly indicates that the degree would have been successfully completed had death not intervened. Nominations for posthumous awards of degree will be initiated by the student’s department and approved internally by the relevant college dean and the Provost. The posthumous nature of the recommended degree award shall be made explicit when the recommendation is forwarded to the Board. The Provost’s office shall be responsible for presenting the degree to appropriate survivors.” The Board of Governors approved CSU-Pueblo’s Posthumous Degree Policy at the December 2011 meeting.

Board of Governors of the  
Colorado State University System  
Meeting Date: August 6-7, 2015  
Consent Item

MATTERS FOR CONSENT:

2015-2016 Faculty Handbook revision – section 1.2.6.4

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revision to the Colorado State University-Pueblo Faculty Handbook, section 1.2.6.4

EXPLANATION:

Presented by Rick Kreminski, Provost and Executive Vice President for Academic Affairs, CSU-Pueblo.

The proposed revision for the 2015-2016 edition of the CSU-Pueblo Faculty Handbook has been adopted by the CSU-Pueblo Faculty Senate. The request is to delete one line from the *ex officio*, non-voting membership of one faculty Board - the University no longer has an individual with the title of Dean of Graduate Studies and Research, hence the membership should no longer include that individual.

NOTE: Revisions are noted in the following manner:

Additions – underlined                      Deletions – ~~striketrough~~

**1.2.6.4 Graduate Studies Board** (revised July 2013)

a. Purpose:

To recommend to the Faculty Senate on matters of graduate program development, policies and standards.

b. Membership:

1. The Program Director of each approved graduate degree and consortium graduate program
2. Provost or Provost's representative.
3. One faculty senator (elected by Faculty Senate) to represent the Board on the Faculty Senate Executive Committee; a senator serving on the Board as a program director will be eligible to serve in this position. The term of office of the senator representing the Board on the Senate Executive Committee shall be for one-year.

~~4. The Dean of Graduate Studies and Research (ex officio, non-voting)~~

c. Duties/Procedures:

1. Convened by the Chair not fewer than twice each semester and otherwise as needed.
2. Oversees all graduate programs and courses. Recommends to the Faculty Senate on all academic or curricular



policy changes proposed by a graduate program, the program's electing unit, the University Administration or other sources. This includes all proposals, regardless of their origin, to modify existing language and/or to add new language pertaining to graduate studies in the University Catalog. Upon approval by Faculty Senate per the Voting Procedures in Section 1.1.2.5 (Article V, Section 8 of the Faculty Senate Constitution), the Board Chair is responsible for communicating the required Catalog changes to the office responsible for publication of the University Catalog. The Board Chair is further responsible for verifying that the necessary changes have been made in the subsequent edition of the University Catalog.

3. Performs other duties upon the request of the Executive Committee.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Report Item

MATTERS FOR ACTION:

Report: Post-Tenure Review and Results of Faculty Activity

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

Colorado State University employs a comprehensive system for hiring and evaluating faculty performance. The following report describes the results of annual performance reviews, promotion and tenure, and periodic comprehensive reviews (post-tenure reviews). This report also summarizes the hiring process used to attract capable new faculty who are likely to succeed.

## **COLORADO STATE UNIVERSITY REPORT ON FACULTY ACTIVITY FOR 2014-2015**

Colorado State University seeks to ensure that every regular, tenure-track faculty member and special appointment faculty member meets or exceeds the expectations for his/her appointment. This report summarizes the procedures the University uses to ensure faculty meet the University's performance standards, and provides a brief analysis of the outcomes of the various types of review. The process begins with the hiring of new faculty (Section I below) and continues with the annual performance reviews (Section II). Untenured faculty members undergo an annual review of progress toward tenure and are reappointed only if satisfactory performance is documented (Section III). At the midpoint of the probationary period, ordinarily during the third year of appointment, such untenured faculty members undergo a more comprehensive review. The critical decision concerning tenure and promotion normally occurs in the sixth year (Section IV). Tenured faculty members undergo periodic comprehensive review (Section V). The outcomes of these reviews for 2014-2015 indicate that the vast majority of Colorado State University faculty members are performing at or above the expectations for their assignments.

### **I. PROCESS FOR FACULTY HIRES**

Hiring new faculty members is among the most important responsibilities of department faculty and college administrators. The processes used in soliciting applications and interviewing candidates vary across the University as to detail, but universally, the search processes are characterized by thoroughness and intensity. Searches generally share the following characteristics:

1. Positions are advertised in printed and electronic form in locations appropriate for the profession involved. Advertising must appear in locations ordinarily accessed by potential faculty members who would enhance the diversity of the unit. Members of search committees are expected to be proactive in solicitation of nominations and applications. Advertising typically specifies the expectations of the successful applicant in terms of teaching, advising, research, service, and outreach and engagement.
2. Applicants are asked to provide a letter of interest, a resume (curriculum vita), and typically three letters of recommendation. Application materials may include statements of teaching philosophy, a list of courses the applicant is qualified to teach, summaries of student evaluations, research plans, and publication lists.
3. Semifinalists are selected after a careful screening by a departmental committee and in strict adherence with clearly defined equal opportunity guidelines. Often, additional information is solicited from other experts in the field.
4. Finalists are selected after another careful screening. Interviews usually include meetings with those who are likely to have important roles in the professional life of the successful applicant. This certainly includes members of the faculty of the

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department conducting the search, but often also includes faculty members from other departments where interactions and collaborations might occur. Students are often included in the interview process. The interview almost always includes one or more presentations by the applicant, and a meeting with the Dean.

## II. ANNUAL PERFORMANCE REVIEWS

Performance reviews are conducted for all Colorado State University faculty members on an annual, calendar-year basis. Each faculty member prepares an annual activities report which details his/her activities in teaching, research and creative activity, and service/outreach/engagement. Typically, faculty members expend 40-55 percent of their effort in teaching, 30-45 percent in research and creative activity, and 5-20 percent in service/outreach. The department head/chair assesses the activities of the faculty member and assigns a performance rating for each of the three categories and an “overall” rating. The faculty member and the head/chair meet to discuss the evaluation which is then forwarded to the college dean’s office for review. The summary report of the evaluation is forwarded to the Provost/Executive Vice President for further review and reporting.

For the calendar year 2014, 1,159 tenured and tenure-track faculty were reviewed. The “overall” outcomes were:

Superior performance:	76
Exceeded performance expectations:	532
Met performance expectations:	550
Below performance expectations:	1
Unsatisfactory performance:	0

The overwhelming majority of the reviews were positive, indicating that the faculty are meeting or exceeding the University’s performance expectations. It is important to note that faculty members who receive “met performance expectations,” and sometimes those who receive “exceeded performance expectations,” ratings may be given suggestions for improvement in one or more of the three categories that are evaluated.

## III. REAPPOINTMENT

Academic faculty on regular appointments who have not acquired tenure are appointed on a contractual basis not exceeding one year. Such faculty members undergo an annual review of progress toward tenure by the department Tenure and Promotion Committee. At the midpoint of the probationary period, ordinarily at the end of the third year of appointment, such faculty members undergo a more comprehensive review. Regular faculty members making satisfactory progress are reappointed.

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#### IV. TENURE AND PROMOTION

The following table summarizes Colorado State University's promotion and tenure activity for 2014-2015.

College	Tenure	Promotion to Associate	Tenure & Promotion to Associate	Promotion to Full	Tenure & Promotion to Full	Denied	Total
Agricultural Sciences			2	1	1		4
Health and Human Sciences	1						1
Business			1	2			3
Engineering			4		3		7
Liberal Arts	1		5	7			13
Libraries							
Natural Resources			3				3
Natural Sciences			5	6	1	0	12
Veterinary Medicine	2		3	3			8
<b>TOTAL</b>	<b>4</b>		<b>23</b>	<b>19</b>	<b>5</b>	<b>0</b>	<b>51</b>

#### Promotion of Special Appointment Faculty

	Promotion to Assistant Professor (Special)	Promotion to Associate Professor (Special)	Promotion to Professor (Special)	TOTAL
<b>TOTAL</b>		0		<b>0</b>

We note that in this past year, there were no denials of promotion and/or tenure. This does not mean that every case that was initially proposed was successful. Each year, there are cases that come forward that are withdrawn for a variety of reasons, most having to do with some level of administrative discouragement due to a perception that the case is not strong enough yet. The above statistics represent those cases that made it through the process leading to a formal recommendation by the Provost to the President.

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## V. COMPREHENSIVE REVIEW OF TENURED FACULTY

All tenured faculty at Colorado State University are subject to periodic comprehensive reviews of their performance. Phase I Comprehensive Performance Reviews of faculty are conducted by the department head/chair at intervals of five years following the acquisition of tenure, or if there are two unsatisfactory annual reviews within a five-year period. The department head's review identifies strengths and any deficiencies in the faculty member's performance. Department heads who believe that a faculty member's deficiencies can be corrected without implementing a Phase II Comprehensive Performance Review prepare, in consultation with the faculty member, a specific professional development plan to assist the faculty member in meeting the department's performance expectations. The review may also result in changes in the distribution of the faculty member's effort across teaching, research, outreach, and service.

If a faculty member's deficiencies are deemed to be more significant, a Phase II Comprehensive Performance Review is initiated. This review is conducted, according to procedures specified in the department's Code, by three of the faculty member's peers at the same or higher rank. The department head is not a committee member. A majority of the committee must decide if the faculty member's performance: a) is satisfactory, or b) has minor deficiencies, or c) has deficiencies that are substantial and chronic or recurrent and must be remedied, or c) is so unsatisfactory as to warrant possible sanctions up to and including tenure revocation. When deficiencies are noted that must be remedied, the department head and faculty member design a professional development plan indicating how the deficiencies are to be remedied and set timelines for accomplishing each element of the plan. Such development plans must be approved by the dean of the college. When sanctions are involved, the Provost/Executive Vice President makes a recommendation to the President regarding action. [see: Colorado State University, Academic Faculty and Administrative Professional Manual, E.14.3, Periodic Comprehensive Reviews of Tenured Faculty].

In the past year (2014) 89 of the 166 faculty members scheduled for Comprehensive Review were delayed or canceled. Cancellations or delays of comprehensive reviews are due to promotions (82), resignations, retirements, sabbaticals, or medical reasons (7). One professional development plan was implemented. The following table summarizes the results of the reviews by College and by outcome.

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**2014-2015 Comprehensive Review Summary**

College	Number	Satisfactory	Delayed or Canceled	Professional Development Plans	Phase II
Agricultural Sciences	21	14	7		
Health and Human Sciences	19	5	14		
Business	3	2	1		
Engineering	11	6	5		
Liberal Arts	32	8	24	1	
Natural Resources	17	5	12		
Natural Sciences	32	17	15		
Vet. Med. and Biomedical Sciences	31	20	11		
Libraries	0	0			
<b>Total</b>	<b>166</b>	<b>77</b>	<b>89</b>	<b>1</b>	

Results from the last six years of Comprehensive Reviews are recorded in the table below.

**Six Year Comprehensive Review Summary**

Year	Number	Satisfactory	Delayed or Cancelled	Professional Development Plans	Phase II
<b>2009-2010</b>	69	66	3	0	0
<b>2010-2011</b>	129	116	12	1	0
<b>2011-2012</b>	110	99	10	1	0
<b>2012-2013</b>	134	126	8	5	0
<b>2013-2014</b>	137	100	35	2	0
<b>2014-2015</b>	166	77	89	1	0

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## **VI. Faculty Workload Analysis**

As part of a review of faculty workload reports in FY13, the Academic and Student Affairs Committee settled on a set of six metrics to use to measure faculty workload; these are:

- The UG Student/Faculty Ratio as computed for the IPEDS data set
- The UG FTE/AAUP Instructional Faculty ratio
- The UG Degrees/AAUP Instructional Faculty ratio
- The Graduate FTE/AAUP Instructional Faculty ratio
- The Graduate Degrees/AAUP Instructional Faculty ratio
- NSF Federal Research Expenditures/AAUP Instructional Faculty

Institutional Research has been tracking these metrics for some time; we present below the past six years of data.

In general, our IPEDS Student/Faculty ratio tracks very closely to our peers – within one. We systematically have a higher UG FTE/Faculty ratio (although our peer group metric jumped significantly closer to ours in 2011). In every year, our UG Degrees/Faculty ratio is significantly higher as well, as are the corresponding ratios for the graduate student metrics.



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Values	2009		2010		2011		2012		2013		2014	
	CSU	Peers	CSU	Peers	CSU	Peers	CSU	Peers	CSU	Peers	CSU	Peers
IPEDS UG FTE/Faculty FTE	18	17	18	18	18	17	17	18	16	17	16	
Undergraduate FTE/AAUP Faculty	21.38	16.86	20.98	16.65	21.92	19.83	22.17	21.43	21.26	20.87	20.90	
Undergraduate Degrees/AAUP Faculty	4.37	3.83	4.26	3.91	4.51	4.26	4.71	4.36	4.69	4.28	4.97	
Graduate FTE/AAUP Faculty	4.33	3.96	4.57	4.15	4.66	4.23	4.73	4.16	4.49	4.67	4.58	
Graduate Degrees/AAUP Faculty	1.63	1.27	1.77	1.28	1.80	1.57	2.01	1.64	1.93	1.66	1.92	
NSF Federal Research Exp/AAUP Faculty	\$219	\$98	\$214	\$118	\$246	\$138	\$263	\$145	\$218	\$154		

Notes: Includes ALL instructional faculty reported to AAUP.

Operational Definitions:

UG FTE/AAUP Instructional Faculty: (Full-time Undergraduate Students + 1/3rd of Part-time Undergraduate Students) DIVIDED BY (AAUP Reported Instructional [Tenured and Tenure-Track] Faculty)

UG Degrees/AAUP Instructional Faculty: (Undergraduate Degrees Conferred) DIVIDED BY (AAUP Reported Instructional [Tenured and Tenure-Track] Faculty)

GR FTE/AAUP Instructional Faculty: (Full-time Graduate Students + 1/3rd of Part-time Graduate Students) DIVIDED BY (AAUP Reported Instructional [Tenured and Tenure-Track] Faculty)

GR Degrees/AAUP Instructional Faculty: (Graduate Degrees Conferred) DIVIDED BY (AAUP Reported Instructional [Tenured and Tenure-Track] Faculty)

NSF Federal Research Exp/AAUP Instructional Faculty (in thousands): (Annual NSF Federal Research Expenditures) DIVIDED BY (AAUP Reported Instructional [Tenured and Tenure-Track] Faculty). Data are a year in arrears.

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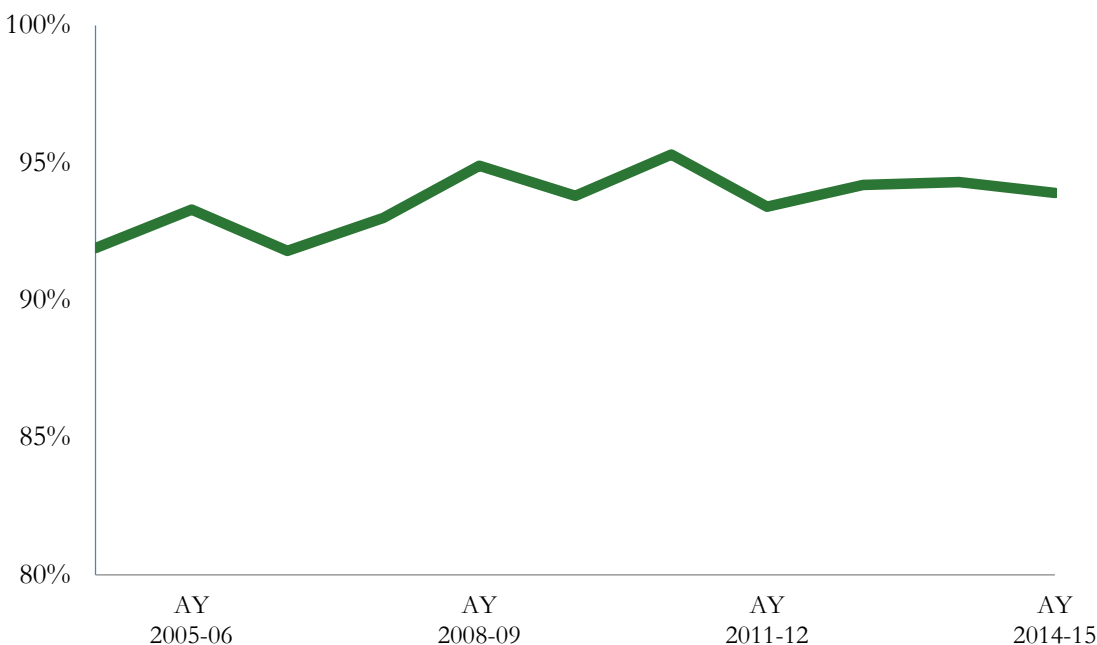
## VII. Faculty Compensation Comparisons

Faculty Salaries at all ranks at Colorado State University continue to lag behind our peer institutions. We present here two tables, one indicating data on salaries only and one on full compensation. At the assistant professor rank, we are about 1.2 percent below our peer average on salaries and 6.2 percent below our peer average on full compensation; at the associate professor rank, we are 4.1 percent below on salaries and 8.4 percent below on full compensation; and at the full professor rank, we are 8.8 percent below on salaries and 10.2 percent below on full compensation.

Another view of these statistics is to note that at the assistant professor rank, eight of the 13 peers have average salaries higher than CSU's; at the associate professor rank, ten of the 13 peers have average salaries higher than CSU's; and at the full professor rank, ten of the 13 peers have average salaries higher than CSU's.

We have identified this issue as one of concern to our campus for many years and, unfortunately, for several years we had little ability to affect things, with very modest faculty salary raises and no raises for multiple years during the recession. The past three years, with a 3 percent salary raise, a 2.5 percent salary raise, and a 2 percent salary raise, we hoped to gain a little ground. The past two years we have invested in additional increases in retirement benefits which we hope will reduce the Total Compensation gaps. The statistics over the past ten years are given in the following graph."

### Ten Year History of Weighted Average Faculty Salaries CSU Salaries as a Percent of Peer Salaries



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2014-2015 Faculty Salaries – BOG Peer Group

Institution	Full Professor			Associate Professor			Assistant Professor			All Ranks Combined		
	Number	Total Dollars	Average Salary	Number	Total Dollars	Average Salary	Number	Total Dollars	Average Salary	Number	Total Dollars	Average Salary
Iowa State	512	64,358,400	125,700	411	37,606,500	91,500	355	29,110,000	82,000	1,278	131,074,900	102,563
Kansas State	286	32,003,400	111,900	286	22,794,200	79,700	280	19,320,000	69,000	852	74,117,600	86,992
Michigan State	824	114,948,000	139,500	606	56,782,200	93,700	634	47,042,800	74,200	2,064	218,773,000	105,995
North Carolina State	489	60,636,000	124,000	382	33,539,600	87,800	252	19,832,400	78,700	1,123	114,008,000	101,521
Oklahoma State	314	33,598,000	107,000	304	24,259,200	79,800	242	18,004,800	74,400	860	75,862,000	88,212
Oregon State	312	35,848,800	114,900	272	24,180,800	88,900	259	20,616,400	79,600	843	80,646,000	95,665
Purdue University	852	111,015,600	130,300	576	53,280,000	92,500	498	40,587,000	81,500	1,926	204,882,600	106,377
Texas A & M	850	111,690,000	131,400	575	52,152,500	90,700	272	22,712,000	83,500	1,697	186,554,500	109,932
Univ of California, Davis	789	113,616,000	144,000	274	26,934,200	98,300	216	18,748,800	86,800	1,279	159,299,000	124,550
Univ of Illinois, Urbana	806	120,174,600	149,100	555	55,111,500	99,300	457	41,998,300	91,900	1,818	217,284,400	119,518
Univ of Tennessee	560	72,968,000	130,300	457	42,044,000	92,000	417	32,192,400	77,200	1,434	147,204,400	102,653
Virginia Tech	460	60,904,000	132,400	461	42,227,600	91,600	315	25,011,000	79,400	1,236	128,142,600	103,675
Washington State	351	43,102,800	122,800	312	26,769,600	85,800	231	18,711,000	81,000	894	88,583,400	99,087
<b>COLORADO STATE</b>	<b>438</b>	<b>52,560,000</b>	<b>120,000</b>	<b>369</b>	<b>32,176,800</b>	<b>87,200</b>	<b>222</b>	<b>17,538,000</b>	<b>79,000</b>	<b>1,029</b>	<b>102,274,800</b>	<b>99,392</b>
TOTAL EXCLUDING CSU	7,405	974,863,600	131,649	5,471	497,681,900	90,967	4,428	353,886,900	79,920	17,304	1,826,432,400	105,550
WEIGHTED AVERAGE CSU AS A PERCENT OF PEERS			131,649 91.2%			90,967 95.9%			79,920 98.8%			105,901 93.9%

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2014-2015 Faculty Compensation – BOG Peer Group

Institution	Full Professor			Associate Professor			Assistant Professor			All Ranks Combined		
	Number	Total Dollars	Average Comp	Number	Total Dollars	Average Comp	Number	Total Dollars	Average Comp	Number	Total Dollars	Average Comp
Iowa State	512	82,739,200	161,600	411	50,100,900	121,900	355	39,227,500	110,500	1,278	172,067,600	134,638
Kansas State	286	39,725,400	138,900	286	28,971,800	101,300	280	24,808,000	88,600	852	93,505,200	109,748
Michigan State	824	147,248,800	178,700	606	76,598,400	126,400	634	63,400,000	100,000	2,064	287,247,200	139,170
North Carolina State	489	76,088,400	155,600	382	42,860,400	112,200	252	25,250,400	100,200	1,123	144,199,200	128,405
Oklahoma State	314	44,682,200	142,300	304	32,041,600	105,400	242	23,328,800	96,400	860	100,052,600	116,340
Oregon State	312	49,920,000	160,000	272	34,571,200	127,100	259	28,982,100	111,900	843	113,473,300	134,607
Purdue University	852	138,450,000	162,500	576	69,696,000	121,000	498	53,335,800	107,100	1,926	261,481,800	135,764
Texas A & M	850	132,430,000	155,800	575	62,847,500	109,300	272	27,417,600	100,800	1,697	222,695,100	131,229
Univ of California, Davis	789	153,618,300	194,700	274	37,510,600	136,900	216	26,438,400	122,400	1,279	217,567,300	170,107
Univ of Illinois, Urbana	806	151,528,000	188,000	555	72,760,500	131,100	457	56,028,200	122,600	1,818	280,316,700	154,190
Univ of Tennessee	560	92,456,000	165,100	457	54,611,500	119,500	417	42,200,400	101,200	1,434	189,267,900	131,986
Virginia Tech	460	78,062,000	169,700	461	55,873,200	121,200	315	33,516,000	106,400	1,236	167,451,200	135,478
Washington State	351	53,106,300	151,300	312	33,696,000	108,000	231	23,423,400	101,400	894	110,225,700	123,295
<b>COLORADO STATE</b>	<b>438</b>	<b>65,875,200</b>	<b>150,400</b>	<b>369</b>	<b>40,294,800</b>	<b>109,200</b>	<b>222</b>	<b>21,978,000</b>	<b>99,000</b>	<b>1,029</b>	<b>128,148,000</b>	<b>124,536</b>
TOTAL EXCLUDING CSU	7,405	1,240,054,600	167,462	5,471	652,139,600	119,199	4,428	467,356,600	105,546	17,304	2,359,550,800	136,359
WEIGHTED AVERAGE CSU AS A PERCENT OF PEERS			167,462 89.8%			119,199 91.6%			105,546 93.8%			136,797 91.0%

## VII. Faculty Demographics

Below we present basic faculty demographic data for the past six years; these statistics and many others can be found in the CSU Fact Book.

We have made progress on our goal of steadily increasing our faculty numbers this past year, and the number of tenure track faculty is at a six-year high. Our number of women faculty continues to rise, as does our number of minority faculty.

### Tenure-Track Faculty by Rank, Gender, and Minority Status

Year	Full Professors	Associate Professors	Assistant Professors	Total Faculty	Men Faculty	Women Faculty	Minority Faculty
FY15	448	388	227	1,063	674	389	163
FY14	433	378	234	1,045	664	381	148
FY13	423	356	229	1,008	658	350	146
FY12	416	332	255	1,003	661	342	143
FY11	404	321	275	1,000	668	332	125
FY10	418	317	298	1,033	696	337	126

*Note: Non-resident Alien faculty are not reported with minority faculty.*

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CSU: Promotion and Tenure Report

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

In May 1995, the State Board of Agriculture delegated authority and responsibility for tenure and promotion decisions to the President of Colorado State University.

Promotion and tenure are among the most important decisions a University makes. Typically, a new assistant professor is hired on a tenure-track appointment. The process begins with an extremely rigorous international search process at the time the candidate is hired. Over the span of the next six years, candidates will turn in detailed annual self-evaluations and receive an annual evaluation from their department chairs. After three years, they will have a comprehensive mid-point review overseen by their department's promotion and tenure committee. Candidates not meeting university, college and departmental standards along this six-year path and who do not correct their course, rarely remain at the university long enough to apply for promotion and tenure. When candidates apply for promotion and tenure, they submit an intricately detailed self-evaluation of their scholarship, teaching portfolio, and summary of service to the department, college, university, professional discipline, and our society. This evaluation is reviewed by six qualified neutral external reviewers at comparable universities. These external evaluations combine with the self-evaluation and the six-year body of work to form the basis of review. The review occurs at five levels, starting with the departmental promotion and tenure committee, the department chair, the dean, the provost, and concluding with the president. Any "negative" external letter, split vote, divergence of opinion between previous reviewers, or hint that the candidate is borderline results in a review by the Council of Deans to help inform the Provost. Such cases are individually reviewed with the President.

Decisions for promoting associate professors to the rank of professor, promotions for special appointment (non-tenure-track) faculty members, and post-tenure reviews follow similarly rigorous procedures.

Reports on denials of tenure and/or advancement in rank are conveyed separately and confidentially to Board members.

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**COLORADO STATE UNIVERSITY**  
**RECOMMENDATIONS FOR ADVANCEMENT IN RANK AND TENURE**  
 (Tenure is awarded on a 9-month basis)  
 Effective July 1, 2015

<u>Faculty Member</u>	<u>Department</u>	<u>Action</u>
<b>College of Agricultural Sciences</b>		
Jerry Johnson	Soil and Crop Sciences	Grant tenure and promote to Professor
Mary Stromberger	Soil and Crop Sciences	Promote to Professor
Jordan Suter	Agricultural and Resource Economics	Grant tenure and promote to Associate Professor
Dale Woerner	Animal Sciences	Grant tenure and promote to Associate Professor
<b>College of Business</b>		
Jeffery Casterella	Accounting	Promote to Professor
David Gilliland	Marketing	Promote to Professor
Tuba Ustuner	Marketing	Grant tenure and promote to Associate Professor
<b>College of Engineering</b>		
Thomas Birner	Atmospheric Science	Grant tenure and promote to Associate Professor
Kenneth Carlson	Civil and Environmental Engineering	Promote to Professor
Jose Chavez	Civil and Environmental Engineering	Grant tenure and promote to Associate Professor
Lakshimi Dasi	Mechanical Engineering	Grant tenure and promote to Associate Professor
Eric Maloney	Atmospheric Science	Promote to Professor
Anthony Marchese	Mechanical Engineering	Promote to Professor

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<b><u>Faculty Member</u></b>	<b><u>Department</u></b>	<b><u>Action</u></b>
Ashok Prashad	Chemical and Biological Engineering	Grant tenure and promote to Associate Professor
<b>College of Health and Human Sciences</b>		
Nathaniel Riggs	Human Development and Family Studies	Grant tenure
<b>College of Liberal Arts</b>		
Chung-Fu Chang	Music, Theatre and Dance	Promote to Professor
Hye Seung Chung	Communication Studies	Grant tenure and promote to Associate Professor
Matthew Cooperman	English	Promote to Professor
Constance DeVereaux	Music, Theatre and Dance	Grant tenure
Christopher Fisher	Anthropology	Promote to Professor
Forest Greenough	Music, Theatre and Dance	Grant tenure and promote to Associate Professor
Mary-Ann Kokoska	Art	Promote to Professor
Marius Lehene	Art	Promote to Professor
Jared Orsi	History	Promote to Professor
Erika Osborne	Art	Grant tenure and promote to Associate Professor
Daniele Tavani	Economics	Grant tenure and promote to Associate Professor
Peter Taylor	Sociology	Promote to Professor
Deborah Yalen	History	Grant tenure and promote to Associate Professor



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<b><u>Faculty Member</u></b>	<b><u>Department</u></b>	<b><u>Action</u></b>
<b>College of Natural Sciences</b>		
Chris Ackerson	Chemistry	Grant tenure and promote to Associate Professor
Brad Conner	Psychology	Grant tenure and promote to Associate Professor
Deborah Garrity	Biology	Promote to Professor
Cameron Ghalambor	Biology	Promote to Professor
Kim Hoke	Biology	Grant tenure and promote to Associate Professor
Olivier Pinaud	Mathematics	Grant tenure and promote to Associate Professor
Jacob Roberts	Physics	Promote to Professor
Don Rojas	Psychology	Grant tenure and promote to Professor
Melinda Smith	Biology	Promote to Professor
Haonan Wang	Statistics	Promote to Professor
Colleen Webb	Biology	Promote to Professor
Tingting Yao	Biochemistry and Molecular Biology	Grant tenure and promote to Associate Professor
<b>College of Veterinary Medicine and Biomedical Sciences</b>		
Stacey Byers	Clinical Sciences	Grant tenure and promote to Associate Professor
Colleen Duncan	Microbiology, Immunology and Pathology	Grant tenure and promote to Associate Professor
Wayne Jensen	Clinical Sciences	Grant tenure

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<u>Faculty Member</u>	<u>Department</u>	<u>Action</u>
Kristy Pabilonia	Microbiology, Immunology and Pathology	Grant tenure
Richard Slayden	Microbiology, Immunology and Pathology	Promote to Professor
Susan Tsunoda	Biomedical Sciences	Promote to Professor
Craig Webb	Clinical Sciences	Promote to Professor
Deanna Worley	Clinical Sciences	Grant tenure and promote to Associate Professor

#### **Warner College of Natural Resources**

Cameron Aldridge	Ecosystem Science and Sustainability	Grant tenure and promote to Associate Professor
Liba Pejchar	Fish, Wildlife and Conservation Biology	Grant tenure and promote to Associate Professor
George Wittemyer	Fish, Wildlife and Conservation Biology	Grant tenure and promote to Associate Professor

#### **P&T Statistics**

- 51 total candidates
- 23 Associate Professor with Tenure
- 22 Professor
- 2 Professor with Tenure
- 4 Tenure only

\*\*\*\*\*

2014: 51 total candidates

2013: 89 total candidates

2012: 80 total candidates

2011: 80 total candidates

2010: 52 total candidates

2009: 55 total candidates

2008: 67 total candidates

2007: 60 total candidates

2006: 65 total candidates

2005: 45 total candidates

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MATTERS FOR ACTION:

Approval of Faculty Activity Report

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the Faculty Report presented by Colorado State University-Global Campus

EXPLANATION:

Presented by Dr. Jon Bellum, Provost & Senior Vice-President, CSU-Global Campus

Colorado State University-Global Campus has a well-defined process for recruiting, training, monitoring, and evaluating faculty. The following report describes the process and includes the results of the 2015 faculty evaluations and an overview of faculty characteristics.

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## Faculty Activity Report

### Candidate and Credential Screening

- Minimum of 18 hours of graduate credit hours in area of specialty
- Only candidates with terminal degrees may teach graduate level courses
- Additional criteria for programs under specialized accreditation
- Manager of Faculty Recruitment and Dean of appropriate school work together to properly credential faculty

### Training

- Initial application and training process
  - Application screening and interview
  - FCC Instructor Training Course
  - Mentored/supervised teaching of first online course
- Continuous faculty training
  - Annual peer mentoring and process
  - Additional FCC in Adult Education, Technology, APA, International Students, Grading and Assessment
  - Monthly faculty meetings
  - All faculty are assigned a Peer Mentor who checks on their course at least twice per term and provides coaching and feedback if necessary

### Compensation

- Teaching Assignments: CSU-Global adopted a new compensation model in July that links compensation directly with the number of students. For faculty with a terminal degree, compensation starts at \$350 for one student and reaches a maximum of \$3,500 for 26 students. For faculty with a masters degree teaching undergraduate courses, the range is \$303-\$3027.
- Content Development and Course Editing; Varies up to \$3,400 for a new course
- Non-Instructional Service: Varies based on type and amount of work

### Non-Instruction Opportunities

- Faculty training courses
- Peer Mentors
- Course Development
- Course Review and Editing
- Committee Leadership and Participation
- Data Analysis for Process Improvement
- Department Input for Content and Process Improvement (e.g. students services and resources, career center, surveys, etc.)
- Work that needs 360 input, strategy development, and faculty-related matters
- Professional development funding

### Performance Evaluations

- Weekly course checking for compliance to faculty requirements and expectations
  - Monitored through the Faculty Management System (FMS) and Peer Mentors
- Annual performance evaluation
  - Discussion facilitation
  - Grading and feedback

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- Other teaching and administrative duties
- Annual Faculty Satisfaction Survey (includes strongly agree, agree, and neutral)
  - 94% feel supported by their Program Coordinator
  - 95% feel supported by the CSU-Global Administration
  - 96% feel they are well informed of matters important to faculty
  - 95% feel CSU-Global facilitates their professional development through training courses

### Faculty Overview

CSU-Global uses all adjunct faculty that are integrated into all areas of the campus including teaching, administration/leadership, programs and courses, organizational development, and student services

**Faculty Counts as reported to IPEDS**

	<b>Fall 2014</b>	<b>Fall 2013</b>	<b>Fall 2012</b>
<b>Total Faculty</b>	<b>429</b>	<b>395</b>	<b>273</b>
<b>Accounting</b>	8%	9%	9%
<b>Applied Social Sciences</b>	4%	4%	5%
<b>Communications</b>	4%	6%	4%
<b>Criminal Justice</b>	6%	5%	5%
<b>Emergency Management/Homeland Security</b>	2%	2%	1%
<b>Finance</b>	2%	2%	2%
<b>General Education</b>	14%	14%	19%
<b>Healthcare Management</b>	6%	7%	5%
<b>Human Resource Management</b>	2%	-	-
<b>Human Services</b>	1%	1%	-
<b>Information Systems Management</b>	2%	-	-
<b>Information Technology</b>	8%	8%	7%
<b>Management</b>	15%	16%	17%
<b>Marketing</b>	4%	4%	4%
<b>Organizational Leadership</b>	13%	13%	15%
<b>Project Management</b>	4%	3%	-
<b>Public Management</b>	1%	1%	2%

*Faculty counts above are those reported to IPEDS and are based upon November 1 of the given year  
Management includes Management, International Management, and Operations Management faculty*

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<b>Faculty Work Load AY 2015</b>			
<b>Program</b>	<b>Credit Hours</b>	<b>Faculty Count</b>	<b>Credit Hours per Faculty</b>
Accounting	20,085	39	515
Applied Social Sciences	7,893	17	464
Communications	5,838	16	365
Criminal Justice	5,753	22	262
Emergency Management	3,078	8	385
Finance	3,999	8	500
General Education	23,743	62	383
Healthcare Management	14,136	32	442
Human Resource Management	3,805	9	423
Human Services	1,830	6	305
Information Systems Management	3,945	8	493
Information Technology	13,929	37	376
International Management	489	2	245
Management	24,171	63	384
Marketing	7,224	17	425
Operations Management	3,162	6	527
Organizational Leadership	21,166	60	353
Project Management	5,649	14	404
Public Management	2,172	6	362
Teaching and Learning	5,499	20	275
<b>Grand Total</b>	<b>177,566</b>	<b>452</b>	<b>393</b>

*Data above reflect all faculty who taught at any point during the academic year, and include new faculty hired after the IPEDS report date of November 1, 2014*

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<b>Faculty Work Load AY 2014</b>			
<b>Program</b>	<b>Credit Hours</b>	<b>Faculty Count</b>	<b>Credit Hours per Faculty</b>
<b>Accounting</b>	13,680	32	428
<b>Applied Social Sciences</b>	6,981	18	388
<b>Business Management</b>	12,768	37	345
<b>Communications</b>	4,719	16	295
<b>Criminal Justice</b>	4,848	18	269
<b>Emergency Management</b>	1,221	4	305
<b>Finance</b>	2,922	9	325
<b>General Studies</b>	24,319	96	253
<b>Healthcare Management</b>	9,236	22	420
<b>Human Resources</b>	2,095	8	262
<b>Information Technology</b>	12,633	32	395
<b>International Management</b>	417	2	209
<b>Management</b>	11,596	32	362
<b>Marketing</b>	6,546	15	436
<b>Operations</b>	2,115	6	353
<b>Organizational Leadership</b>	16,087	45	357
<b>Project Management</b>	3,687	11	335
<b>Public Management</b>	2,163	5	443
<b>Teaching and Learning</b>	4,695	19	247
<b>Total</b>	<b>142,728</b>	<b>427</b>	<b>334</b>

*Data above reflect all faculty who taught at any point during the academic year, and include new faculty hired after the IPEDS report date of November 1, 2013*

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<b>Faculty Work Load AY 2013</b>			
<b>Program</b>	<b>Credit Hours</b>	<b>Faculty Count</b>	<b>Credit Hours per Faculty</b>
<b>Accounting</b>	9,024	33	273
<b>Applied Social Sciences</b>	8,268	19	435
<b>Communications</b>	5,703	24	238
<b>Criminal Justice</b>	4,080	17	240
<b>General Studies</b>	16,999	67	254
<b>Healthcare Management</b>	4,845	24	202
<b>Information Technology</b>	8,754	28	313
<b>Management</b>	22,286	59	378
<b>Organizational Leadership</b>	16,087	45	357
<b>Project Management</b>	3,687	11	335
<b>Public Management</b>	2,163	5	433
<b>Teaching and Learning</b>	4,695	19	247
<b>Total</b>	<b>105,804</b>	<b>353</b>	<b>300</b>

*Data above reflect all faculty who taught at any point during the academic year, and include new faculty hired after the IPEDS report date of November 1, 2012*

<b>Faculty Demographics</b>			
<b>Race/Ethnicity</b>	<b>Gender – Male</b>	<b>Gender— Female</b>	<b>Overall %</b>
<b>Latino/Hispanic</b>	16	7	5.4%
<b>Asian</b>	14	3	4.0%
<b>American Indian/Native Alaskan</b>	3	1	0.9%
<b>Black or African American</b>	27	24	11.9%
<b>Hawaiian/Other Pacific Islander</b>	1	0	0.2%
<b>Two or More Races</b>	5	3	1.9%
<b>White</b>	149	157	71.3%
<b>Unknown</b>	12	7	4.4%
<b>Total Adjunct Faculty</b>	<b>227</b>	<b>202</b>	<b>429</b>

*Data above are those data reported to IPEDS and include faculty counts through November 1, 2014  
Current percentage of Racial/Ethnic minorities (without including unknown category) is 24.2%*



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Report Item

**MATTERS FOR ACTION:**

Report on Annual Faculty Performance, Promotions and Post Tenure Review

**RECOMMENDED ACTION:**

No action required -- report only.

**EXPLANATION:**

Presented by Rick Kreminski, Provost and Executive Vice President for Academic Affairs, CSU-Pueblo.

**INTRODUCTION**

The CSUS Board of Governors formally approved Colorado State University-Pueblo's tenure/post-tenure review policy on December 3, 1997. The report summarizes major actions taken during the 2014-2015 academic year in relation to that policy.

**REPORT ON FACULTY ACTIVITY FOR AY 2014-2015**

Colorado State University-Pueblo has in place policies, procedures and practices to ensure that every tenure-track faculty member meets or exceeds the performance expectations for his/her position when hired and throughout his/her career at the University. This report summarizes the relevant procedures and recent review results.

The performance review process begins with the hiring of new faculty (Section I below) and continues with the annual performance reviews (Section II). Untenured faculty members undergo an annual review of progress toward tenure and are reappointed only if satisfactory performance is documented (Section III). The critical decision concerning tenure normally occurs in the sixth year (Section IV). Tenured faculty members undergo periodic comprehensive review (Section V). The outcomes of these reviews for 2014-2015 indicate that the vast majority of Colorado State University-Pueblo faculty are performing at or above the expectations for their assignments.

**I. PROCESS FOR FACULTY HIRES**

Hiring qualified new faculty members is among the most important responsibilities of department faculty and college administrators. The process used in soliciting applications and interviewing candidates is thorough, objective and conforms to central policies. Searches share the following characteristics:

1. All tenure-track faculty searches are conducted nationally. Positions are advertised in printed and

electronic form in locations appropriate for the discipline involved. All positions are posted on the University's web site and, typically, in the discipline's major print and electronic resources for job searches. Members of search committees are expected to be proactive in soliciting nominations and applications, and, typically, contact is made with leading doctoral programs in the discipline, especially those with high rates of minority and Hispanic graduates. Advertising specifies the expectations of the successful applicant in terms of teaching, scholarship, and faculty duties unique to the position.

2. Applicants are asked to provide a letter of interest, résumé (curriculum vitae), evidence of excellent teaching performance and names of references and/or letters of recommendation.
3. A search and screen committee is named, with the majority of members representing the discipline in which the position exists. Faculty from other disciplines sometimes are named to the search and screen committee in order to promote diversity or to represent the teaching interests of related fields.
4. Candidates meeting minimum qualifications are determined after a careful review by the search and screen committee and in strict adherence with clearly defined University guidelines. The group of qualified candidates is further reviewed through more extensive examination of submitted materials, telephone interviews with references and/or telephone or online video interviews with the top candidates.
5. The resulting finalists are invited for an on-campus interview. Interviews usually include meetings with those who are likely to have important roles in the professional life of the successful applicant. This includes members of the faculty of the department conducting the search, but often also includes faculty members from other departments where interactions and collaborations might occur. Students are included in the interview process. The interview almost always includes two presentations by the applicant: a teaching demonstration and a presentation of scholarly work.

## **II. ANNUAL PERFORMANCE REVIEWS**

Performance reviews are conducted for all Colorado State University-Pueblo faculty on an annual, calendar-year basis. Each faculty member prepares an annual activities report, which details his/her activities in teaching, scholarship/creative activity, and service/outreach in relation to the faculty member's annual performance goals and plan. The department chair assesses the activities of the faculty member in light of formal departmental and college performance standards and University performance criteria. The faculty member and the chair meet to discuss the evaluation, which is then forwarded to the college (or school) dean's office for review. The dean's and the chair's recommendations are forwarded to the provost for further review, and then all recommendations are submitted to the president for final approval.

For the calendar year 2014, 124 tenured and tenure-track faculty members were reviewed. (For CY2013, 146 tenured and tenure-track faculty members were reviewed.) This number includes department chairs.

The outcomes are tabulated below:

	Tenure-track (untenured) faculty	Tenured faculty	Total
Exceptional	4	30	34 (27%)
Exceeds expectations	15	69	84 (68%)
Meets expectations	1	5	6 (5%)
Below expectations	0	0	0
Unsatisfactory	0	0	0

(The comparable outcomes a year ago were 38% exceptional and 56% meets expectations.)

As part of the annual review process, all faculty receive feedback about the quality of their performance, and this feedback affects the identification of performance goals for the next year. Additionally, faculty members receiving “below expectations” evaluations overall or in any evaluation category prepare special development plans, in consultation with their chairperson (see below).

### III. REAPPOINTMENT

Academic faculty on regular appointments who have not acquired tenure are appointed on a contractual basis not exceeding one year. Such faculty members undergo an annual review of progress toward tenure as part of the standard annual review process. Faculty members making satisfactory progress are reappointed. A midpoint performance review is also conducted in the midpoint of a tenure-track faculty member’s normal probationary period (i.e. typically in the third year of the six year probationary period).

### IV. TENURE AND PROMOTION

The following table summarizes Colorado State University-Pueblo promotion and tenure outcomes for 2014-2015. There was one denial (of promotion); however, in consultation with their peers, chairs, and deans, faculty often do not submit dossiers if they do not believe that they have a strong case for tenure and/or promotion.

Academic Unit*	Tenure only	New Appointments with Tenure	Promotion to Associate only	Tenure & Promotion to Associate**	Promotion to Full	Tenure & Promotion to Full	Denied	Total Actions
CEEPS	1	0	0	2	1	0	1	7
CHASS	0	0	1	3	1	0	0	8
CSM	0	0	0	0	2	0	0	2
HSB	0	0	0	0	0	0	0	0
Library	0	0	0	0	0	0	0	0
<b>COLUMN TOTAL</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>17</b>

\*-See key for acronyms at end of section V in this report

\*\*-Tenure and promotion counted as two separate actions

## V. COMPREHENSIVE REVIEW OF TENURED FACULTY

All tenured faculty at Colorado State University-Pueblo must complete a comprehensive, post-tenure review every five years. This review consists of the annual performance review for the current year plus a review of performance over the previous four years. If the comprehensive review results in a non-meritorious rating or if two successive annual reviews result in a non-meritorious rating, a cumulative performance review is scheduled for the following year. In the interim, the faculty member works closely with the department chair to analyze deficiencies and to develop a detailed professional development plan for improvement. This process of analysis and developing a plan is tied closely to the formally defined University criteria and college/school and department standards for performance. The cumulative review includes a self-assessment of performance, and assessments conducted by the department chair, the College Personnel and Review Committee, the dean, and the provost. Final review and action is done by the President.

In the past academic year (2014-2015), 15 comprehensive reviews were scheduled. The table below summarizes the results of the reviews by college/school and by outcome.

### AY 2014-2015 Comprehensive Review Summary

College*	Number scheduled	Meets or exceeds expectations	Delayed or Canceled
CEEPS	7	6	1**
CHASS	2	1	1**
CSM	3	3	0
HSB	2	2	0
Library	1	1	0
<b>Totals</b>	<b>15</b>	<b>13</b>	<b>2</b>

\* See key for acronyms below.

\*\* One (full) and one associate professor served over a year as an Interim Dean; post-tenure review was postponed for these two.

Key:

Colleges

- CEEPS: College of Education, Engineering, and Professional Studies
- CHASS: College of Humanities and Social Sciences
- CSM: College of Science and Mathematics
- HSB: Hasan School of Business

## VI. FACULTY WORKLOAD

The chart below is an update from material submitted for the August 2012, 2013 and 2014 Board of Governors meeting. Data are obtained from the Integrated Postsecondary Education Data System (IPEDS).

### CSU-Pueblo FACULTY WORKLOAD

	2010*		2011*		2012*		2013*		2014*	
	CSU-Pueblo	Peer Median	CSU-Pueblo	Peer Median	CSU-Pueblo	Peer Median	CSU-Pueblo	Peer Median	CSU-Pueblo	Peer Median
IPEDS UG Student Faculty Ratio	16	17	18	17	16	16	15	17	16	17
UG FTE/IPEDS Instructional Faculty	28.87	27.01	28.70	26.26	29.19	27.77	29.86	26.55	33.82	24.80
UG Degrees/IPEDS Instructional Faculty	4.47	4.78	4.69	5.46	5.75	5.67	5.99	5.95	NA	NA
GR FTE/IPEDS Instructional Faculty	4.65	3.37	3.98	3.06	4.30	2.77	5.88	3.19	7.14	3.22
GR Degrees/IPEDS Instructional Faculty	0.83	1.53	0.55	1.37	0.68	1.30	0.85	1.12	NA	NA
Research Exp/IPEDS Instructional Faculty	2,155	3,177	1,945	2,900	1,521	2,684	1,251	3,076	NA	NA

"Peers" are from peer set approved December 2011; see section VII for details.

Source: All variables are directly from IPEDS.

\*-Each year refers to students & faculty in fall of that year; degrees awarded and research expended are for the fiscal year that includes fall of that year.

#### Operational Definitions:

**IPEDS UG Student Faculty Ratio:** Self-reported to IPEDS; essentially it's (full-time undergraduate students + 1/3rd of part-time undergraduate students) DIVIDED BY (full-time faculty + 1/3rd part-time faculty).

**UG FTE/IPEDS Instructional Faculty:** Computed as (full-time undergraduate students + 1/3rd of part-time undergraduate students) DIVIDED BY (IPEDS reported instructional [tenured and tenure-track, FT+PT/3] faculty)

**UG Degrees/IPEDS Instructional Faculty:** Computed as (undergraduate degrees conferred) DIVIDED BY (IPEDS reported instructional [tenured and tenure-Track, FT+PT/3] faculty)

**GR FTE/IPEDS Instructional Faculty:** Computed as (full-time graduate students + 1/3rd of part-time graduate students) DIVIDED BY (IPEDS reported instructional [tenured and tenure-track, FT+PT/3] faculty)

**GR Degrees/IPEDS Instructional Faculty:** Computed as (graduate degrees conferred) DIVIDED BY (IPEDS reported instructional [tenured and tenure-track, FT+PT/3] faculty)

**Research Exp/Instructional Faculty:** Computed as (IPEDS reported annual research expenditures) DIVIDED BY (IPEDS reported instructional [tenured and tenure-track, FT+PT/3] faculty))

The second and fourth rows of the table indicate that, on average, CSU-Pueblo tenured and tenure-track faculty have more students than the median of the peer set. The undergraduate and graduate degrees awarded per (tenured and tenure-track) faculty member are slightly above, and most recently .3 below, the median of the peer set, respectively. For graduate degrees, this is in part because many graduate students are non-degree-seeking teachers, taking classes for professional development.

## VII. FACULTY COMPENSATION COMPARISONS

The most recent peer set was determined at the December 2011 Board of Governors meeting and is listed below. Faculty salaries relative to this peer set, as obtained IPEDS, are summarized in the table on the next page.

As the table shows, CSU-Pueblo faculty salaries are below the peer averages for each of the ranks of Professor, Associate Professor, and Assistant Professor, for each of the past three academic years (in AY2014-2015, this is roughly \$8K, \$10K and \$10K below the peer average, or about 9%, 14% and 16% below the peer average). Two years ago, we anticipated that the salary increase in FY2013 (the first after three years of no increases) would close the gap somewhat, and the data for AY2012-2013 bore that out, but the gap has since widened over the past two years.

The peer set, approved by the CSU System Board in December 2011, is:

Augusta State University  
 California State University-Stanislaus  
 Emporia State University  
 Midwestern State University  
 Missouri Western State University  
 The University of Tennessee-Martin  
 The University of Texas at Tyler  
 University of Colorado Colorado Springs  
 University of Michigan-Flint  
 University of South Carolina-Upstate  
 Washburn University

As noted in the table, Augusta State University no longer exists, having merged with Georgia Health Sciences University and forming Georgia Regents University by fall 2013. The current university includes both a dental and a medical school.

## Faculty Salaries - Board of Governors Peer Group

Institution	AY 2014-2015						AY 2013-2014						AY 2012-2013					
	Professor		Associate Professor		Assistant Professor		Professor		Associate Professor		Assistant Professor		Professor		Associate Professor		Assistant Professor	
	#*	average salary*	#*	average salary*	#*	average salary*	#*	average salary*	#*	average salary*	#*	average salary*	#	average salary	#	average salary	#	average salary
Augusta State University**							NA	NA	NA	NA	NA	NA	50	76511	49	57408	84	53910
California State University-Stanislaus	120	89910	55	72090	57	64370	123	88734	57	70413	43	64753	116	89899	54	71051	53	62745
Colorado State University-Pueblo	42	80667	51	60645	44	52699	44	84200	55	63203	53	53952	44	83906	47	61347	59	53999
Emporia State University	69	73300	77	59484	57	58603	77	71138	76	57285	48	53943	75	72453	82	58926	52	52094
Midwestern State University	41	86569	65	72966	97	61574	45	85598	62	68982	95	59264	46	80149	54	66597	72	56698
Missouri Western State University	52	76293	53	63823	73	53588	52	75903	50	62163	69	52681	49	74608	50	61721	68	53537
The University of Tennessee-Martin	74	76081	75	65350	76	58489	74	80928	70	66052	83	57431	69	61324	61	71709	77	53915
The University of Texas at Tyler	53	97889	73	74559	95	68183	49	92590	68	70754	79	65421	48	85219	68	66729	79	62855
University of Colorado-Colorado Springs	80	100210	76	78371	82	68793	73	99717	67	75608	77	68988	80	96231	74	73391	82	65518
University of Michigan-Flint	37	107370	73	81334	99	72329	36	104044	64	79108	96	69826	39	98965	62	75664	86	67425
University of South Carolina-Upstate	22	75556	55	63050	49	56580	21	77141	51	62897	59	54797	22	77909	51	64388	60	53960
Washburn University	79	97323	59	72151	61	56942	73	102576	71	70621	63	59064	66	102356	73	70549	67	57572
Averages of peers***	62.7	88552	66.1	70549	74.6	62821	62.3	88041	63.6	68455	71.2	61156	60.0	83909	61.6	67303	70.9	58549

\*-For 2013-2014 and 2014-2015, IPEDS salaries include faculty on 9,10,11, or 12-month contracts; all CSU-Pueblo faculty are on 9-month contract (and our peers average 93% of profs, 94% of assoc profs, and 95% of asst profs on 9-month contract).

\*\*--Augusta State University no longer exists; it merged with Georgia Health Sciences University to form Georgia Regents University, a university with over 1000 doctoral students including a medical school and a dental school, by fall 2013. IPEDS provided no data for Augusta State for fall 2013.

\*\*\*- salaries weighted by # of faculty

## VIII. FACULTY DEMOGRAPHICS

Our Factbook, available online, has gender and ethnicity breakdown since fall 2003 for all full-time faculty. The gender and ethnicity is not disaggregated by rank in the Factbook. The eight most recent years of data are summarized in the table below.

Full-time faculty by rank, gender and ethnicity

Academic year	Professor	Associate Professor	Assistant Professor	Total tenured or tenure track	total full time faculty*	Men	Women	minority**
2014-2015	44	51	25	120	180	99	81	39
2013-2014	45	55	36	136	199	110	89	41
2012-2013	46	47	51	144	195	106	89	40
2011-2012	49	42	58	149	190	102	88	38
2010-2011	48	39	59	146	193	99	94	34
2009-2010	47	44	54	145	192	100	92	36
2008-2009	46	40	49	135	185	93	92	34
2007-2008	48	41	41	130	171	90	81	29

\*-includes visiting faculty and lecturers

\*\*-includes Hispanic, Black non-Hispanic, Asian or Pacific Islander (and excludes foreign)

The percentage of female and minority full-time faculty has remained stable over the past few years. More quantitatively, over the years between 2009-2010 and 2014-2015, the percentage of female faculty has fluctuated, yet always remained between 49% and 45%. The percentage of minority faculty has increased each year, from 18% to 22%.

In addition, the table below provides further depth to the data, with breakdown by rank for tenured or tenure-track faculty. As already seen above, the growth in tenured or tenure-track faculty has been smaller than the overall growth in full-time faculty.

Tenured or tenure-track faculty by rank, gender and ethnicity

Academic Year	Professor		Associate Professor		Assistant Professor		Total men	Total women	Total minority*	Total faculty
	Men	Women	Men	Women	Men	Women				
2014-2015	30	14	25	26	16	9	71	49	30	120
2013-2014	34	11	26	29	22	14	82	54	33	136
2012-2013	35	11	22	25	27	24	84	60	35	144
2011-2012	36	13	20	22	27	31	83	66	34	149
2010-2011	34	14	16	23	27	32	77	69	31	146

\*-In all years except 2011-2012, includes Asian, Black or African American, Hispanic, multi ethnicity, and Native Hawaiian or other (and excludes nonresident alien)

-In 2011-2012, includes Asian, Black or African American, Hispanic, multi ethnicity, and Native Hawaiian or other



# Academic Integrity

The foundation of a university is truth and knowledge, each of which relies in a fundamental manner upon academic integrity and is diminished significantly by academic misconduct.

CSU General Catalog; 1.6 p. 8. Guiding Principles

Colorado State University

*Academic Integrity Program*



- The Bad News...

- Like at other Universities, some CSU students cheat.
  - 307 reported by Instructors in 2014-15
- No matter what we do, some students will resort to cheating.
- Some will get away with it.

- The Good News...

- The number of surveyed students who say they have cheated has *gone down* since studies in both 1992 and 2009.
- Students and Faculty both report that we have a strong “culture of integrity” at CSU.



# Why Do Students Cheat?

- Poor time management !!!
- Not understanding the material
- Pressure to succeed
- Lack of confidence
- Opportunism
- Not understanding attribution and citation (plagiarism)



- Plagiarism

- Both a challenge and significant “teachable moment”
- Area of largest decline in cheating in student surveys
  - (done one or more times)
  - 1992 = 70% , 2009 = 30% 2014 = 22%
- Students arrive with very different backgrounds in understanding obligations to cite
  - especially International Students from some countries
  - including graduate students
- Computer resources allows detection of much copied work.
- “Ghost Writers” & online “Homework Help” sites
  - hardest to detect and readily available.



# CSU Strategies



## Policing

- Proctoring + Consequences



## Prevention

- Pedagogical Strategies



## Promotion

- Academic Integrity as a value and community norm



Based on work by Professor Lawrence Hinman, University of San Diego



- Academic Integrity procedures (“Policing”)
  - “Faculty-centric”
    - 73 - 77% handled by faculty only
  - Grading penalties
    - Loss of points to an “F” for course
  - Referral for hearing
    - Faculty prerogative
    - Educational/preventative sanctions
    - Warning to expulsion
  - There were documented discussions with 307 individual students about academic integrity last year.



## CSU Academic Integrity Program

- Annually:
  - Individual consultation with over 300 faculty/instructors
  - Presentations to over 800 students
  - Presentations to over 325 instructors
- Promoted the adoption and use of the CSU Honor Pledge
- Coordinate Academic Integrity Week
- Lead TILT Faculty/Student Honor Code Task Force
- Conducted research on student and faculty academic integrity issues
- Consult with CRSCS and hear cases referred by faculty.
- Advise ASCSU and Faculty Council.
- Acquired CSU endorsement of the International Center for Academic Integrity “Fundamental Values” statement.
- Create/maintain websites for faculty and student information.



# Maintaining Academic Integrity



Colorado State University  
**GLOBAL CAMPUS**

— CSUGlobal.edu —

Jon Bellum, Ph.D.  
Provost & Senior Vice President



# Student Verification

- **Student Verification – Internal**
  - Faculty provide verification by comparing discussion postings with written assignments. As most assignments in CSU-Global courses require students to make a link to their current employment, faculty can align the content in different posts and assignments to ensure there is alignment.
- **Student Verification - External**
  - CSU-Global adopted a third party tool that verifies new students prior to logging in and then randomly verifies students using unique identifying information to confirm the person logging in is in fact the student.
  - Students are prompted at least two times per term and are required to answer unique data provided through the third party service
  - If a student fails to correctly answer the questions, they are locked out of the student portal and need to contact their advisor by phone.

# Plagiarism

- **Plagiarism**
  - The greatest number of students reported for plagiarism have demonstrated poor scholarship or writing versus being a behavior based problem. Some students use too many direct quotes, poor efforts to paraphrase, and/or do not properly cite the contributions of others.
  - Initially, Instructors and The Office of Student Success work together to provide coaching and resources for developmental needs.
  - Beyond developmental needs, CSU-Global provides three opportunities to adjust behavior through continued instructor support, library sessions, and tutoring.

# Cheating

- **Cheating**
  - Cheating is the intentional use or attempt to use unauthorized materials, information, or study aids in any academic exercise. It includes egregious acts of plagiarism where a student knowingly uses the work of another (often another student) as their own work.
- **Disciplinary Panel**
  - Students found in violation of academic dishonesty may be subject to disciplinary panel proceedings. This is an extension of efforts to ensure student understanding of academic integrity, provide due process, and continuous improvement within CSU-Global.

# Data

## Plagiarism - 2014/2015 Academic Year

- 1<sup>st</sup> offense: 339
- 2<sup>nd</sup> offense: 41
- 3<sup>rd</sup> offense: 6

Total of confirmed reports: 386

## Cheating - 2014/2015 Academic Year

- Three cases which resulted in two students who were required to retake a course and one student who was administratively withdrawn.

# Section 9

## *Consent Agenda*

### A. Colorado State University System

- Minutes of the June 18-19 2015 Board Retreat and Board and Committee Meetings
- Institutional Student Fee Plan and Policy
- Amendment to Board Policy 314
- Degree Candidates for Academic Year 2015-16

### B. Colorado State University

- Faculty Manual Change – Section D.2.1
- Faculty Manual Change – Section F
- Faculty Manual Change – Section I.15
- Faculty Manual Change – Appendix 1
- Program Review Schedule 2015-2016
- Graduate Certificates

### C. Colorado State University-Pueblo

- Program Review Schedule 2015-2016
- Posthumous Degree
- Faculty Handbook Change – Section 1.2.6.4

**BOARD OF GOVERNORS OF THE  
COLORADO STATE UNIVERSITY SYSTEM  
BOARD OF GOVERNORS RETREAT AND MEETING  
Colorado State University Mountain Campus  
June 18-19, 2015**

**CALL TO ORDER**

Chair Mosher called the retreat to order on June 18, 2015, at 8:30 a.m.

**ROLL**

**Governors present:** William Mosher, Chair; Demetri “Rico” Munn, Vice Chair (6/19/15 only); Scott Johnson, Secretary; Dennis Flores; Dorothy Horrell, Mark Gustafson; Jane Robbe Rhodes; Joseph Zimlich, Paul Doherty, Faculty Representative, CSU; Michael Mincic, Faculty Representative, CSU-Pueblo; Jason Sydoriak, Student Representative, CSU; Megan Schulze, Student Representative, CSU-Global Campus; Sarah Zarr, Student Representative, CSU-Pueblo.

**Administrators present:** Tony Frank, Chancellor, CSU System, and President, CSU; Amy Parsons, Executive Vice Chancellor, CSU System; Lesley Di Mare, President, CSU-Pueblo; Becky Takeda-Tinker, President, CSU-Global Campus; Rick Miranda, Chief Academic Officer, CSU System, and CSU Provost and Executive Vice President; Allison Horn, Director of Internal Auditing, CSU System; Rich Schweigert, Chief Financial Officer, CSU System.

**System Staff present:** Adam Fedrid, IT Manager; Melanie Geary, Executive Assistant to the Chancellor; Allen Sneesby, IT Technician; Sharon Teufel, Executive Assistant to the Board of Governors.

**Campus Staff and Guests present:** Jason Johnson, Deputy General Counsel, CSU; Lynn Johnson, Vice President of Operations, CSU; Rick Kreminski, Provost, CSU-Pueblo; Tom Milligan, Vice President of External Relations, CSU; William Shuster, CSU College of Business; Rob White, Education Reporter, *Coloradoan* (6/19/15 only).

Chair Mosher reported Governor Munn will be arriving later in the day and Governors Tuor and Deemer were not able to participate.

**OATH OF OFFICE**

Deputy General Counsel Johnson administered the oath of office for the new faculty and student representatives.

**BOARD RETREAT: STRATEGIC MAPPING**

Chair Mosher encouraged the Board to be creative in the strategic mapping process and then asked Mr. Shuster to begin the process.

Mr. Shuster outlined the base expectation of defining capabilities to develop a strategic map and the floor and ceiling expectations. The group was divided into four breakout groups at 8:40 a.m. to examine the top five brutal facts or external pressures beyond CSU System control. At 9:10 a.m. the group reconvened as a whole to provide feedback.

Discussion followed on innovation and progress within legacy structures; internal culture; changing demographics; competition for students, research funding and talent; the tenure track process; student health/mental health issues; and decreasing public support and funding per student, and the shift of a greater portion the financial burden to families and students. Other topics included the public perception of the decreasing value of higher education, ROI and development of skills in order to get a job; the impact of changing technology; international relations and global perspective; the K-12 system and college readiness; and increasing employer costs. A list of brutal facts was developed and reviewed by influence or control.

Mr. Shuster explained the next step in the strategic mapping was to define capabilities in terms of efficiency and effectiveness currently possessed by the three individual universities that can be integrated or leveraged to drive the CSU System forward. The breakout groups reconvened at 10:00 a.m. to discuss capabilities and the group reconvened as a whole at 10:38 a.m.

Capabilities identified in the breakout group discussions included entrepreneurial spirit; the role of Board and System leadership to provide direction, and the role of the campus leadership to work with the faculty and staff to create buy-in; partnerships between institutions; brand identity; individual value of each institution with different access; and resource integration where it makes sense. Challenges for integration include monetary barriers and creating commonality and functionality within the System while maintaining institutional identity and autonomy with a limited role of advocacy and communication from the System.

There are opportunities to create value through integration of programs and sharing best practices, and to create pathways between the institutions for undergraduate and graduate programs, online degree completion and life-long learning. There are also opportunities to leverage broad-based infrastructure investments, such as financial management and IT systems, and other resources, such as student tracking and advising programs.

Following a lunch break from 12:10 p.m. to 1:05 p.m., the Board reconvened to further define four capabilities to draw upon to create System value: 1) market-responsiveness and research driven; 2) diversified access and experience; 3) resource management integration; and 4) technology. Dr. Frank and Governor Zimlich provided an historical perspective on the overarching System strategic plan, campus strategic plans and stretch goals. The overall group was then asked to work in twos to rank the capabilities for a total score of 10. Mr. Shuster explained that the weighted priorities would be used to begin to differentiate proposals.

The breakout groups reconvened at 2:30 to discuss potential Key Performance Indicators (KPIs). The group reconvened as a whole at 3:27 and provided feedback on potential KPIs and related initiatives. Ms. Parsons was directed to work with the campus leadership to further define the KPIs and initiatives and to report to the Board at the August meeting. Mr. Shuster indicated he would summarize the work completed on the strategic mapping to assist the Board in moving forward. The retreat then adjourned for the day at 4:15 p.m.

## **BOARD RETREAT CONTINUED**

Chair Mosher reconvened the retreat at 8:30 a.m. on June 19, 2015, and recounted the work of the previous day. The Board recognizes the unique attributes of the three very different CSU System institutions that have their own strategic plans which reflect their individual capabilities. He reviewed the five brutal facts that were identified and the four capabilities of the collective System that can be leveraged to develop an integrated, effective and efficient System that serves all three universities. Based on those capabilities, there was an initial discussion to begin to identify the KPIs.

Ms. Parsons explained how she would work with the campus leadership and System staff to develop KPIs based upon the identified capabilities with specific initiatives to be undertaken. Dr. Frank commented on how the road map being developed is forward-thinking for the next two to three years and will move forward the role and mission in a manner that leverages the institutions. He noted, however, that next steps should include discussions for the longer term, such as ten years, to ensure the System is prepared to address bigger picture issues.

The Board was then asked to provide feedback on the process and facilitator. There was consensus that the end product which can be grown from the bottom-up will be useful in moving the System forward. Resources could be identified and redirected if necessary to move forward initiatives. While energy and time may be the biggest barrier for faculty, the implementation could begin to energize faculty and staff. Effective articulation of the compatibility with the role and mission, the mandate from the Board to move forward, and the potential for collaboration and leveraging of resources will help redefine the culture and move forward the process.

The ability to demonstrate data-driven decision-making was deemed to be positive for attracting students and all decisions in terms of service should be made with cognizance of the students. Other comments included there should be recognition of the existence of different types of systems, the need for clear articulation of goals and an understanding of the role of the CSU System. There were some issues cited with the interpretation of the feedback by the facilitator and at times challenges with understanding the directives. The brutal facts will be revised to include omissions or clarity on issues such as culture, diversity and demographic shifts, and internationalization.

Dr. Frank raised the question as to whether the Board needed to have two board retreats annually. Comments included the February meeting has been used for more in-depth educational opportunities and the June retreat for strategic planning. Suggestions were made to have updates on the strategy mapping process and educational opportunities at every meeting to engage the Board.

Dr. Frank explained the intent to highlight the key foundational elements of the budget at the August meeting. The February meeting could be used to delve further into the impact on enrollment, tuition and state funding for the budget. The campus budgeting processes will have been run at that point and there would be time for any necessary modifications before the budgets are approved in May. With no further discussion, the retreat was concluded at 9:30 a.m.

## **REGULAR BUSINESS MEETING**

Chair Mosher called to order the business meeting and reported the oath of office was administered to the new faculty and student representatives the previous day.

## **EVALUATION COMMITTEE**

Committee Chair Munn called the Evaluation Committee to order and indicated the meeting would convene in executive session. Deputy General Counsel read the meeting into executive session for the purpose of discussing and evaluating public officials, confidential as set forth in the meeting notice. **Motion/Action:** Governor Johnson made the motion to convene in executive session; Governor Robbe Rhodes seconded; and the motion carried unanimously.



## **EXECUTIVE SESSION**

The Board continued in executive session to receive the litigation report and legal advice, all confidential as set forth in the meeting notice. The meeting then moved back into open session.

## **REAL ESTATE/FACILITIES COMMITTEE**

Committee Chair Johnson called to order the Real Estate/Facilities Committee and asked Deputy General Counsel Johnson to read the meeting into executive session for the purposes of discussions relating to the purchase of property for public purpose or sale of property, confidential pursuant as set forth in the meeting notice. **Motion/Action:** The motion was made, seconded and carried unanimously to convene in executive session. The meeting recessed for a break at 10:55 a.m.

## **BOARD CHAIR'S AGENDA**

The open meeting was reconvened at 11:07 a.m. Chair Mosher reported there were scheduling conflicts for the December and June meetings. The suggestion was made to move the June meeting to the prior week. A follow-up email will be sent to the Board on potential December dates to finalize the FY 2015-16 and FY 2016-17 meeting schedules.

## **PUBLIC COMMENT**

Chair Mosher asked if there was any public comment, of which there was none.

## **REAL ESTATE/FACILITIES COMMITTEE**

Committee Chair Johnson re-convened the committee meeting and asked Dr. Frank to address the program review for the academic and alumni spaces in the new stadium. Dr. Frank recounted that the Board at the May meeting authorized moving forward with discussions on adding academic space and the alumni center to the east side of the stadium facility based on favorable pricing.

Ms. Parsons reported the Facilities department and the campus architect then moved quickly to develop seven different programming options which were discussed with representatives from various campus constituency groups including the Faculty Council, ASCSU, Administrative Professional Council, Classified Personnel Council, administration, and several colleges and academic departments. There was general consensus in all groups that the space should be designed to meet the highest campus needs and be utilized to draw in numerous individuals from diverse populations.

The collective recommendation was to include the alumni center that will pay for the space out of existing operational revenue; eight flipped classrooms with a range of 28 to 120 seats; and the Center for Advising and Student Achievement (CASA) that is currently housed in two buildings. The relocation of CASA will assist with the process to vacate Aylesworth and provide additional space in the Institute for Teaching and Learning (TILT) building for the Resources for Disabled Students program. The additional space will allow for LEED certification for the stadium project and will be within the 15% enhancement allowed by statute with no additional state approval necessary.

Dr. Miranda, Governor Doherty and Governor Sydorik commented on the process that reflected shared governance in the decision-making process and expressed positive support for the final decision. In response to questions, Dr. Frank confirmed the alumni center would occupy approximately one-third of the space and it was made explicit in the discussions with the constituent groups that E&G funds under the debt service line of expenses would be committed for the academic portion of the project.

Deputy General Counsel Johnson read the matter for action to approve the program review for the alumni and academic space in the multipurpose stadium for \$18,500,000. **Motion/Action:** Governor Horrell moved to approve; Governor Flores seconded; and the motion carried unanimously.

## AUDIT AND FINANCE COMMITTEE

Vice Committee Chair Zimlich called the committee meeting to order and asked Mr. Schweigert to present the first agenda item.

*Approval of the FY 2016-17 State Funded Priority List, CSU and CSU-Pueblo 5-year Capital Construction Prioritization Lists, and the National Western 5-year List:* Mr. Schweigert explained the Board is required to annually approve the combined capital priority list that was developed in conjunction with both physical campuses for submission to the CCHE. The two highest priority projects are the final phase of the CSU chemistry building and phase II of the IT upgrades at CSU-Pueblo. With the state facing a TABOR-limited refund, there may not be funding available for capital projects.

A five-year capital construction budget request summary for CSU that includes the National Western Center (NWC) projects was provided. \$50 million of the \$250 million for the NWC authorized for state COP funding through HB 15-1344 would be split between three projects on the CSU campus. The first two projects – the Institute for Biological and Translational Therapies and the new equine veterinary teaching hospital – will largely be supported through private philanthropy.

When asked about the exclusion of the CSU-Pueblo student housing, the response was that the housing is through auxiliary funding and options to address the financial challenges will be presented at the August meeting.

Deputy General Counsel Johnson read the matter for action to approve the FY16-17 combined campus state priority list, the 5-year capital construction plan and the 5-year NW construction plan. **Motion/Action:** Governor Flores moves to approve; Governor Robbe Rhodes seconded; and the motion carried unanimously.

*CSU System Foundation Update:* Deputy General Counsel Johnson reported the foundation has been incorporated with approval of articles of incorporation, bylaws, officers and directors, and has received the employer identification number. Work continues on the operating agreement between the foundation and the CSU System. Next action items include filing the tax exempt application for the foundation, and finalizing and executing the IP transfer agreements from the System to the foundation to On-Campus Innovations. General Counsel Nosler will provide an update at the August meeting.

*CSU Treasury:* Deputy General Counsel Johnson reported the next step will be to formally charge an investment committee whose membership requires the Board Treasurer, one additional voluntary Board member, and three members from the community with financial experience. General Nosler will provide an update at the August meeting.

*Approval of Certain Tuition/Course Fee Charges:* Mr. Schweigert explained that, by CCHE policy, the Board is required to approve all fees. At the May meeting, the Board approved three new graduate program charges. Subsequently the determination was made that these charges should be tuition differentials, not program charges, so the fee schedule has been updated. A complete schedule of the fees was provided in the meeting materials. When asked for clarification on the difference between a charge and differential tuition, Dr. Miranda explained that program charges are an assessment for a student in a

program for a semester or academic year and differential tuition is tuition based on credit hour whether or not a student was in a specific degree program.

Deputy General Counsel Johnson read the matter for action to approve the CSU graduate program differential tuition and special course and program fees. **Motion/Action:** Governor Horrell moved to approve; Governor Johnson seconded; and the motion carried unanimously.

#### **CONSENT AGENDA**

Chair Mosher asked for a motion to approve the consent agenda. **Motion/Action:** Governor Gustafson made the motion; Governor Munn seconded; and the motion carried unanimously.

With no further business to come before the Board, the meeting was adjourned at 11:45 a.m.

The Board of Governors of the  
Colorado State University System  
Meeting Date: \_\_\_\_\_  
Consent Item

\_\_\_\_\_  
Approved

Stretch Goal or Strategic Initiative: N/A: Board approval of this administrative action is required by statute, CCHE, Board, or university policy.

**MATTERS FOR ACTION:**

CSU and CSU - Pueblo: Institutional Student Fee Plan and Policy

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the Institutional Student Fee Plan and Policy for Fiscal Year 2015-16, as follows for CSU and CSU-Pueblo.

FURTHER MOVED, that the Board of Governors approve establishing a cap of 18 credit hours as the maximum number of credit hours against which the University Facility Fee increase in FY15-16 of \$5.75/credit hour will be assessed for Professional Veterinary Medicine graduate students at CSU.

FURTHER MOVED, that the Board of Governors approve a fee waiver for CSU Professional Veterinary Medicine students participating in the Alaska 2+2 program.

EXPLANATION:

Presented by [Tony Frank, President] [Rick Miranda, Executive Vice President/Provost]

1. Institutional Fee Policy and Plan. In accordance with C.R.S. §23-5-119.5 and CCHE Policy VI-C-3.01, the Board is required to adopt a Student Fee Policy and to annually approve an Institutional Student Fee Plan. This document is organized according to the statutory requirements and provides all required information regarding Student Fees currently being charged, and to be charged in FY2016, by Colorado State University.
2. Professional Veterinary Medicine graduate students are required to take a course load of 24 credit hours per semester, a significantly higher load than for other programs. These students have requested that the FY15-16 incremental increase of \$5.75/credit hour for the University Facility Fee be assessed only as to the first 18 credits so as to more equitably compare to students in other disciplines. The University and the Student Fee Review Board support this request.
3. PVM students participating in the Alaska 2 + 2 Program will spend their first two years at the University of Alaska – Fairbanks and their third and fourth year at CSU. As these students will not be on campus, CVMBS is requesting that they be exempted from the following university fees assess to all PVM students: General fees, University Technology Fee, College Technology Fee, and University Facility Fee.

The Board of Governors of the  
Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

Stretch Goal: N/A

Strategic Initiative: N/A

**MATTERS FOR ACTION:**

Approval of Amendment to Board Policy 314, Approval of Degree Candidates (Posthumous degrees).

**RECOMMENDED ACTION:**

MOVED, that Board Policy 314, Approval of Degree Candidates at paragraph 3 is hereby amended to read:

3. "The Board approves in advance all degree candidates who meet the requirements of their respective institutions including posthumous degrees."

**EXPLANATION:**

Presented by Dr. Rick Miranda, System Academic Officer and Michael D. Nosler, General Counsel.

Pre-approval for posthumous degrees awarded by the institutions governed by the Board creates efficiencies in Board governance. Pursuant to Board Policy 100, the General Counsel is charged with the responsibility to periodically review and revise Board policies.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

Approval of Degree Candidates for Academic Year 2015-16

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the granting of specified degrees to those candidates fulfilling the requirements for their respective degrees at Colorado State University, Colorado State University – Pueblo, and Colorado State University – Global Campus at the end of the each cohort during the Academic Year 2015-16.

EXPLANATION:

Presented by Michael D. Nosler, General Counsel, and Dr. Rick Miranda, Chief Academic Officer, CSU System

Based on degree requirements established by their respective Faculties, and audited by their Registrars, each CSU System institution grants degrees periodically upon student completion of the various degree programs offered by the institutions. Pursuant to CRS 23-30-119 and in accordance with Policy 314, upon recommendation of the Academic Affairs Committee the Board approves all degree candidates for the institutions it governs at least annually.

Approval of Degree Candidates  
Academic Year 2015-16

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

2015-16 Academic Faculty and Administrative Professional Manual Revisions: Section D.2.1 – University Benefits Committee

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revisions to the Colorado State University Academic Faculty and Administrative Professional Manual, Section D.2.1 – University Benefits Committee

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

The proposed revision for the 2014-2015 edition of the Colorado State University Academic Faculty and Administrative Professional Manual had been adopted by the Colorado State University Faculty Council. A brief explanation for the revision follows:

With the support of Amy Parsons, Diana Prieto, APC chair, Toni-lee Viney, current and past UBC members; we feel members of this committee should serve 4 year terms. To serve effectively on this committee the member must spend much of his/her first year gaining a solid understanding of: self-funded medical care, fringe, state and federal regulations related to providing benefits, details of employee classifications at CSU, and understanding of how salary funding models can impact benefits for employees. Four years terms would support membership model allowing a “new” faculty an AP member each year since there are 4 each of those member types.

Our committee represents both Administrative Professionals and Faculty in regards to benefits offerings. It makes sense to add APC and FC membership to our group to ensure ongoing, regular communication among groups, and prevent overlap of effort by the different committees on benefits related issues.

Our committee has been “unofficially” referred to as the UBC (University Benefits Committee) for quite some time, so it seems logical to refer to us the way the campus community refers to us.

Board of Governors of the Colorado State University System  
 Meeting Date: August 7, 2015  
 Consent Item

NOTE: Revisions are noted in the following manner:  
 Additions - underlined Deletions - ~~overseored~~

**D.2.1 University Benefits Committee** *(last revised August 8, 2014)*

The University Benefits Committee (UBC) advises the University administration regarding benefit programs for faculty and administrative professionals. The ~~Benefits Committee~~ UBC consists of four (4) faculty members, four (4) administrative professional members, a one (1) retired faculty member or administrative professional member, and four (4) ex officio non-voting members: the Chair or Vice Chair of the Classified Personnel Council (CPC), as decided by the Chair of CPC, the Chair or Vice Chair of the Administrative Professional Council (APC), as decided by the Chair of APC; the Chair or Vice Chair of the Faculty Council (FC), as decided by the Chair of FC; and the Executive Director of Human Resources, as an ex officio non-voting member. At least one (1) representative of the faculty and one (1) representative of the administrative professionals shall be elected each year. Each representative on the ~~Benefits Committee~~ UBC shall serve a ~~three (3)~~ four (4) year term. ~~The retired faculty or administrative professional shall serve a three (3) year term and shall be appointed by the Provost, based on nominations from retirees.~~ Faculty members shall be nominated by the Faculty Council Committee on Faculty Governance who shall provide nominees for election by the Faculty Council. Administrative professionals shall be elected by the Administrative Professional Council. The retired faculty or administrative professional member shall be appointed by the Office of the Provost on the recommendation of the Society of Senior Scholars. Terms of office shall begin on July 1. The Chair of the ~~Benefits Committee~~ UBC shall present an annual report to Faculty Council and the Administrative Professional Council.



Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

2015-16 Academic Faculty and Administrative Professional Manual Revisions: Section F – Leave Policies

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revisions to the Colorado State University Academic Faculty and Administrative Professional Manual, Section F – Leave Policies.

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

The proposed revision for the 2014-2015 edition of the Colorado State University Academic Faculty and Administrative Professional Manual had been adopted by the Colorado State University Faculty Council. A brief explanation for the revision follows:

These changes are based on a recommendation from Robert Schur (Executive Director, Dept. of Policy, Risk & Environmental Programs) to separate Parental Leave from Catastrophic Leave in order to comply with federal guidelines for fringe reimbursement.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

2015-16 Academic Faculty and Administrative Professional Manual Revisions: Section I.15 – Responsibilities of Being a Student Group Advisor

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revisions to the Colorado State University Academic Faculty and Administrative Professional Manual, Section I.15 – Responsibilities of Being a Student Group Advisor.

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

The proposed revision for the 2014-2015 edition of the Colorado State University Academic Faculty and Administrative Professional Manual had been adopted by the Colorado State University Faculty Council. A brief explanation for the revision follows:

The added language provides clarification of the mutual agreement underpinning the selection and retention of a student group advisor.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

2015-16 Academic Faculty and Administrative Professional Manual Revisions:  
Appendix 1 – Discrimination, Harassment, Sexual Harassment, Sexual Misconduct,  
Domestic Violence, Dating Violence, Stalking, and Retaliation

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revisions to the Colorado State University Academic Faculty and Administrative Professional Manual, Appendix 1 – Discrimination, Harassment, Sexual Harassment, Sexual Misconduct, Domestic Violence, Dating Violence, Stalking, and Retaliation

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

The proposed revision for the 2014-2015 edition of the Colorado State University Academic Faculty and Administrative Professional Manual had been adopted by the Colorado State University Faculty Council. A brief explanation for the revision follows:

The changes are required for the university to be in compliance with Title IX federal regulations and accompanying guidance from the Department of Education, specifically, aligning definitions with the definitions provided in the guidance.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

Program Review Schedule

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the 2015-2016 program review schedule.

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

In accordance with University policy, as approved by the Board of Governors, every Department or instructional unit must undergo a program review at least once every six years. The following academic program review schedule for the academic year 2015-2016 is submitted for your approval:

College of Engineering

Atmospheric Sciences  
Chemical and Biological Engineering  
Civil and Environmental Engineering  
Electrical and Computer Engineering  
Mechanical Engineering

College of Health and Human Sciences

Construction Management  
Education  
Food Science and Human Nutrition  
Health and Exercise Science  
Human Development and Family Studies  
Occupational Therapy  
Social Work

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

College of Natural Sciences

Computer Science  
Statistics

Warner College of Natural Resources

Forestry and Rangeland Stewardship

Special Academic Units

Biomedical Engineering

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

MATTERS FOR ACTION:

Graduate Certificates

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the Graduate Certificates.

EXPLANATION:

Presented by Rick Miranda, Provost and Executive Vice President

In order to qualify for Title IV funding, graduate certificates awarded by Colorado State University must demonstrate approval by the Board of Governors, the Colorado Department of Higher Education and the Higher Learning Commission. The certificates listed here for which we are seeking approval have received approval from the University Curriculum Committee and the Faculty Council.

Board of Governors of the Colorado State University System  
Meeting Date: August 7, 2015  
Consent Item

**Graduate Certificates:**

**School of Education**

Evidence-Based Design – 9 credits

**College of Business**

Accounting Ethics and Auditing – 9 credits

Applied Finance – 11 credits

Business Information Systems – 9 credits

Business Intelligence – 9 credits

Information Technology (IT) Project Management – 9 credits

Marketing Management – 9 credits

**School of Social Work**

Advanced Clinical Behavioral Health – 9 credits

Pre K-12 School Social Worker – 9 credits

**Warner College of Natural Resources**

Ski Area Management – 12 credits

Board of Governors of the  
Colorado State University System  
Meeting Date: August 6-7, 2015  
Consent Item

MATTERS FOR ACTION:

Program Review Schedule

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve and forward to the Colorado Commission on Higher Education the following list of Colorado State University-Pueblo academic programs to be reviewed in academic year 2015-2016 in accordance with the approved Program Review Plan for the CSU System. The CSU-Pueblo program review calendar appears on the next page.

- Athletic Training (BS)
- Biochemistry (MS)
- Biology (MS)
- Chemistry (MS)
- History (MA)
- Mass Communications (BA/MS)
- Nursing (BSN and MS)

EXPLANATION:

Presented by Rick Kreminski, Provost and Executive Vice President for Academic Affairs, CSU-Pueblo.

The list above is in accordance with established review schedule 2015-2016 through 2019-2020 on the next page. To date, none of the programs have submitted formal requests with justification to the CSU-Pueblo Curriculum and Academic Programs Board (CAP Board) to delay their University program review to coincide with their disciplinary accreditation review. Should any delay requests be submitted, the CAP Board will respond to them in September and make recommendation to the President. We request that the Board delegate authority to President Lesley Di Mare to approve any 2015-2016 program review delays.

\_\_\_\_\_  
Approved

\_\_\_\_\_  
Denied

\_\_\_\_\_  
Board Secretary

\_\_\_\_\_  
Date



### Program Review Calendar

2015-2016	CEEPS: CHASS: CSM:	Nursing (BSN and MS), Athletic Training (BS) Mass Communications (BA/BS), History (MA) Chemistry (MS), Biology (MS), Biochemistry (MS)
2016-2017	CEEPS: CHASS: CSM:	Automotive Industry Management (BS), Construction Management (BS) Liberal Studies (BS), Social Work (BSW) Mathematics (BA/BS), Chemistry (BS)
2017-2018	CEEPS: CHASS: HSB:	Exercise Science and Health Promotion (BS) Political Science (BA/BS), Social Science (BA/BS), English (BA) Computer Information Systems (BS; includes joint BS-CIS/MBA)
2018-2019	CEEPS: CSM: CHASS:	Engineering (Mechatronics, BSE), Industrial Engineering (BSIE), Industrial & Systems Engineering (MS), Civil Engineering Technology (BSCET) Biology (BS), Physics (BS) Art (BA/BFA), History (BA/BS), Psychology (BA/BS), English (MA)
2019-2020	CHASS: HSB:	Music (BA), Sociology (BA/BS), Foreign Languages (Spanish BA) Accounting (BSBA), Business Management (BSBA), Economics (BSBA), Master of Business Administration (MBA, including joint BSBA/MBA)

#### Abbreviations

CEEPS:	College of Education, Engineering and Professional Studies
CHASS:	College of Humanities and Social Sciences
CSM:	College of Science and Mathematics
HSB:	Hasan School of Business

Board of Governors of the  
Colorado State University System  
Meeting Date: August 6-7, 2015  
Consent Item

MATTERS FOR CONSENT:

Colorado State University-Pueblo: Posthumous Degree Candidate

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the presented candidate to receive a Bachelor of Arts degree for her major in Sociology, minor in Psychology, posthumously. The posthumous degree is to be conferred at the end of the summer 2015 term.

EXPLANATION:

Presented by Rick Kreminski, Provost and Executive Vice President for Academic Affairs, CSU-Pueblo.

In May 2005, the Board of Governors approved the policy stating that “In exceptional circumstances, the Board may award degrees posthumously. Recommendations for such an award will only be considered when the student had completed nearly all of the requirements for his or her degree before dying, and when the student’s academic record clearly indicates that the degree would have been successfully completed had death not intervened. Nominations for posthumous awards of degree will be initiated by the student’s department and approved internally by the relevant college dean and the Provost. The posthumous nature of the recommended degree award shall be made explicit when the recommendation is forwarded to the Board. The Provost’s office shall be responsible for presenting the degree to appropriate survivors.” The Board of Governors approved CSU-Pueblo’s Posthumous Degree Policy at the December 2011 meeting.

Board of Governors of the  
Colorado State University System  
Meeting Date: August 6-7, 2015  
Consent Item

MATTERS FOR CONSENT:

2015-2016 Faculty Handbook revision – section 1.2.6.4

RECOMMENDED ACTION:

MOVED, that the Board of Governors approve the proposed revision to the Colorado State University-Pueblo Faculty Handbook, section 1.2.6.4

EXPLANATION:

Presented by Rick Kreminski, Provost and Executive Vice President for Academic Affairs, CSU-Pueblo.

The proposed revision for the 2015-2016 edition of the CSU-Pueblo Faculty Handbook has been adopted by the CSU-Pueblo Faculty Senate. The request is to delete one line from the *ex officio*, non-voting membership of one faculty Board - the University no longer has an individual with the title of Dean of Graduate Studies and Research, hence the membership should no longer include that individual.

NOTE: Revisions are noted in the following manner:

Additions – underlined                      Deletions – ~~striketrough~~

**1.2.6.4 Graduate Studies Board** (revised July 2013)

a. Purpose:

To recommend to the Faculty Senate on matters of graduate program development, policies and standards.

b. Membership:

1. The Program Director of each approved graduate degree and consortium graduate program
2. Provost or Provost's representative.
3. One faculty senator (elected by Faculty Senate) to represent the Board on the Faculty Senate Executive Committee; a senator serving on the Board as a program director will be eligible to serve in this position. The term of office of the senator representing the Board on the Senate Executive Committee shall be for one-year.

~~4. The Dean of Graduate Studies and Research (ex officio, non-voting)~~

c. Duties/Procedures:

1. Convened by the Chair not fewer than twice each semester and otherwise as needed.
2. Oversees all graduate programs and courses. Recommends to the Faculty Senate on all academic or curricular

policy changes proposed by a graduate program, the program's electing unit, the University Administration or other sources. This includes all proposals, regardless of their origin, to modify existing language and/or to add new language pertaining to graduate studies in the University Catalog. Upon approval by Faculty Senate per the Voting Procedures in Section 1.1.2.5 (Article V, Section 8 of the Faculty Senate Constitution), the Board Chair is responsible for communicating the required Catalog changes to the office responsible for publication of the University Catalog. The Board Chair is further responsible for verifying that the necessary changes have been made in the subsequent edition of the University Catalog.

3. Performs other duties upon the request of the Executive Committee.

# Section 10

## *Faculty and Student Representative Reports*

Board of Governors of the  
Colorado State University System  
August 2015 Meeting  
CSU-Pueblo Faculty Report

## **COLORADO STATE UNIVERSITY-PUEBLO FACULTY REPORT**

**This report covers highlights since the May 2015 Board of Governors Meeting.**

Since the May Board of Governors meeting the 2015-2016 Colorado State University-Pueblo faculty senate has not met. The Faculty handbook allows for special meetings during the summer by the faculty senate executive committee on an as-needed basis. No special meetings were necessary during this time period. The first scheduled meeting of the full senate will take place during the convocation week for the fall 2015 semester. The faculty senate will meet with the faculty as a whole during the convocation week to discuss issues of importance and to seek issues the faculty would like to cover during the upcoming academic year. The results of that meeting will be the information used by the full senate at the senate retreat. The items will be discussed, prioritized and distributed to the appropriate committees of sub committees for attention.

Since the senate did not meet during the summer this report highlights a few of the major items to be carried over for consideration with the full senate and the accompanying sub-committees.

- Consideration of meeting dates (see below)
- Senate input and assistance on the university strategic plan
- Final exam schedule
- Revisit of the newly adopted academic calendar
- Senate input and assistance on the upcoming HLC –Higher learning Commission visit
- Information Technology issues

The following is a draft of the 2015-2016 Faculty Senate meetings.

**Colorado State University-Pueblo**  
**AY 2015-16 Faculty Senate Schedule**

Monday, August 17, 2015	1:00pm to 2:00pm (LARC 109)	Faculty Senate provide input to Senate 2015-16 action agenda
Wednesday, August 19, 2015	12:00pm to 2:45pm (LARC 109)	<b>Fall Retreat</b>
<b>Monday, September 7, 2015</b>	<b>3:30pm to 5:30pm (LARC 236)</b>	<b>Executive Committee Meeting</b>
Monday September 21, 2015	3:30pm to 5:30pm (OUC - Aspen Leaf Room*)	Faculty Senate Meeting
<b>Monday October 5, 2015</b>	<b>3:30pm to 5:30pm (LARC 236)</b>	<b>Executive Committee Meeting</b>
<b>Monday October 19, 2015</b>	3:30pm to 5:30pm (OUC - Aspen Leaf Room)	Faculty Senate Meeting
<b>Monday, November 2, 2015</b>	<b>3:30pm to 5:30pm (LARC 236)</b>	<b>Executive Committee Meeting</b>
Monday November 30, 2015	3:30pm to 5:30pm (OUC - Aspen Leaf Room)	Faculty Senate Meeting
<b>Monday December 7, 2015</b>	<b>3:30pm to 5:30pm (LARC 236)</b>	<b>Executive Committee Meeting</b>
<b>Monday January 18, 2016</b>	3:30pm to 5:30pm (OUC - Aspen Leaf Room)	Faculty Senate Meeting
<b>Monday February 1, 2016</b>	<b>3:30pm to 5:30pm (LARC 236)</b>	<b>Executive Committee Meeting</b>
Monday February 15, 2016	3:30pm to 5:30pm (OUC - Aspen Leaf Room)	Faculty Senate Meeting
<b>Monday March 7, 2016</b>	<b>3:30pm to 5:30pm (LARC 236)</b>	<b>Executive Committee Meeting</b>
Monday March 28, 2016	3:30pm to 5:30pm (OUC - Aspen Leaf Room)	Faculty Senate Meeting
<b>Monday April 11, 2016</b>	<b>3:30pm to 5:30pm (LARC 236)</b>	<b>Executive Committee Meeting</b>
Monday April 25, 2016	3:30pm to 5:30pm (OUC - Aspen Leaf Room)	<b>2015-2016 Faculty Senate (1<sup>st</sup> hour)</b> <b>2016-2017 Faculty Senate Meeting (2<sup>nd</sup> hour)</b>

Respectfully submitted by:

Michael A. Mincic, PLS, MEd  
Board of Governors Representative for the CSU-Pueblo Faculty Senate  
Chair of Engineering Technology, Construction and Automotive Industry Management  
Professor and Program Coordinator, Construction Management and Civil Engineering  
Technology  
Colorado State University-Pueblo  
719-549-2638



## **Board of Governors of the Colorado State University System**

Meeting Date: August 6-7, 2015

Report Item

### **Matters for Action**

Report Item. No action necessary.

### **Explanation**

Presented by Robert Deemer, Faculty Representative from CSU-Global.

Report to the Board of Governors to provide an overview of CSU-Global's faculty-training process through Faculty Certification Courses (FCC). These training classes are focused on continuously improving the instructional quality of the CSU-Global faculty, in so doing, enhancing the CSU-Global student learning experience.

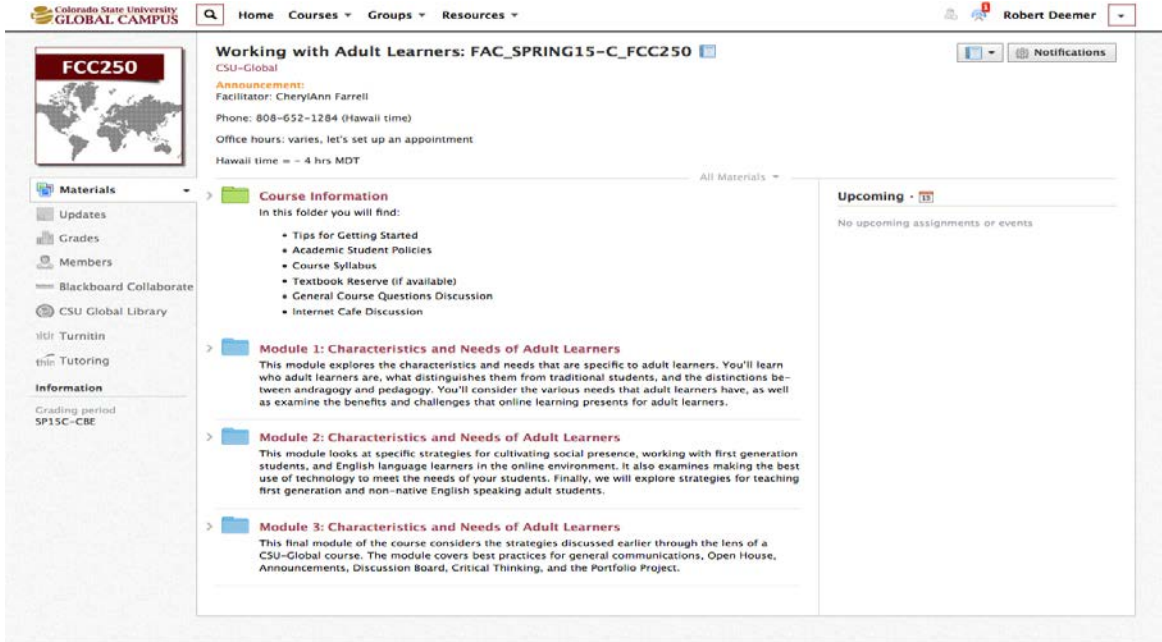
#### **FCC Course List**

CSU-Global offers nine training opportunity for faculty, each focused on specific areas of importance for the university including working with adult learners, utilizing technology, and engagement in an online learning environment. See the "Faculty Certificate Courses List" below for a complete list.



## Walk through of FCC250 — Working with Adult Learners

### 1. Class Overview Screenshot



Colorado State University GLOBAL CAMPUS

Home Courses Groups Resources

Robert Deemer

**FCC250**

**Working with Adult Learners: FAC\_SPRING15-C\_FCC250**

CSU-Global

**Announcement:**  
Facilitator: CherylAnn Farrell  
Phone: 808-652-1284 (Hawaii time)  
Office hours: varies, let's set up an appointment  
Hawaii time = - 4 hrs MDT

**Materials**

- Updates
- Grades
- Members
- Blackboard Collaborate
- CSU Global Library
- Turnitin
- Tutoring

**Information**

Grading period  
SP15C-CBE

**Course Information**

In this folder you will find:

- Tips for Getting Started
- Academic Student Policies
- Course Syllabus
- Textbook Reserve (if available)
- General Course Questions Discussion
- Internet Cafe Discussion

**Module 1: Characteristics and Needs of Adult Learners**

This module explores the characteristics and needs that are specific to adult learners. You'll learn who adult learners are, what distinguishes them from traditional students, and the distinctions between andragogy and pedagogy. You'll consider the various needs that adult learners have, as well as examine the benefits and challenges that online learning presents for adult learners.

**Module 2: Characteristics and Needs of Adult Learners**

This module looks at specific strategies for cultivating social presence, working with first generation students, and English language learners in the online environment. It also examines making the best use of technology to meet the needs of your students. Finally, we will explore strategies for teaching first generation and non-native English speaking adult students.

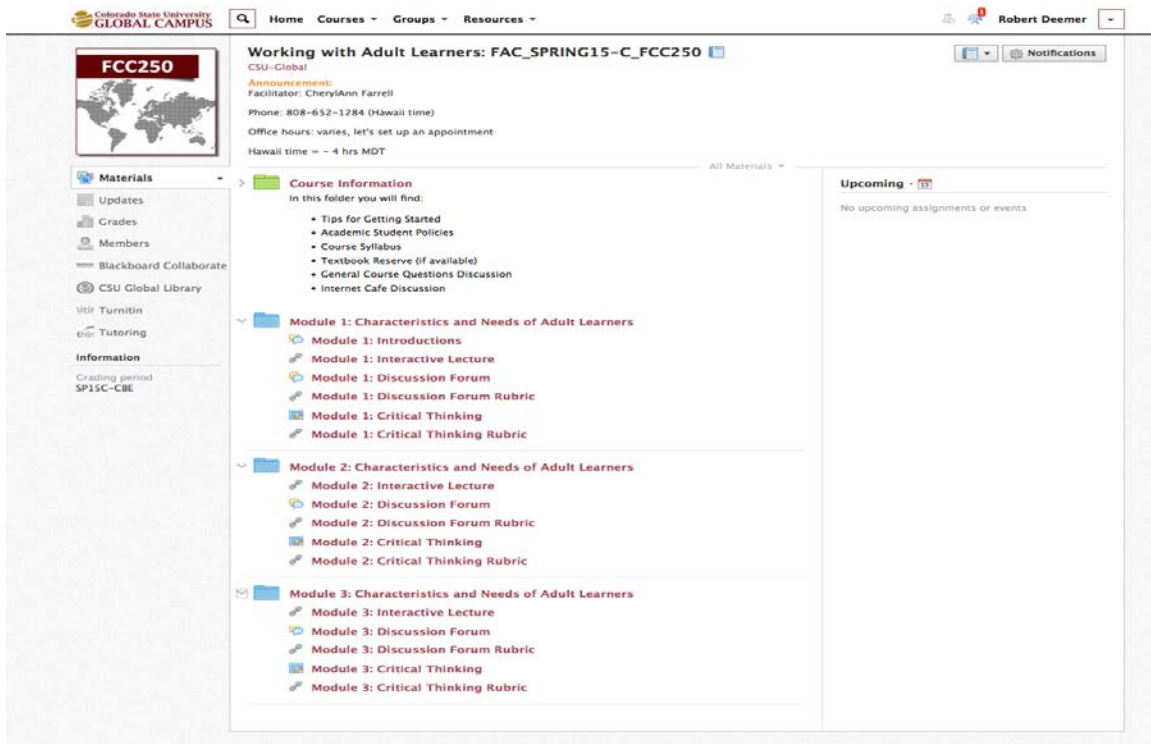
**Module 3: Characteristics and Needs of Adult Learners**

This final module of the course considers the strategies discussed earlier through the lens of a CSU-Global course. The module covers best practices for general communications, Open House, Announcements, Discussion Board, Critical Thinking, and the Portfolio Project.

**Upcoming**

No upcoming assignments or events

### 2. Class Portal Weekly Training Activity Screenshot



Colorado State University GLOBAL CAMPUS

Home Courses Groups Resources

Robert Deemer

**FCC250**

**Working with Adult Learners: FAC\_SPRING15-C\_FCC250**

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**Information**

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SP15C-CBE

**Course Information**

In this folder you will find:

- Tips for Getting Started
- Academic Student Policies
- Course Syllabus
- Textbook Reserve (if available)
- General Course Questions Discussion
- Internet Cafe Discussion

**Module 1: Characteristics and Needs of Adult Learners**

- Module 1: Introductions
- Module 1: Interactive Lecture
- Module 1: Discussion Forum
- Module 1: Discussion Forum Rubric
- Module 1: Critical Thinking
- Module 1: Critical Thinking Rubric

**Module 2: Characteristics and Needs of Adult Learners**

- Module 2: Interactive Lecture
- Module 2: Discussion Forum
- Module 2: Discussion Forum Rubric
- Module 2: Critical Thinking
- Module 2: Critical Thinking Rubric

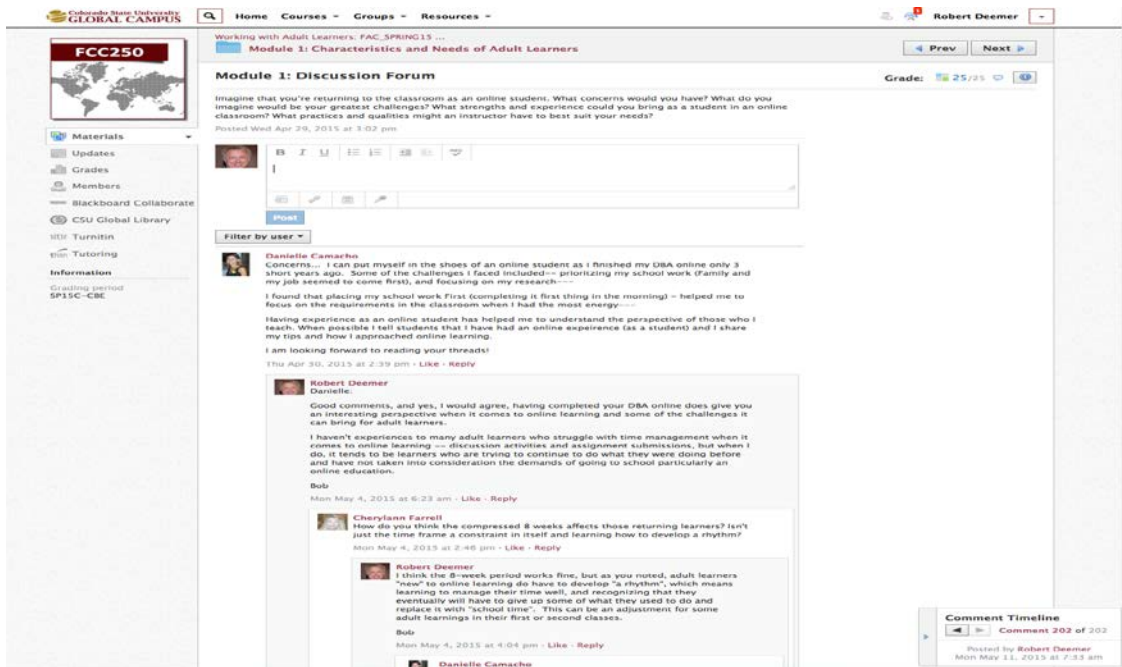
**Module 3: Characteristics and Needs of Adult Learners**

- Module 3: Interactive Lecture
- Module 3: Discussion Forum
- Module 3: Discussion Forum Rubric
- Module 3: Critical Thinking
- Module 3: Critical Thinking Rubric

**Upcoming**

No upcoming assignments or events

### 3. Class Portal Weekly Discussion Thread Screenshot



Working with Adult Learners: FAC, SPRING 15 ...  
Module 1: Characteristics and Needs of Adult Learners

**Module 1: Discussion Forum**

Grade: 25/25

Imagine that you're returning to the classroom as an online student. What concerns would you have? What do you imagine would be your greatest challenges? What strengths and experience could you bring as a student in an online classroom? What practices and qualities might an instructor have to best suit your needs?

Posted Wed Apr 29, 2015 at 3:02 pm

**Danielle Camacho**  
Danielle:  
I can put myself in the shoes of an online student as I finished my DBA online only 3 short years ago. Some of the challenges I faced included-- prioritizing my school work (Family and my job seemed to come first), and focusing on my research---  
I found that placing my school work first (completing it first thing in the morning) - helped me to focus on the requirements in the classroom when I had the most energy---  
Having experience as an online student has helped me to understand the perspective of those who I teach. When possible I tell students that I have had an online experience (as a student) and I share my tips and how I approached online learning.  
I am looking forward to reading your threads!  
Thu Apr 30, 2015 at 2:39 pm - Like - Reply

**Robert Deemer**  
Danielle:  
Good comments, and yes, I would agree, having completed your DBA online does give you an interesting perspective when it comes to online learning and some of the challenges it can bring for adult learners.  
I haven't experiences to many adult learners who struggle with time management when it comes to online learning -- discussion activities and assignment submissions, but when I do, it tends to be learners who are trying to continue to do what they were doing before and have not taken into consideration the demands of going to school particularly an online education.  
Bob  
Mon May 4, 2015 at 6:23 am - Like - Reply

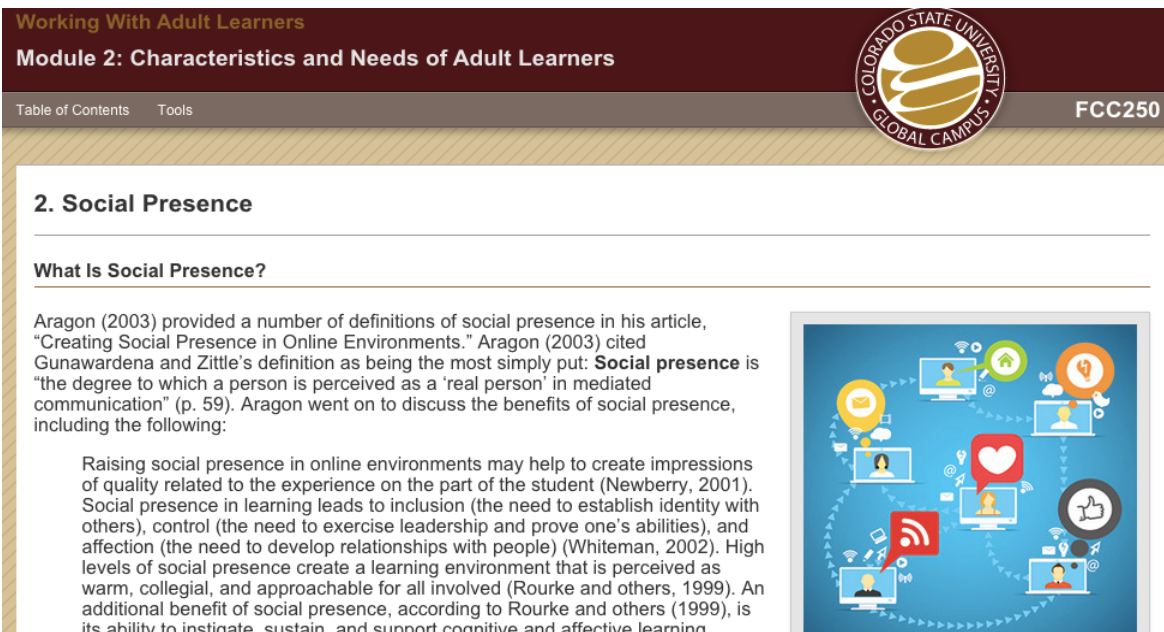
**Cherylann Farrell**  
How do you think the compressed 8 weeks affects those returning learners? Isn't just the time frame a constraint in itself and learning how to develop a rhythm?  
Mon May 4, 2015 at 2:46 pm - Like - Reply

**Robert Deemer**  
I think the 8-week period works fine, but as you noted, adult learners "have" to online learning do have to develop "a rhythm", which means learning to manage their time well, and recognizing that they eventually will have to give up some of what they used to do and replace it with "school time". This can be an adjustment for some adult learners in their first or second classes.  
Bob  
Mon May 4, 2015 at 4:04 pm - Like - Reply

**Danielle Camacho**  
The 8 weeks

**Comment Timeline**  
Comment 203 of 202  
Posted by Robert Deemer  
Mon May 11, 2015 at 7:33 am

### 4. Class Portal Weekly Study Material Screenshot



Working With Adult Learners  
Module 2: Characteristics and Needs of Adult Learners

Table of Contents Tools

Colorado State University  
GLOBAL CAMPUS


FCC250

## 2. Social Presence

### What Is Social Presence?

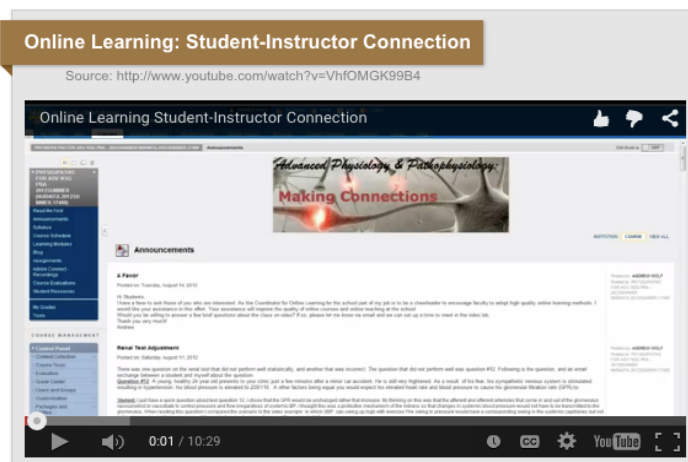
Aragon (2003) provided a number of definitions of social presence in his article, "Creating Social Presence in Online Environments." Aragon (2003) cited Gunawardena and Zittle's definition as being the most simply put: **Social presence** is "the degree to which a person is perceived as a 'real person' in mediated communication" (p. 59). Aragon went on to discuss the benefits of social presence, including the following:

Raising social presence in online environments may help to create impressions of quality related to the experience on the part of the student (Newberry, 2001). Social presence in learning leads to inclusion (the need to establish identity with others), control (the need to exercise leadership and prove one's abilities), and affection (the need to develop relationships with people) (Whiteman, 2002). High levels of social presence create a learning environment that is perceived as warm, collegial, and approachable for all involved (Rourke and others, 1999). An additional benefit of social presence, according to Rourke and others (1999), is its ability to instigate, sustain, and support cognitive and affective learning.



## 5. Class Portal Weekly Interactive Lecture Screenshot

Watch the following video to see how one online instructor creates a strong social presence in his online classroom with his students (keep in mind that each university has different required instructor presence policies, including those regarding social media usage; ensure you apply what you learn here to what CSU-Global expects and allows regarding instructor presence. Also, keep in mind that your CSU-Global courses are already developed for you, so you will not be creating course content to establish social presence; rather, you could apply these principles in your class where allowable, such as in weekly announcements and grading feedback):





### Faculty Certification Courses List

Title	Description	Time	Stipend
<b>FCC100</b>	<b>CSU-Global Candidate Faculty Onboarding</b> In FCC100, faculty candidates learn the policies and protocols associated with being a member of CSU-Global's esteemed faculty. Candidates learn about the mission and vision of the university, and complete tasks and engage in discussions that prepare them to teach at CSU-Global. Completion of this onboarding course does not guarantee employment or course scheduling.	<b>1 week</b>	<b>N/A</b>
<b>FCC200</b>	<b>Assessing with Impact</b> In FCC200, CSU-Global faculty members discuss the art of impactful assessment. Participants complete tasks and engage in discussions that require critical thinking around feedback strategies and grade inflation. Participants also gain skills in using the CSU-Global rubric system effectively and efficiently.	<b>3 weeks</b>	<b>\$100</b>
<b>FCC250</b>	<b>Working with Adult Learners</b> In FCC250, CSU-Global faculty members explore the types of students that CSU-Global serves. Participants identify the differences between traditional students and adult learners, identify strategies that facilitate adult learning, and analyze the role of technology in online course delivery for adult learners. These concepts are presented and analyzed through the lens of best practices as they relate to CSU-Global instruction and policy.	<b>3 weeks</b>	<b>\$100</b>
<b>FCC300</b>	<b>Enhanced Instructional Technology</b> In FCC300, CSU-Global faculty members learn instructional strategies related to technology integration, especially as it applies to the university's learning management system. Participants learn and demonstrate technology integration skills that will help them enhance their course facilitation, feedback, and student engagement.	<b>3 weeks</b>	<b>\$100</b>
<b>FCC350</b>	<b>The International Student</b> In FCC350, CSU-Global faculty members discuss the cultural differences encountered when working with international students in the Western classroom and identify strategies that will facilitate student engagement and success in the online environment.	<b>3 weeks</b>	<b>\$100</b>



Colorado State University  
GLOBAL CAMPUS

<b>FCC400</b>	<p><b>Information Literacy in the Classroom</b> In FCC400, CSU-Global faculty members examine the role of scholarship in instruction. Participants consider perspectives in research and information literacy as they relate to a variety of academic disciplines. Participants also learn ways to effectively navigate and integrate the CSU-Global Library into their course facilitation. Finally, participants review APA citation skills and how to ensure a consistent application of APA assessment in student grading and feedback practices. This course also discusses the importance of helping students understand the intentional and critical use of research in addition to citation mechanics.</p>	<b>3 weeks</b>	<b>\$100</b>
<b>FCC450</b>	<p><b>Facilitating Discussions in an Online Classroom</b> In FCC450, information and resources related to facilitating online discussions is presented. Strategies to increase engagement and participation as well as tools to use to facilitate discussions are reviewed.</p>	<b>3 weeks</b>	<b>\$100</b>
<b>FCC500</b>	<p><b>Recognizing, Reporting, and Helping Students Avoid Plagiarism</b> In FCC500, the CSU-Global policy for reporting plagiarism and strategies to help students understand and avoid plagiarism are reviewed. The student alert system and student success issues are presented.</p>	<b>3 weeks</b>	<b>\$100</b>
<b>FCC550</b>	<p><b>Achieving Classroom Excellence</b> A critical analysis of your own instructional practices as well as a review of the most effective online teaching and engagement strategies is discussed through the lens of attitude, communication, and excellence.</p>	<b>3 weeks</b>	<b>\$100</b>

**Report by the Faculty Representative from CSU – Fort Collins to the Board of Governors****August 6-7, 2015, Pueblo, CO.**

Summary of the May 5, 2015 Faculty Council Meeting (full meeting minutes can be found on the CSU Faculty Council web site).

**1.) Announcements**

- a. Anne Byrne (President of the Graduate Student Council) presented the new Graduate Advising and Mentorship Award to Scott Nissen (Bioagricultural Sciences and Pest Management), Cameron Aldridge (Ecosystem Science and Sustainability) and Susan van den Heever (Atmospheric Science).

**2.) Unfinished Business**

- a. Faculty elections to fill Standing Committees (Committee on Scholastic Standards, Committee on Faculty Governance, Committee on University Programs, Committee on Responsibilities and Standing of Academic Faculty, University Curriculum Committee, Committee on Strategic and Financial Planning) as well as the University Discipline Panel and University Grievance Panel occurred.

**3.) Reports**

- a. Provost/Executive Vice President Rick Miranda

Miranda reported that enrollment is up and that the university will have the largest and most diverse class in CSU history. Increased enrollment leads to challenges that CSU will continue to manage. Miranda reported that CCHE has been discussing what types of courses and experience should be accepted as prior knowledge (i.e., Prior Learning Assessment) and asked for feedback. Miranda and faculty discussed the recent impasse in the Faculty Council Executive Committee, the state of shared governance, and how to move forward. Miranda present actions he would like to take to strengthen shared governance, and talked about the need for faculty to be recognized for their service to Faculty Council, plans to add faculty, staff and student representation on all SPARCS, and faculty involvement in long-term budget planning. Miranda, Stromberger (Faculty Council Chair), and others will be working on ideas and initiatives this summer. Miranda reported on a mistake that was made with the annual salary exercise, in which gender was included as a variable in the annual salary exercise. The mistake was discovered by Professor Mary Meyer, Dept. of Statistics, and corrected. Miranda apologized, and outlined strategies (e.g., external review, internal review, better communication/engagement) that will be implemented to prevent this from happening again.

- b. Vice President for Research Alan Rudolph

Rudolph reported that 1/3 of the university budget comes from research. Interdisciplinary work will be a continued theme. The Graduate Show had ~300 presentations this year and we can continue to improve our graduate programs. Substantive investment in our core facilities is needed. Metrics on research productivity (e.g., publications) are hard to collate and CSU is going to implement a tracking system (Digital Measures) to help collect such data and analytics.

- c. Faculty Council Chair – Mary Stromberger

Stromberger reported that temporary replacements to Faculty Council Executive Committee had been elected; that the Faculty Council web site is being updated and that the Faculty Ombuds committee will be developing a job description. Meetings with Library staff about the cost of serial subscriptions, open access text books, and copyright issues also have recently occurred.

- d. Board of Governors Faculty Representative – Alexandra Bernasek  
Bernasek reported that the BOG will be meeting on campus and submitted her written report to the BOG. The written report summarizing the last two Faculty Council meetings. Bernasek congratulated Stephanie Clemons, chair of Committee on Teaching and Learning, who recently received the Board of Governors Excellence in Undergraduate Education award. Bernasek noted this will be her last meeting as BOG representative.

#### 4.) Action Items

- a. Faculty Council approved the minutes of 4 University Curriculum Committee meetings.
- b. Proposed revisions to the Graduate and Professional Bulletin Section E.1.1 Graduate Study Advisory System were approved. The revisions clarify that no committee is required for Master's Plan C programs.
- c. Proposed revisions to the General Catalog Fresh Start Policy were approved. The revision allows the Fresh Start policy to be granted after a student has been gone for at least 2 years rather than 5 years.
- d. Faculty Council approved the following changes to the Academic Faculty and Administrative Professional Manual:
  - i. Section I.15 Responsibilities of Being a Student Group Advisor (specifies that these mutual agreements are binding for the academic year).
  - ii. Section F.3.16 Parental Leave and Catastrophic Circumstances Leave (catastrophic leave is separated from parental leave and placed in a new Section 3.17, to reflect that the fringe paid for each leave type comes from different sources).
  - iii. Appendix I (to comply with new federal regulations and guidance from the Department of Education).
- e. Faculty Council approved requests to add minimum grade requirements for the Gerontology Interdisciplinary Minor, Addictions Counseling concentration in the Psychology major, and Human Development and Family Studies concentrations.
- f. Proposed revisions to the General Catalog Enrollment Status were approved, with an amendment to specify that graduate students taking 4 or less credits are classified as less than half-time. The revisions change the number of credit hours that classify students as full or part-time during the summer session, to be in compliance with federal student aid regulations.
- g. Faculty Council approved a position statement on Shared Governance by a vote of 24-16. The statement calls on administration and faculty to work together to develop processes to increase faculty involvement in decision-making. It also calls for greater recognition of faculty for University service and better communication between administration and faculty.

Summary of the May 12, 2015 Faculty Council Executive Meeting. At the last meeting of the year Executive Committee sometimes acts for Faculty Council.

- 1) Actions taken by the Faculty Council Executive Committee on behalf of Faculty Council
  - a. Approved University Curriculum Committee minutes for April 24 and May 1, 2015.
  - b. Approved revision to Manual Section D.2.1 Benefits Committee to extend terms from 3 to 4 years to improve continuity in committee membership.
- 2) Discussion Items
  - a. Online Plus name change. Mike Palmquist (Associate Provost for Instructional Innovation) explained the desire to change the branding name from Online Plus to CSU Online. Executive Committee supported the name change.
  - b. Academic space build-out in the on-campus stadium. President Frank and members from the Committee on Strategic and Financial Planning, Administrative Professional Council officers, Classified Personnel Council officers, ASCSU officers, the faculty representative to the Board of Governors, and Vice President Amy Parsons were among the guests invited to the Executive Committee to discuss this topic. Frank presented the pros and cons and why the decision needed to be made quickly. A long discussion occurred. An informal straw vote suggested the group was in support of funding academic space and creating space that a large number of people could use.

#### Other Faculty Council News

- 1) Chair Stromberger, Provost Miranda, and Vice-Provost Dan Bush are establishing a task force and procedures to review salaries of women full professors, and another task force with internal and external constituents to examine salary equity issues, best practices, and to develop an equitable and fair salary model moving forward.
- 2) Chair Stromberger and Provost Miranda have been meeting ~weekly during the summer to work on strategies to strengthen shared governance. Starting in the fall, an investigation about how faculty are recognized for institutional and departmental service will occur by reviewing codes and possibly recommending Manual revisions. Faculty will be appointed to each SPARC (Strategic Planning and Area Review Committee) so that faculty are included in longer-term budgetary planning decisions.
- 3) During the upcoming year, Faculty Council will discuss the current structure of standing committees to determine if the current committee structure is adequate for being fully engaged in strategic and financial planning.
- 4) Revisions of the anti-bullying policy are being reviewed.

Respectfully submitted by Dr. Paul Doherty, CSU Faculty Representative to the Board of Governors.





# Colorado State University-Pueblo Student Representative's Report

**Associated Students' Government President Sarah Zarr**  
**August 2015**

## General Statement

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This year ASG is focused on being an advocate for the students. We want to inspire action, encourage people, give people new experiences and insight, be bold and courageous, support students, be consistent, collaborate, and empower students to be the best they can be. We want to be a voice for students where they don't get one otherwise and advocate to create a university that is full of engaged students and a strong community. We want to help students see all the opportunities they have at CSU-Pueblo and get them involved. We want all students to have a space that they can be their unique self and use their extraordinary talent we know they have. We want to create an ASG that is respected, professional, fun, collaborative, friendly, hardworking, action-oriented, consistent, and that empowers the student body. Following our new motto, we want to make CSU-Pueblo legendary and give students a legendary experience at college!

**ASG's Mission:** The Associated Students' Government of CSU-Pueblo is dedicated to advocating for students and voicing their concerns. Thus, bridging the gap between faculty, administration, staff, and the students of CSU-Pueblo. We will enhance and encourage a productive and dynamic learning environment for our students. It is our mission as representatives for the student body to create an exceptional collegiate atmosphere to help our students establish a strong, personal, and professional foundation that will propel them into a successful career.

## **Campus and Student Initiatives and Projects**

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### **Student Emergency Fund**

Last year I began the Student Emergency Fund project with the help of last year's administration and am working on getting the fund functioning this year. The Student Emergency fund is a fund for students to apply for when they experience hardships and emergencies and therefore need financial support. The fund will cover vehicle accidents, hospital bills, funerals, trips home for family emergencies and deaths, and other emergencies that could keep a student from being able to stay at CSU-Pueblo or that would inhibit their success as a student. The fund will be raised by corporate underwriters, donors, faculty, staff, parents and students. The funds will come primarily through donations from other students. The fund is about students helping their fellow students. Therefore not only will the fund be helping hurting students, it will also be creating community, promote kindness, and encourage generosity and philanthropy at CSU-Pueblo. We will be setting up an approval committee for the fund and getting the application online by the first week of classes. We hope to raise money for the Student Emergency Fund through doing a "Change Round Up" at all food locations and the CSU-Pueblo bookstore. Our goal is to raise \$4,700 which comes out to every student giving one dollar.

### **Student Bill of Rights and Student Handbook**

In order to help students know all that is available to them and what their rights are, we are assisting the Dean of Students in developing a Student Handbook . ASG would like to develop a Student Bill of Rights, so they are informed what the processes and procedures are for anything they may encounter. We are also looking at other ways we can help students know the resources that they have.

### **Technology**

Student's number one complaint is that they do not have the technology they need and want at CSU-Pueblo. Even getting a Wifi connection in some areas is difficult. Though we made some headway on this issue last year, we still have a long way to go. So far, we have already voted to allocate student fees to fix the Wi-Fi in two of our four residence halls and hope to fix all three of the newer residence halls by the end of our term. We want to make sure that students can do their homework in the library, video call with their parents in the residence halls, and learn with the newest technology, so they are prepared to enter our advancing technological society.

### **Dean's Advisory Councils**

Another task we are finishing from last year is to set up Dean's Advisory Councils (DAC) for each of the four colleges. Three of the four colleges have DAC's set up now, so we will get the last one set up. We will make sure each one has a mission statement, bylaws, and a clear plan.

### **President's Council**

This fall I will be setting up a President's Council of all of the Student Organizations on campus led by the ASG President with the intent to make sure they have support and help and in order to collaborate with other student leaders. This will help Student Organizations be held accountable and will help us to not repeat events and projects on campus but to collaborate instead. This is just one of several ideas that we would like to implement in order to increase Student Organization involvement and overall engagement on campus.

### **Co-Curricular Transcripts**

Something we would like to work on is getting Co-curricular transcripts for students. Through our Student Organization and Event website, we have a way to make them, so ASG would like to raise awareness about this and make it more of a staple that students graduate with not only their academic transcript but their co-curricular transcript. We hope this will help stress the importance of getting involved and help students in their futures.

### **Frequent Flyer Miles Donation Site**

There are so many professional development opportunities that students could attend with either their student organization, their field of study, or for leadership experience, but getting students there is the hard part. We would like to start a fund or a site that helps student be able to attend these opportunities. One of the ways we would like to do this is by starting a site that people can donate their Flyer miles to so that student s have a way to get there. We will also be looking at doing the same thing with hotel points and etcetera. This is a new idea, so we do not know yet how we will develop this, but we know we want to work on getting students more opportunities to travel and to develop professionally.

### **It's On Us and Step Up**

We are going to continue the Step Up campaign that was started last year, which teaches students bystander intervention training, how to step up, and help people and do random acts of kindness. All of ASG is required to go through bystander intervention training, and we will be helping facilitate trainings for other student organizations and athletes. We are also looking into giving students bracelets that they then pass on each time they see someone doing a random act of kindness. To go along with Step Up we would like to further develop the It's On Us campaign to teach others about sexual assault prevention and to further define our campuses Title IX and Sexual Assault policies and procedures. We are looking at writing a definition of consent and doing support events for survivors.

### **Dining Services**

We want to continue making sure that our students have a variety of healthy food options on campus since this is a vital part of everyday life. We will continue to work with Chartwells to make sure they know what the students want.

### **Free Textbook Resources**

Last year, one of ASG's directors started a project to make available free textbooks for students through using online sources. A lot of research and planning was done and now we have to take the next step to get faculty on board and to work out the logistics of this initiative. The goal with this project is to help cut down on extra costs for students. Students spend upwards of \$800 a semester on textbooks that they sometimes only need once or twice which is why we hope to encourage professors to see if they can get the same material online or at a cheaper cost. In addition, to getting free online resources we are looking into starting a committee of students and faculty that assess if a textbook is really needed in a class or looks for cheaper ways to get the same information.

### **Sustainability Task Force**

CSU-Pueblo recently added a sustainability minor. After we attended the Youth Climate Summit in D.C, we want to work on making CSU-Pueblo more sustainable. We plan to do this by creating a Task Force with ASG members and the Sustainability Minors to raise awareness and work on projects that makes CSU-Pueblo and the students conscious about sustainability.

## **External Initiatives and Projects**

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### **Student Discount Program**

Last year's administration worked on growing the Student Discount Program and gave us a great start to really build on it this year. Our goal is to have 50 businesses signed up for the Student Discount Program by the end of our term, May 1<sup>st</sup>. We are going to do this through having all of the ASG members get at least one business to sign up and through working with the Pueblo Chamber of Commerce, Latino Chamber, and Pueblo Downtown Association. To make sure students are aware of the discounts, we will be raising awareness by putting up posters, handing out flyers, asking businesses to come and table with ASG on campus, and etcetera. We will also be working with the Alumni Association to make the Alumni and Student Discount program interchangeable and to create one logo for businesses to put in their doorway. We hope to accomplish several things with the program including helping students with their financial burden, getting students involved in the Pueblo community, supporting local businesses, encouraging Pueblo to support CSU-Pueblo more, and make the student experience complete by giving them things to do in Pueblo.

## **Pueblo Community Involvement**

One thing that is lacking in the CSU-Pueblo college experience is the “college town experience” and involvement within their home for four years. We want to get the Pueblo community more engaged with CSU-Pueblo and the students more engaged with Pueblo. We are planning to do this through increasing the Student Discounts offered and raising awareness about the discounts, getting students involved in volunteer opportunities in Pueblo, buying tickets to CSU-Pueblo athletic events and raffling them off in the community, and hosting some ASG events off campus for students. We are also looking at other ideas to accomplish this goal.

## **National Campus Leadership Council (NCLC) Presidential Summit**

This year myself and my Vice President got to represent CSU-Pueblo at the National Campus Leadership Council Presidential Summit. We got to meet top white house staff, network with several agencies, learn about issues facing college campuses, and connect with student body presidents from all over the nation. This was a great conference not only because we learned a lot and brought back a ton of ideas for our campus, but also because we got to represent CSU-Pueblo and show people what we are about.

## **Internal Initiatives and Projects**

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### **ASG Image and Awareness Building**

Last year’s administration began the process of making the Student Body aware of Associated Students’ Government and what we do for the students and what they can come to us with. They also worked on building a positive image and brand recognition for Associated Students’ Government. We are continuing this by making sure the student representatives are recognizable on campus through banners, brochures, and etcetera, through marketing, through utilizing social media and building our social media platform, and getting the ASG website on the regular CSU-Pueblo website. There are several things we are doing this year so that students know who to go to, to make change happen, are confident in who is representing them, and feel supported.

### **ASG Restructure**

Last year we restructured some of the positions in ASG to allow more money in our budget to do student focused projects and to give the students in ASG more purpose in their positions. We cut two Senators from our legislative branch and we cut two Director Positions from the Executive branch and added a Chief of Staff. These positions are working out well so far and we are excited to see what the Senators are able to do with a budget for projects.

### **Judicial Branch Restructure**

This summer we have been working with our Student Judicial Affairs Director to make our ASG Judicial Branch more relevant and helpful to the students. This includes making some of the Judicial Branch advocates for students going through the judicial or appeals process, to help them write their appeals and know what they should expect. We are also creating a Judicial Board that ASG members can appeal to for pay percentages, misconduct, and etcetera. In addition the Student Judicial Affairs Director is setting up an Academic Misconduct board that the Judicial Branch will sit and vote on.

### **New ASG Positions**

This year we will be adding Legislative Aids and Cabinet Aids to our Associated Students' Government. These will be volunteer positions made up of mostly freshmen students and will help the Senators and Executives with their work and help with projects. This will help to create knowledgeable students ready to run for a position in ASG the following year and will get freshmen involved with ASG which will bring us a new and needed perspective. It will also give the Senators help with their projects to make sure things get done.

### **ASG Open Forums**

This year we will be having monthly open forums for students to come to ASG with questions, concerns, and ideas. This will help us to be transparent and to get information out there as well as build a relationship with our student body so we can represent them to the best of our ability.

### **ASG Retention, Culture, and Traditions**

Our Student government has had a problem with students dropping out of their roles and having to constantly rehire new representatives, which ruins the integrity of an elected representative and makes it hard to get things done. This year we are working on several ways to retain our members including giving them specific duties and roles, making sure they are fully trained and aware by holding a three day retreat, offering incentives, giving them a place within the office that they can call their own, and giving them recognition on campus. We are trying to build culture and traditions within our ASG that we are lacking that other student governments have. We want to make sure that ASG is a strong organization for the future so new administrations can stop starting over and move forward. We have been planning an extensive retreat that will be August 10<sup>th</sup>-12<sup>th</sup> that will hopefully launch us into a very successful year.

## Closing Statement

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This is just the beginning of the plans that the 2015-2016 ASG has and we are anxious to see our plans come to fruition. Our next step is our ASG retreat in August and from there we will begin or continue work on all of these plans. We are committed to the students we serve and hope to help make their college experience even better. Please do not hesitate to contact me with any questions, concerns, ideas, or for more information at [president.asg@csupueblo.edu](mailto:president.asg@csupueblo.edu) or 719-549-2773.

*“Great leaders don’t set out to be a leader; they set out to make a difference. It’s never about the role—always about the goal.”*

Board of Governors to the  
Colorado State University System  
August 7<sup>th</sup>, 2015  
Student Report

#### 2015 Commencement:

On June 20<sup>th</sup>, 2015 Colorado State University Global Campus held graduation for the Class of 2015. The commencement ceremony was held at the Bellco Theater in Downtown Denver. This was the first year that the commencement has been broadcasted live over the internet enabling students or family members that could not attend to watch the ceremony live. The commencement address was delivered by faculty member Dr. Jimmie Flores whom has extensive experience developing and teaching courses in the disciplines of Project Management. The student speaker was Mr. Jason Hotch whom received his B.S. in Business Management from Joshua Tree, CA. Please see the attached demographic breakdown of the students that received degrees in the 2014-2015 school year. A summary of these demographics is as follows:

- Total awarded Bachelor degrees in 2014-2015 year: 1,333
- Total awarded Master degrees in 2014-2015 year: 496
- Total number of graduates that attended the ceremony in person: 585
- Total number of graduates that attended the ceremony virtually: 124
- Total attendance of graduation in person: Approximately 5,000
- Total attendance of graduation virtually: 317
- Percent of graduates with military affiliation: 18.7%

#### In the news:

CSU Global has been ranked #6 by U.S. News & World for best online bachelor's programs for veterans. Along with that, the university was ranked in the top 50 for best online graduate business programs for veterans and top 100 for best online graduate education programs for veterans. CSU-Global was also selected as a top school by Military Advanced Education Magazine for 2015. CSU-Global is recognized as a military friendly university as it offers its active service members, veterans and their families many forms of military education assistance, military scholarships and they can receive credit for military experience towards their degree.

Respectfully,



Megan Schulze

Student Representative  
Colorado State University Global Campus



## Demographics of 2014-2015 CSU-Global Graduates

Degree Level	Count	Percent
Bachelor	1,333	72.9%
Master	496	27.1%
Grand Total	1,829	100.0%

Program	Count	Percent
<b>Bachelor of Science</b>	<b>1,333</b>	<b>72.9%</b>
BS - Accounting	143	7.8%
BS - Applied Social Sciences	86	4.7%
BS - Business Management	426	23.3%
BS - Communication	53	2.9%
BS - Criminal Justice and Law Enforcement Administration	29	1.6%
BS - Healthcare Administration and Management	97	5.3%
BS - Human Resource Management	17	0.9%
BS - Human Services	8	0.4%
BS - Information Technology	224	12.2%
BS - Interdisciplinary Professional Studies	7	0.4%
BS - Management Information Systems and Business Analytics	5	0.3%
BS - Marketing	52	2.8%
BS - Organizational Leadership	112	6.1%
BS - Project Management	41	2.2%
BS - Public Management	33	1.8%
<b>Master</b>	<b>496</b>	<b>27.1%</b>
Master - Criminal Justice and Law Enforcement Administration	17	0.9%
Master - Finance	6	0.3%
Master - Healthcare Administration and Management	92	5.0%
Master - Human Resource Management	1	0.1%
Master - Information Technology Management	9	0.5%
Master - International Management	4	0.2%
Master - Project Management	12	0.7%
MS - Management	105	5.7%
MS - Organizational Leadership	188	10.3%
MS - Teaching and Learning	62	3.4%
<b>Grand Total</b>	<b>1,829</b>	<b>100.0%</b>

Average Age	
Bachelor	35.1
Master	37.0
Grand Total	35.6

Data above reflect students with graduation dates of July 1, 2014 through June 30, 2015

## Demographics of 2014-2015 CSU-Global Graduates

Gender	Female		Male		Total	
	Count	Percent	Count	Percent	Count	Percent
Bachelor	657	50.2%	653	49.8%	1,310	100.0%
Master	288	60.4%	189	39.6%	477	100.0%
Grand Total	945	52.9%	842	47.1%	1,787	100.0%

First Generation Students	Count	Percent
Bachelor	489	36.7%
Master	173	34.9%
Total	662	36.2%

Marital Status	Divorced		Married		Separated		Single		Unknown		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Bachelor	94	7.1%	701	52.6%	12	0.9%	455	34.1%	71	5.3%	1,333	100.0%
Master	37	7.5%	274	55.2%	8	1.6%	144	29.0%	33	6.7%	496	100.0%
Grand Total	131	7.2%	975	53.3%	20	1.1%	599	32.8%	104	5.7%	1,829	100.0%

Military Affiliation	Active/Guard/Reserve		Veteran		Spouse/Dep		No Military Affiliation		Total	
	N	%	N	%	N	%	N	%	N	%
Bachelor	64	4.8%	150	11.3%	37	2.8%	1,082	81.2%	1,333	100.0%
Master	31	6.3%	46	9.3%	15	3.0%	404	81.5%	496	100.0%
Grand Total	95	5.2%	196	10.7%	52	2.8%	1,486	81.2%	1,829	100.0%

- 18.7% total any Military affiliation across all graduates

Residency	In Colorado		Outside of CO		Total	
	Count	Percent	Count	Percent	Count	Percent
Bachelor	651	48.8%	682	51.2%	1,333	100.0%
Master	267	53.8%	229	46.2%	496	100.0%
Grand Total	918	50.2%	911	49.8%	1,829	100.0%

# 2015 Commencement Ceremony









## **COLORADO STATE UNIVERSITY**

Jason Sydoriak – Student Representative

### **Citizen Review Board**

ASCSU is pursuing the feasibility and necessity of having a nonbinding civilian oversight board for the police department here on campus. It would closely mimic the board that oversees the Fort Collins Police Department. It would help preserve the dignity of complainants while also providing closure and citizen support for officers who have conducted themselves appropriately. No particular incident between an individual and the police department has brought this issue to the institutional agenda; however, being that this institution is a progressive one pushing the envelope of society and that the Fort Collins Police Department are extremely pleased with their board I believe that this would be a worthwhile cause. A policy proposal can be provided for further discussion.

### **Rocky Mountain Student Media Corporation Contract**

A new contract with the Rocky Mountain Student Media Corporation was negotiated and completed. The new contract would allow the Collegian staff to focus more on digital content to better reflect changing tides in journalism. It would allow them to print a minimum of three printed editions a week during the fall and spring with the ability to print special editions on features such as elections and other issues pertaining to the community. They also requested an increase from \$546,880.00 to 557,820.00 for mandatory costs, which was granted.

### **Veterans Task Force**

In order to ensure that the best practices and services were being provided to veterans by the Adult Learner and Veteran Services a task force was created by ASCSU. This is to help augment current administrative efforts. The task force is taking advantage of a potential transitional period in which the office may relocate to a larger space. This provides the opportunity to implement new ideas and practices that will be easier to implement during the change. It's composition will consist of students, faculty, and staff.

### **Creation of an Executive Structure Task Force**

As the number of fee funded areas increase there is an increasing amount of workload required of the Vice President. This task force will determine if a new structure of the ASCSU Executive is needed in order to provide more thorough attention to the Student Fee Review Board and Senate. Suggestions could consist of creating a second Vice President or institutionalizing the Speaker Pro Tempore as leader of Senate with appropriate check from the Executive. The



composition will consist of ASCSU leadership with the approval of the Speaker Pro Tempore and myself.

### **Collegiate Readership Program**

Contract is currently in negotiation. Because of structural changes at the Gannet they would like to only commit to a one-year contract with the assurance to negotiate a three year contract after. This provides us with the opportunity to experiment with different papers and locations. If a plan doesn't work it can be scrapped in a year with little cost. It originally included the New York Times, Denver Post, and USA Today. It will now include the Coloradoan at a select few locations replacing the Denver Post at a reduced cost. No increase to the budget will be necessary.

### **West Elizabeth Transportation Corridor**

ASCSU has been collaborating with the City of Fort Collins and the CSU Administration on compiling potential routes and infrastructure concepts to go along West Elizabeth. This transportation system would mirror the MAX Transit line along a route that is widely used by students, faculty and staff. Initial discusses included how we could provide access to those using the Foot Hills campus as well as where the West Elizabeth route should link up with MAX system on campus. Further investigation is needed and concepts will be presented at the next meeting.

### **Communication with other universities**

ASCSU has been in communication with University of Denver, University of Colorado, and University of Northern Colorado. In addition we hosted the University of Nevada's student government as they were looking for innovative ways to change their student body dynamic. They were very interested in our Director of Diversity and the Diversity offices here on campus.

### **Communication with Washington D.C.**

ASCSU has been working with the National Campus Leaders Council on hot topic issues pertaining to higher education. They have been pushing hard on the White House's agenda of "It's on Us" for sexual assault as well as higher ed funding. I plan to work with them throughout the year; however, they are their own lobbyist group that may be asking more from students than what they are willing to put in.



### **Inside ASCSU**

- The Student Services department is quickly planning the annual Grill the Buffs pep rally to take place.
- ASCSU is working with Off Campus Life for the annual Community Welcome Walk to welcome new and old residence to Fort Collins and encourage them to meet their neighbors.
- The furniture for the Senate Chamber will arrive late August hopefully just in time for the first session.
- Appointed an Interim Vice President, Phoenix Dugger, after the unfortunate resignation of former Vice President Taylor Albaugh.
- Although the ASCSU office is functional, it is still lacking the personality that embodies the ASCSU/CSU traditions that have made this office so special. Therefore I have put in a few work orders to bring in past traditions lost in the renovation. What I am looking forward to the most is a plaque of a painted ram head face that past and future presidents will sign.



# Section 11

## *Chancellor and Presidents' Reports*



# COLORADO STATE UNIVERSITY SYSTEM

Colorado State University • Colorado State University - Pueblo • CSU Global Campus

## COLORADO STATE UNIVERSITY SYSTEM CHANCELLOR'S REPORT

August 2015

### CSU-System Wide

- June 2015 retreat follow up
- Strategic Mapping Document – report
  - Policy Alignment
  - Instructional Innovation at CSU Pueblo and CSU Fort Collins

### Campus Updates

- CSU-Pueblo, CSU-Global: joint programs update
- CSU Online staff and CSU-Global are meeting to share what they are doing in online education

### CSU System Government Affairs - Federal:

- June visit with Senator Bennet and Global Grand Challenges Event
- Update on Congressman Lamborn inquiry
- Potential Rep. Degette visit

### CSU System Government Affairs – State:

- Hosted the Capital Development Committee in Fort Collins June 10 and Pueblo June 23
- Joint Budget Committee will visit Fort Collins September 22 and Pueblo September 11

### Statewide Partnerships:

- Adams State University, CSU College of Ag continue discussions on collaborative programs. Developing plan of work with Chancellor Emeritus Martin that will include efforts in this area.
- Colorado Energy Research Collaboratory/Colorado Energy Research Authority – Focusing on creating a new, sustainable business model that is less dependent on state funds. CSU is assisting with development of collateral materials and development expertise.
- Chancellor Frank met in June with key state partners including Denver Scholarship Foundation and the Colorado Livestock Association (at its annual convention/summit).

### National higher education engagement:

- APLU - Commission on International Initiatives: Chancellor Frank participated in the APLU Commission summer meeting in Estes Park in July, which focused on enhancing global engagement and impact. He moderated a panel discussion on practical perspectives on internationalization. The commission also committed to review a 2004 report on the presidential role in internationalizing the university and to spearhead an update for nationwide release in 2017. CSU campus and System staff will be engaged in this project.



**COLORADO**  
Department of Natural Resources

Executive Director's Office  
1313 Sherman Street, Room 718  
Denver, CO 80203

August 4, 2015

Tony Frank, Chancellor  
Colorado State University System  
475 17th Street, Suite 1550  
Denver, CO 80202

Dear Chancellor Frank,

Since 1955, responsibility for managing the state of Colorado's forestry resources has resided at Colorado State University (CSU). At that time, aligning with policy in many other states, CSU, the state's land grant university, created the Colorado State Forest Service (CSFS). Housing CSFS at CSU made sense, as the state's premier forestry school was also located there, and at that time the functions of the agency were seen as largely technical.

Today, only five states still have their state forestry agencies housed in universities. All of the others have transferred those functions into their executive branch or into an independent agency. The factors underlying that trend are many of the same challenges and opportunities we face in Colorado. As the role for a state forestry agency has shifted away from pure silvicultural expertise into broader concerns including homeowner education, water quantity and quality, and wildlife conservation, most states have seen the advantages associated with integrated resource management. In Colorado, we attempted to improve the integration of the services related to Colorado's forests in 2002, with the creation of the Division of Forestry within the Colorado Department of Natural Resources (DNR). As envisioned, CSFS would be treated as a division of DNR, although CSFS remained part of CSU. That relationship, however, has proven to be difficult to describe accurately, let alone administer effectively, and I think there is an opportunity to expand and improve upon that integration.

Given this evolution, we believe that the time is right to consider implementation of a more permanent solution. We at DNR want to initiate a conversation with you as to the best way to serve Colorado's residents, visitors, and forestry resources - including potentially transferring CSFS to the DNR.

One of the most prominent themes in my tenure as Executive Director has been reorganization to facilitate improved coordination and management. I believe that better outcomes often come from having all natural resource agencies under the same administrative umbrella, removing artificial silos and facilitating interdisciplinary decision making. Relocating CSFS in DNR would enhance coordinated natural resource management among our other divisions, including those whose needs and missions overlap with those of the CSFS such as the State Land Board and Colorado Parks and Wildlife. Also, while the recent coordination between DNR and CSFS to assist with pile burning needs was effective, integrating CSFS within DNR would improve administrative efficiencies. Further, now that the Governor has removed the statewide ban on broadcast burning, CSFS staff with training in prescribed fire will be even more



valuable. Moving CSFS into DNR creates a naturally closer link to the Department of Public Safety - both are executive branch agencies - and maximizes those opportunities.

In our discussions on this topic over the last months and years, I felt we have shared a common goal of identifying and implementing the most efficient and effective structure to steward Colorado's forest environments. More specifically, I believe we have jointly concluded that transferring CSFS to DNR may make the most sense, given where we find ourselves today. We sought a legal analysis and learned that such a transfer would require statutory changes. The 2016 legislative session seems an opportune time to move such a bill forward, though it is essential that we have broad agreement from both sides of the equation if we are to surmount political concern. To those ends, we request that as we work together on this, you provide information to and seek the support of the CSU Board of Governors on potential solutions.

Thank you for your continued dialogue and effort on this important topic. We stand ready to work with you and appropriate CSU or CSFS staff to answer any questions, perform any desired study, and draft and secure passage of legislation that would effectuate such a change.

Sincerely,

A handwritten signature in black ink, appearing to read "M. King", written in a cursive style.

Mike King  
Executive Director

## **COLORADO STATE UNIVERSITY PRESIDENT'S REPORT**

Board of Governors of the Colorado State University System  
August 7, 2015

### **I. TEACHING AND LEARNING: ASSURE EXCELLENCE IN ACADEMIC PROGRAMS**

#### **A. Record-breaking fundraising continues to transform Colorado State University**

Colorado State University alumni, friends and other supporters once again have backed the University in record-breaking fashion, donating a combined \$172.3 million for the fiscal year that ended June 30. The total surpassed the previous fundraising record of \$143.3 million set in FY14, and gives CSU four consecutive years of record fundraising. In addition, CSU saw the largest single cash gift in University history and set a record for total donors – more than 34,000 – along with its best-ever alumni participation, 10.34 percent. Even as the state of Colorado has worked to bolster its support for higher education, private donations to the University continue to greatly exceed public support from the state. Private support at CSU has more than tripled in the last five years, providing resources for student scholarships, academic programs, research, athletics, outreach initiatives, and construction efforts. Five of CSU's eight colleges, plus the Department of Athletics, surpassed the \$10 million mark in fundraising this year. For the fifth consecutive year, the University saw growth in the number of individual donors, exceeding 34,000 for the first time in CSU history. In addition, the highest alumni participation rate for the University came even as most indicators suggest that alumni participation rates are decreasing at universities nationally.

#### **B. Semester at Sea joins with Colorado State University as new academic partner**

Colorado State University will become the new academic home for Semester at Sea, in a partnership of two organizations focused on providing students with a college education that is a true voyage of learning and discovery. The Institute for Shipboard Education (ISE), parent organization to the Semester at Sea program, and CSU announced the five-year agreement June 4. Over the next year, ISE will move its offices from Charlottesville, Virginia to the Colorado State University campus in Fort Collins, where CSU and ISE will officially begin the partnership June 1, 2016. (Semester at Sea's contract with current academic sponsor University of Virginia runs through May 2016.) Participating students from a variety of universities will earn CSU credit for coursework that will transfer to their home institutions. The agreement also calls for ISE to provide additional scholarship support for CSU students to participate in a Semester at Sea voyage.

#### **C. Menon named dean of College of Agricultural Sciences**

Colorado State University has tapped a proven leader to position the College of Agricultural Sciences to drive innovation and entrepreneurship within the state's agricultural industry: Ajay Menon became the college's next dean July 1. Menon served for the last 13 years as the dean of

Board of Governors of the  
Colorado State University System  
Meeting date: August 7, 2015

the College of Business, where he recruited faculty and created programs that have helped propel that college to the top-ranked business school in Colorado.

**D. Diana Wall receives 2015 Ulysses Medal from University College of Dublin**

Diana H. Wall, University Distinguished Professor and director of the School of Global Environmental Sustainability at Colorado State, has been awarded the University College of Dublin's highest honor, the Ulysses Medal. The medal is awarded annually to individuals whose work has made an outstanding global contribution. It was inaugurated in 2005, as part of the University College's sesquicentennial celebrations, to highlight the "creative brilliance" of UCD alumnus James Joyce, and it is named for his famous novel. In conferring the Ulysses Medal on Dr. Wall June 16, UCD Professor Joe Carthy cited her 30 years of research in the Antarctic on how biodiversity contributes to productive soils and thus benefits society, and the consequences of human activities on soil sustainability.

**E. CSU offers advanced clinical behavioral health graduate certificate**

The behavioral health field needs more practitioners who are equipped to meet the needs of people dealing with mental illness and substance abuse, and Colorado State University's new graduate certificate program will offer training to help fill this need. The certificate program was announced in June. CSU's Advanced Behavioral Health Graduate Certificate will address a gap in specialization within the areas of psychopathology, psychopharmacology, and trauma-informed care. In addition, unlike many master's-level programs, CSU's certificate features psychopharmacology courses that train professionals to work with clients who take prescribed medication. The admissions requirement for this program is a bachelor's degree from an accredited institution and is ideal for current or aspiring social workers looking to supplement their skill set.

**II. TEACHING AND LEARNING: INTEGRATE ACADEMIC AND CO-CURRICULAR EXPERIENCES**

**A. CSU lands \$2 million NSF grant to revamp engineering education**

Colorado State University is one of only six schools in the country that has just been charged by the National Science Foundation with retooling the way engineering and computer science are taught, the university announced June 16. Armed with a \$2 million, five-year grant, CSU will break down the traditional approach of teaching one subject per course and replace it with a system in which students in electrical and computer engineering simultaneously learn how various components fit together in real-world applications. Instead of teaching those subjects and others separately, without explaining how they relate to each other and everyday technologies, the CSU team will adopt a more holistic approach in the Department of Electrical and Computer Engineering. The project, titled "Revolutionizing Roles to Reimagine Integrated Systems of Engineering Formation," also will involve revamping the way that faculty in the department are evaluated and rewarded.

### **III. RESEARCH AND DISCOVERY: FOSTER EXCELLENCE IN RESEARCH, SCHOLARSHIP, AND CREATIVE ARTISTRY/FOCUS IN AREAS OF INSTITUTIONAL STRENGTH AND SOCIETAL NEED**

#### **A. Building the herd: Bison delivers healthy bull calf at CSU**

In Colorado State University's Foothills Campus pasture June 5, bison cow No. 50 delivered a 45-pound male calf after a hard two-hour labor. He is the first calf born this spring and bound for the Laramie Foothills Bison Conservation Herd, which soon will roam open space owned by the city of Fort Collins and Larimer County. The creatures set to live on historic grazing grounds in northern Colorado are purebred Yellowstone bison – without lingering cattle genes that are typical in most bison herds as a result of interbreeding between the two species. Assisted reproductive technologies developed at CSU's Animal Reproduction and Biotechnology Laboratory are helping solve the conundrum. On Nov. 1, about a dozen bison will be released on fenced property at Soapstone Prairie Natural Area and Red Mountain Open Space, about 20 miles north of Fort Collins. The Laramie Foothills Bison Conservation Herd is expected to expand from there.

#### **B. CSU sparks cancer meeting for unified approach to animal, human medicine**

Dozens of leading cancer experts who convened in the nation's capital in June agreed that human and animal oncologists will more effectively pursue cures for the disease in all species by closely collaborating to set a shared research agenda and to devise beneficial clinical trials. The meeting, spearheaded by Colorado State University's renowned Flint Animal Cancer Center, was designed to set a unified vision for translational cancer research – meaning the studies that seek effective cancer treatments starting with animal patients, with results that benefit animal and human health. The approach is possible because of similarities in tumors across species. The gathering helped generate support for comparative oncology. It also identified two preliminary objectives for greater research within veterinary oncology: more fully characterizing the genetic makeup of tumors that develop in dogs and people, and further investigating the role of cancer immunology in dogs. The workshop, titled "The Role of Clinical Studies for Pets with Naturally Occurring Tumors in Translational Cancer Research," was hosted by the National Cancer Policy Forum, which is part of the health division of the prestigious National Academies. About 20 academic and nonprofit organizations sponsored the event.

#### **C. Alternatives for ag/urban water uses studied**

A two-and-a-half year study, funded by the Colorado Water Conservation Board and facilitated by Colorado State University's Colorado Water Institute, says agriculture could remain viable and urban water needs be met in one area of fast-growing Northern Colorado, but there are no easy answers. The Poudre Water Sharing (PWS) group, made up of representatives from Cache la Poudre River basin irrigation companies and the city utilities and special districts that provide municipal and industrial water from the Poudre, advised the research team as it collected data, surveyed irrigation company shareholders, and developed descriptions and prototype agreements for alternative water transfer methods that might work in the Poudre basin. The group issued a report at the end of June that details why they tackled the question, what they learned and their

recommendations for the future. The Colorado Water Conservation Board supported the study as part of the state's effort to find ways to avoid "buy and dry," the permanent removal of water from agriculture use. Avoiding the practice is a goal stated in the most recent draft of the State Water Plan.

#### **D. CSU aids wildfire response with new wildland-urban map**

Wildfires are as much a part of western landscapes as the forests that depend on them for survival. But as development in the Wildland-Urban Interface grows, the potential for wildfire property damage dramatically increases. In fact, Colorado's most expensive wildfires in terms of insured losses have all occurred since 2010 and included significant damage in WUI communities. The WUI Center and Mike Caggiano, research associate at Colorado State University's Center for Managing WUI Fire Risk, are developing a 'values at risk' spatial database to provide information for land managers to improve wildfire risk reduction strategies and responses to wildfires. The database combines individual building locations in the WUI for 10 Colorado counties with physical and social data, and post wildfire home loss assessments. Together, these data show where wildfire risks overlap with infrastructure in the forests, at a higher resolution and level of detail than other maps available today. Other maps rely on less detailed information such as U.S. Census data.

### **IV. RESEARCH AND DISCOVERY: IMPROVE DISCOVERY CAPABILITIES**

#### **A. Space radiation: CSU studies risks for astronauts journeying to Mars**

A new research facility at Colorado State University – the only one of its kind in the world – will be established with a \$9 million grant from NASA to help reveal the effects of long-term exposure to space radiation as the nation prepares for a manned mission to Mars. The multimillion-dollar grant from America's space agency, announced May 6, will provide a unique neutron radiation facility at CSU, which is one of three new NASA Specialized Centers of Research for the study. The Colorado State facility will mimic the long-term, low-dose-rate exposures to highly energetic radiation that astronauts would encounter on a multiyear mission to the Red Planet. The five-year project will renovate an existing gamma ray facility at CSU, allowing researchers to assess the impact of low doses of neutron radiation over long periods. A mission to Mars is expected to last about three years, and astronauts already are staying in space longer than they used to on the International Space Station.

#### **B. Precise genome editing may improve rice crops**

Rice, a staple crop that feeds half the world's people, may be improved by a new project that harnesses the power of genome editing. The project, led by Cornell University researcher Adam Bogdanove and funded by a four-year, \$5.5 million National Science Foundation grant, will serve as proof of principle that genome editing can be used to optimize quantitative traits, such as height, yield, and disease resistance. Very little is known about quantitative traits expressed to varying degrees in different individual plants, as they require complex orchestration of many genes. Genome editing is a new technique that allows researchers to precisely target, cut, remove and replace DNA in a living cell. Jan Leach, professor of Bioagricultural Sciences and Pest



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Management at Colorado State University, is one of the co-investigators working on the new study with principal investigator Bogdanove. The editing technique will focus on such traits as disease resistance and tolerance to acidic soils. On average, 15 percent of rice yield is lost worldwide to rice diseases, according to Leach, who is also a University Distinguished Professor at CSU. Leach and her team will receive a \$930,000 grant for their contributions to the project.

### **C. CSU researcher studies effect of pesticides, air pollution on asthmatic kids**

A new Colorado State University study will explore how the combination of pesticides and traffic pollution affects children with asthma. Sheryl Magzamen, an assistant professor in CSU's Department of Environmental and Radiological Health Sciences, received a career development award of \$461,000 from the National Institutes of Health for the three-year project. The research is significant because little is known about the effect of pesticides on asthma in humans. In addition, most studies of this kind focus on a single pollutant, and Magzamen is looking at both vehicle emissions and pesticides — and what happens when they interact. The award was announced June 30.

## **V. SERVICE AND OUTREACH: PREPARE AND EMPOWER LEARNERS OUTSIDE THE CAMPUS ENVIRONMENT**

### **A. CSU team travels to South Africa to chronicle indigenous art, culture**

Three Colorado State University faculty members in June took a group of students to South Africa to help preserve the art, history and customs of an indigenous community. In one of the main initiatives, the team will work on a plan for restoring and improving a small museum atop a mountain in the area of QwaQwa that had been vandalized several years ago. The museum lacks proper environmental controls to protect historical pieces from external threats like light and bugs, so part of the CSU team's work was to recommend how to improve the facility's ability to preserve cultural artifacts in a sustainable manner. Goals for the museum included re-establishing it as a place for local schoolchildren to learn about their cultural history and making it a source of income for the impoverished community, where nearly 90 percent of the population is unemployed.

## **VI. RESOURCES AND SUPPORT: EXPAND FUNDRAISING**

### **A. CSU Ventures partners with Rockies Venture Club**

CSU Ventures, the technology transfer and commercialization agent for Colorado State University, has formed a partnership with the Rockies Venture Club, one of the leading angel investor networks in the country, to begin hosting educational and other events. RVC, which has an active Fort Collins chapter and a relationship with the Innosphere, will offer educational events at CSU Ventures' new offices at 2537 Research Blvd. in Fort Collins every other month. These classes will be open to RVC members and guests and selected CSU Ventures staff and founders of CSU-related startup companies.

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## B. Major Gift Report

	June 2015		FY 2015		FY 2014	
	Amount	Count	Amount	Count	Amount	Count
<b>Contributions</b>	\$4,580,469	3,797	\$98,173,271	34,458	\$91,684,467	34,119
<b>Irrevocable Planned Gifts</b>	-	-	\$54,644	1	-	-
<b>Revocable Gifts and Conditional Pledges</b>	-	-	\$58,514,407	79	\$36,084,393	180
<b>Payments to Commitments Prior to Period</b>	(\$630,542)	800	(\$15,030,838)	1,212	(\$16,550,920)	1,276
<b>Total Philanthropic Support</b>	\$3,949,927	3,186	\$141,711,484	34,048	\$111,217,940	33,551
<b>Private Research</b>	\$2,777,332	26	\$30,603,982	184	\$32,021,154	197
<b>Net Private Support</b>	\$6,727,258	3,210	\$172,315,466	34,199	\$143,239,094	33,716

### Major Gifts – (\$100,000 +) Not Previously Reported

Gift to support the *Helen and Arthur E. Johnson Family Equine Hospital*, College of Veterinary Medicine and Biomedical Sciences

\$750,000 revocable commitment to support the *Mary Meyer and Jean Opsomer Professorship Endowment*, College of Natural Sciences

Gift to support the *Lucy Neu Oncology Rounds Room*, College of Veterinary Medicine and Biomedical Sciences

\$250,000 pledge to support *One Cure*, College of Veterinary Medicine and Biomedical Sciences

\$250,000 gifts designated as \$150,000 to support the *Marching Band*, College of Liberal Arts, \$50,000 to support the *Ascend Program*, Division of Student Affairs, and \$50,000 to support *Presidential Leadership Excellence*, Office of the President

\$242,475 in gifts to support the *Sean “Ranch” Lough Memorial Scholarship/Endowment*, Division of Enrollment and Access

\$234,731 revocable commitment to support the *Henson Scholarship in Biology Endowment*, College of Natural Sciences

\$231,143 gift to support the *College of Health and Human Sciences Outreach*, College of Health and Human Sciences

\$225,000 gift to support the *Lisa and Desi Rhoden College Professorship in Electrical and Computer Engineering*, College of Engineering

\$193,676 in planned gifts to support the *Colonel Arthur C. Allen Scholarship*, College of Agricultural Sciences

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\$180,000 pledge to support the *Animal Sciences Building Renovation and Expansion*, Department of Agricultural Sciences

\$155,000 gift designated as \$150,000 to support *Drought Adaptation*, \$2,500 to support *Bioagricultural Sciences and Pest Management Seminar* and \$2,500 to support *Agronomy – Soil and Crop Sciences*, College of Agricultural Sciences

\$150,000 gift to support Engines and Energy Conversion Lab Research, Division of Research & Interdisciplinary Programs

\$150,000 revocable commitment to support the *Lamb – Donar Undergraduate Scholarship*, College of Natural Sciences

\$138,849 planned gift split evenly to support *Fish, Wildlife, and Conservation Biology and Forest and Rangeland Stewardship*, Warner College of Natural Resources

\$126,000 gift in kind to support *Maternal Aging and Reproductive Efficiency in Mares*, College of Veterinary Medicine and Biomedical Sciences

\$100,000 gift to support the *Colorado Conservation Exchange*, Warner College of Natural Resources

\$100,000 gift to support the *Dr. Ajay Menon Presidential Chair in Business*, College of Business

\$100,000 gift to support *Hydrocarbon Research – Department of Civil Engineering*, College of Engineering

\$100,000 gift to support the *CSU Design Center*, College of Health and Human Sciences

\$100,000 gift to support the *Center for New Energy Economy - Program*, Division of Research & Interdisciplinary Programs

\$100,000 gift to support Fostering Success Leadership, Division of Student Affairs

## **VII. RESOURCES AND SUPPORT: NURTURING HUMAN CAPITAL**

### **A. Parsons named Executive Vice Chancellor, Johnson named VP for University Operations**

Amy Parsons, formerly CSU's VP for University Operations, was in May was named Executive Vice Chancellor of the CSU System. She will serve as top aid to the Chancellor. To allow the Chancellor the ability to continue to effectively serve the System's flagship institution while also ensuring smooth and consistent operations for the System. She has served first as deputy general counsel and then as Vice President for University Operations, successfully overseeing an unprecedented period of construction and renovation of our physical campus, managing a series of complex special projects, leading CSU's Ripple Effect initiative, and initiating significant

improvements in the benefits and privileges afforded to CSU faculty and staff. She will be taking some portions of her portfolio with her into the Executive Vice Chancellor role, most notably continuing to oversee CSU's engagement in Todos Santos and the National Western Center partnership. She will also remain the lead person responsible for the stadium construction through that project's completion. In addition, in her new role, Parsons will manage the day-to-day operations of the CSU System office, help with support around the Board of Governors and the management of Board meetings, assist the Chancellor as needed with legislative relationships and activities, and work with the Chancellor to coordinate and support the other System campuses and presidents. Lynn Johnson, CSU's Chief Financial Officer, has been appointed at to the role of Vice President for University Operations.

## **VIII. RESOURCES AND SUPPORT: INCREASING AWARENESS**

### **A. Saudi finance minister receives honorary degree from alma mater CSU**

The minister of finance for the Kingdom of Saudi Arabia, Ibrahim Al-Assaf, who earned his Ph.D. in economics from Colorado State University in 1982, received an honorary doctorate from CSU on during Spring 2015 commencement ceremonies. Al-Assaf received the degree at CSU's Graduate School commencement ceremony in Moby Arena. He was nominated by Stephan Weiler, economics professor and research associate dean for the College of Liberal Arts.



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# 2015 FUND-RAISING COMPARISON:

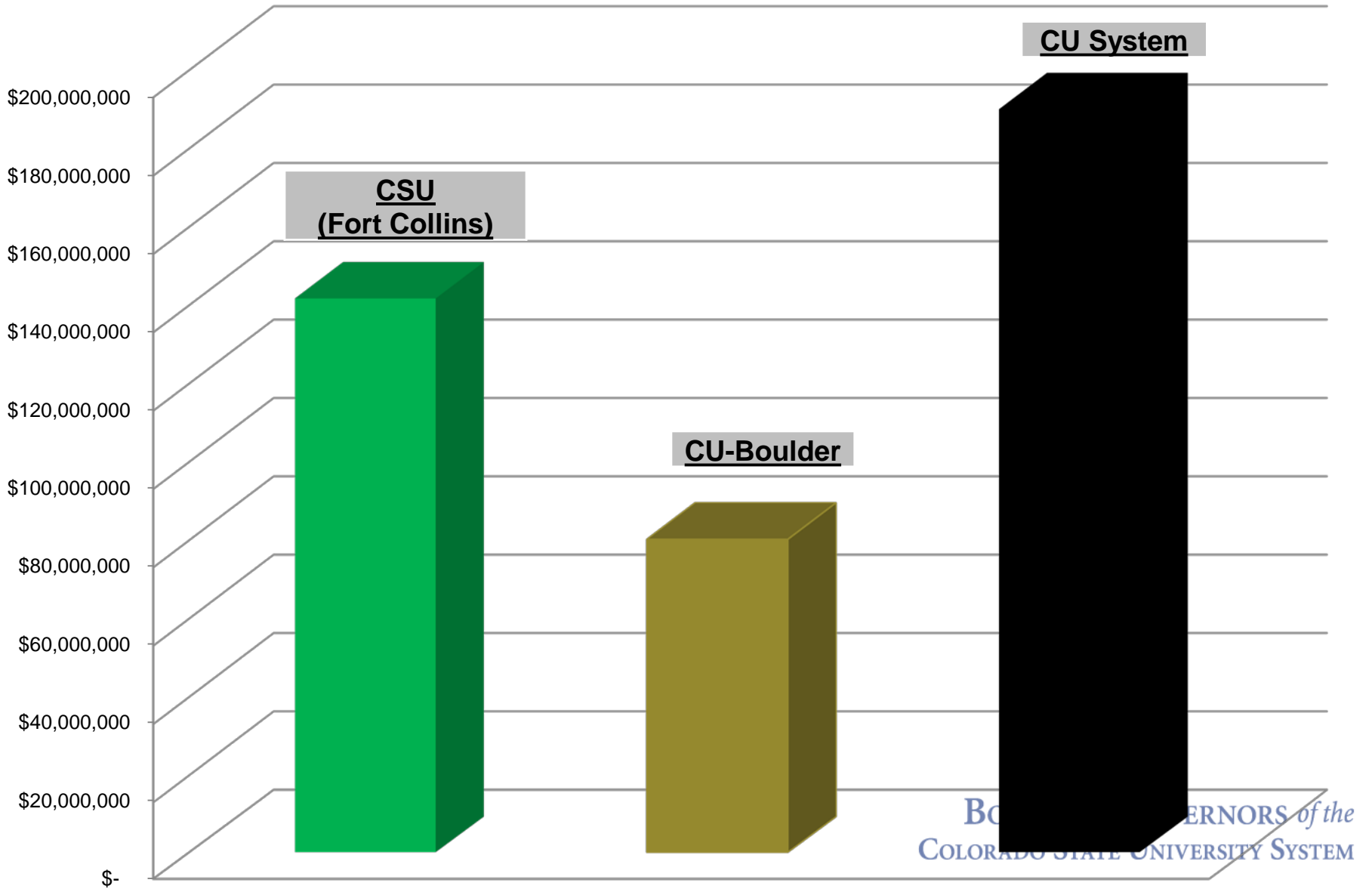
CSU (Fort Collins) &  
the University of Colorado

# Campus Comparison

	<u>CSU (Fort Collins)</u>	<u>CU-Boulder</u>	<u>CU System</u>
Alumni Participation Rate	10.4%	8.0%	unknown
Total Donors	34199	32000	47000
Philanthropic Funds	\$ 141,700,000	\$ 80,200,000	\$ 190,000,000
Private Research	\$ 30,600,000	\$ 28,400,000	\$ 170,000,000
Total Private Support	\$ 172,300,000	\$ 108,600,000	\$ 360,000,000

# Philanthropic Funds

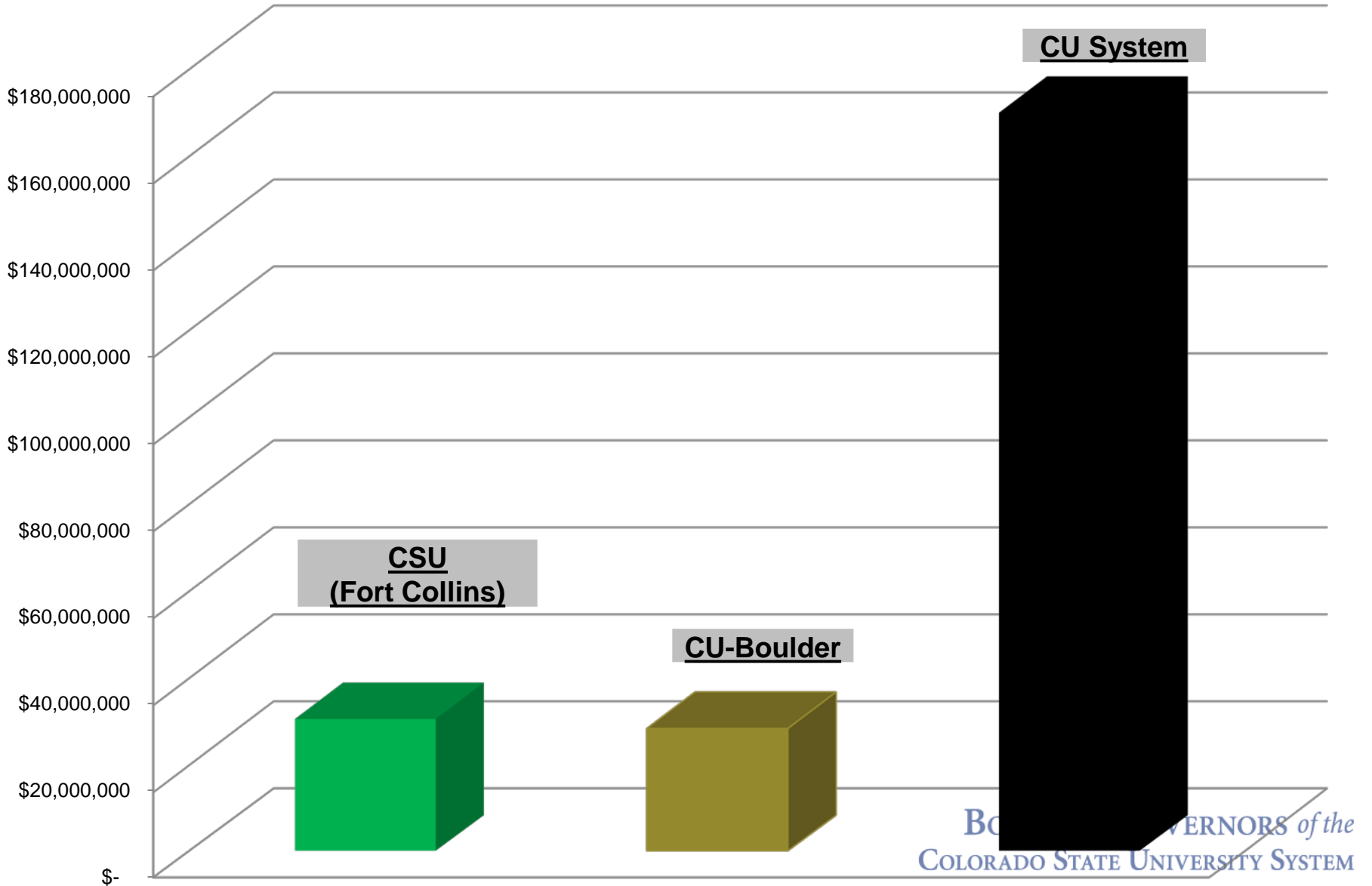
303



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# Private Research

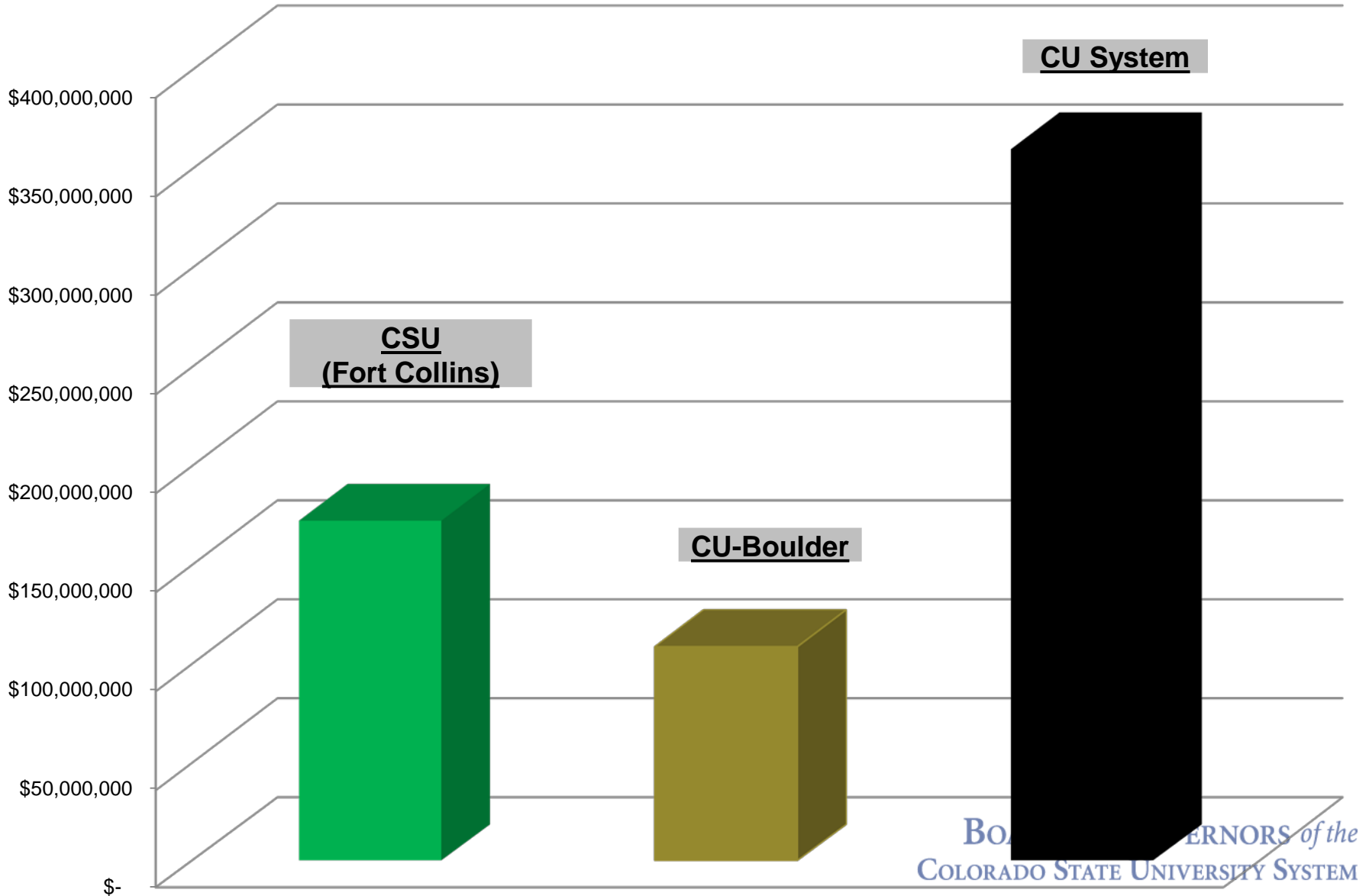
304





# Total Private Support

305



## Board of Governors of the Colorado State University System

Meeting Date: June 19, 2015

## Report Item

## MATTERS FOR ACTION:

CSU: Delegable Personnel Actions

No action required. Report only.

## EXPLANATION:

Presented by Tony Frank, President

At its August 3, 2012 meeting, the Board approved a resolution to expand the delegated and redelegable authority to the institutional Presidents to include approval, in accordance with Board-approved institutional policies: 1) sabbatical leaves and revisions to them; 2) emeritus faculty appointments; and 3) all requests for Leave without Pay, with periodic reports to the Board.

	NAME	DEPARTMENT	FROM	TO	TYPE	LEAVE TYPE
1	Abt, Steven R	Civil & Environmental Engineering	6/1/15	10/1/15	12/Temp	LWOP/Personal
2	Andreas, Tanja	Hartshorn Health Services	5/19/15	5/30/15	12/Reg	LWOP/Personal
3	Austin, Stephanie Nicole	CEMML	3/18/15	tbd	12/Spec	LWOP/Disability
4	Avery, Brenda	Anthropology	4/21/15	5/30/15	12/Reg	LWOP/FMLA Leave
5	Barrett, Mary F	Hartshorn Health Services	5/18/15	5/30/15	12/Reg	LWOP/Departmental
6	Borthwick, Laurie A	Hartshorn Health Services	5/21/15	5/30/15	12/Reg	LWOP/Departmental
7	Broderick, Sabrina Marie	CEMML	5/1/15	5/23/15	12/Spec	LWOP/FMLA Leave
8	Brown, Kristen Paige	CVMBBS College Office	5/1/15	5/2/15	12/Reg	LWOP/FMLA Leave
9	Caille, Gary	Mechanical Engineering	4/29/15	7/30/15	12/Spec	LWOP/Personal
10	Chen, Junwen	Computer Information Systems	3/25/15	4/22/15	9/Reg	LWOP/FMLA Leave
11	Cler, Bridget J	Admissions	4/1/15	4/30/15	12/Reg	LWOP/Administrative
12	DeRosby, Stephanie F	University Counseling Center	3/19/15	3/20/15	12/Reg	LWOP/Personal
13	Dunn, Bailey N	Student Financial Services	3/18/15	3/19/15	12/Reg	LWOP/FMLA Leave
14	Elwyn, Laurie L	Hartshorn Health Services	4/28/15	5/1/15	12/Reg	LWOP/Personal
15	Elwyn, Laurie L	Hartshorn Health Services	3/30/15	4/1/15	12/Reg	LWOP/Personal
16	Foster, Michelle	Food Science & Human Nutrition	4/30/15	5/1/15	9/Reg	LWOP/FMLA Leave
17	Geisert, Bethany Tamar	Finance & Real Estate	5/1/15	5/11/15	12/Reg	LWOP/FMLA Leave
18	Graham, Rachel Lucas-Thompson	Human Development & Family Studies	4/8/15	4/25/15	9/Reg	LWOP/FMLA Leave
19	Harlan, Patsy L	Vice President for Research	6/2/15	6/3/15	12/Reg	LWOP/Personal
20	Harlan, Patsy L	Vice President for Research	5/4/15	6/1/15	12/Reg	LWOP/FMLA Leave
21	Hughes, Steven A	Civil & Environmental Engineering	5/1/15	6/1/15	12/Spec	LWOP/Personal
22	Ingram, Patrick	Mathematics	8/15/15	8/16/16	9/Reg	LWOP/Personal
23	Irianni Renno, Maria M	Civil & Environmental Engineering	5/20/15	5/27/15	12/Spec	LWOP/FMLA Leave
24	Irianni Renno, Maria M	Civil & Environmental Engineering	4/15/15	4/29/15	12/Spec	LWOP/FMLA Leave
25	Jorgensen, Sarah Elizabeth	Hartshorn Health Services	5/14/15	5/30/15	12/Reg	LWOP/Departmental

## Board of Governors of the Colorado State University System

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26	Koonce, Brittany	College of Business	3/30/15	4/27/15	12/Reg	LWOP/Disability
27	Lee, Chihoon	Statistics	8/16/15	8/16/16	9/Reg	LWOP/Personal
28	Lu, Lixin	CIRA	5/15/15	6/30/15	12/Spec	LWOP/FMLA Leave
29	Mellon, April	Hartshorn Health Services	5/1/15	5/30/15	12/Reg	LWOP/Personal
30	Mellon, April	Hartshorn Health Services	4/1/15	5/1/15	12/Reg	LWOP/Personal
31	Morse, Emily	Hartshorn Health Services	5/18/15	5/23/15	12/Reg	LWOP/Departmental
32	Orswell, Forrest M	Student Legal Services	4/6/15	4/27/15	12/Reg	LWOP/Personal
33	Orswell, Forrest M	Student Legal Services	3/16/15	3/19/15	12/Reg	LWOP/Departmental
34	Rodriguez, Ruth	Admissions	4/1/15	4/30/15	12/Reg	LWOP/Administrative
35	Schaefer, Beryl S	Hartshorn Health Services	4/1/15	5/1/15	12/Reg	LWOP/Personal
36	Tate, Cynthia	Occupational Therapy	5/16/15	6/30/15	12/Spec	LWOP/Personal
37	Thomas, Natalie Kay	CEMML	3/30/15	unknown	12/Spec	LWOP/FMLA Leave
38	Thomas, Natalie Kay	CEMML	2/16/15	2/28/15	12/Spec	LWOP/Personal
39	Vesty, Jill C	Hartshorn Health Services	5/18/15	5/30/15	12/Reg	LWOP/Departmental
40	Wang, Xiaohan	International Programs	5/26/15	6/27/15	12/Temp	LWOP/Personal
41	Whitesell, Julie C	Hartshorn Health Services	5/18/15	5/30/15	12/Reg	LWOP/Departmental
42	Whitesell, Julie C	Hartshorn Health Services	3/23/15	4/7/15	12/Reg	LWOP/Personal
43	Wolfelt, Susan L	Hartshorn Health Services	5/18/15	5/30/15	12/Reg	LWOP/Departmental

Board of Governors of the Colorado State University System  
 Meeting Date: August 7, 2015  
 Report Item

MATTERS FOR ACTION:

CSU: Delegable Personnel Actions

RECOMMENDED ACTION:

No action required. Report only.

EXPLANATION:

Presented by Tony Frank, President

At its August 3, 2012 meeting, the Board approved a resolution to expand the delegated and redelegable authority to the institutional Presidents to include approval, in accordance with Board-approved institutional policies: 1) sabbatical leaves and revisions to them; 2) emeritus faculty appointments; and 3) all requests for Leave without Pay, with periodic reports to the Board.

	NAME	DEPARTMENT	FROM	TO	TYPE	LEAVE TYPE
1	Adams, Richard	Anthropology 1787	5/15/15	12/31/15	9 month SPE	LWOP/Departmental
2	Andreas, Tanja	Hartshorn Health Services 8031	7/6/15	7/31/15	12 month REG	LWOP/Departmental
3	Andreas, Tanja	Hartshorn Health Services 8031	6/1/15	6/30/15	12 month REG	LWOP/Departmental
4	Austin, Stephanie Nicole	CEMML 1490	5/26/15	5/28/15	12 month SPE	LWOP/Personal
5	Avery, Brenda	Anthropology 1787	6/20/15	6/29/15	12 month REG	LWOP/FMLA
6	Barrett, Mary F	Hartshorn Health Services 8031	7/1/15	7/31/15	12 month REG	LWOP/Departmental
7	Barrett, Mary F	Hartshorn Health Services 8031	6/1/15	6/30/15	12 month REG	LWOP/Departmental
8	Bontadelli, Johnna	Hartshorn Health Services 8031	7/1/15	7/10/15	12 month REG	LWOP/Departmental
9	Bontadelli, Johnna	Hartshorn Health Services 8031	6/1/15	6/30/15	12 month REG	LWOP/Departmental
10	Borger, Rosemary L	CIRA 1375	6/9/15	6/19/15	12 month SPE	LWOP/FMLA
11	Borthwick, Laurie A	Hartshorn Health Services 8031	7/1/15	7/31/15	12 month REG	LWOP/Departmental
12	Borthwick, Laurie A	Hartshorn Health Services 8031	6/1/15	6/30/15	12 month REG	LWOP/Departmental
13	Broderick, Sabrina Marie	CEMML 1490	6/15/15	7/3/15	12 month SPE	LWOP/FMLA
14	Busch, Carol	Communication Studies 1783	7/27/15	7/31/15	12 month REG	LWOP/Personal
15	Cler, Bridget J	Admissions 1062	6/10/15	8/10/15	12 month REG	LWOP/Administrative
16	DeRosby, Stephanie F	University Counseling Center 8010	6/19/15	6/26/15	12 month REG	LWOP/Personal
17	Dufore, Micah Kole	CEMML 1490	6/2/15	6/21/15	12 month SPE	LWOP/Layoff
18	Elwyn, Laurie L	Hartshorn Health Services 8031	6/18/15	6/22/15	12 month REG	LWOP/Personal
19	Elwyn, Laurie L	Hartshorn Health Services 8031	6/22/15	6/26/15	12 month REG	LWOP/Personal
20	Guy, Karen Ilene	Human Resources 6004	5/22/15	5/22/15	12 month REG	LWOP/Personal
21	Hanson, Gregory V	Business and Financial Services 6003	6/5/15	6/12/15	12 month REG	LWOP/Personal
22	Hughes, Steven A	Civil and Environmental ENG 1372	6/01/15	6/30/15	12 month REG	LWOP/Personal
23	Ikemire, Renee	Provost/Executive VP 1001	6/16/15	6/30/15	12 month REG	LWOP/Personal
24	Jones, Elizabeth Bright	History 1776	FA15	SP16	9 month REG	LWOP/Special
25	Jorgensen, Sarah Elizabeth	Hartshorn Health Services 8031	7/6/15	7/31/15	12 month REG	LWOP/Departmental
26	Jorgensen, Sarah Elizabeth	Hartshorn Health Services 8031	6/1/15	6/30/15	12 month REG	LWOP/Departmental

Nondelegable Personnel Actions

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	NAME	DEPARTMENT	FROM	TO	TYPE	LEAVE TYPE
27	Mack, Virginia C	Hartshorn Health Services 8031	6/01/15	6/30/15	12 month REG	LWOP/FMLA
28	Malysz, Anna M	Biomedical Sciences 1680	5/26/15	6/12/15	12 month SPE	LWOP/Personal
29	Mellon, April	Hartshorn Health Services 8031	7/1/15	7/31/15	12 month REG	LWOP/Personal
30	Mellon, April	Hartshorn Health Services 8031	6/1/15	6/30/15	12 month REG	LWOP/Personal
31	Mildrexler, Janella Dawn	Adult learners/Veterans service 8048	6/11/15	6/30/15	12 month REG	LWOP/FMLA
32	Morse, Emily	Hartshorn Health Services 8031	6/1/15	6/30/15	12 month REG	LWOP/Departmental
33	Rodriguez, Ruth	Admissions 1062	6/10/15	8/10/15	12 month REG	LWOP/Administrative
34	Schaneman, Krystle Lynn	VP for External Relations 0150	6/29/15	6/30/15	12 month REG	LWOP/FMLA
35	Schelly, Erica D	Occupational Therapy	7/13/15	7/31/15	12 month SPE	LWOP/Personal
36	Steinheber, Laura	Hartshorn Health Services 8031	7/01/15	7/06/15	12 month REG	LWOP/Departmental
37	Steinheber, Laura	Hartshorn Health Services 8031	6/01/15	6/30/15	12 month REG	LWOP/Departmental
38	Steneroden, Kay K	Biomedical Sciences 1680	6/1/15	6/30/16	12 month SPE	LWOP/Personal
39	Sunseri, Thaddeus	History 1776	FA15	SP16	9 month REG	LWOP/Special
40	Vesty, Jill C	Hartshorn Health Services 8031	6/01/15	6/30/15	12 month REG	LWOP/Departmental
41	Whitesell, Julie C	Hartshorn Health Services 8031	6/01/15	6/30/15	12 month REG	LWOP/Departmental
42	Winterbottom, Jeffrey J	Development & Advancement Info 7116	5/11/15	Unknown	12 month REG	LWOP/Personal
43	Wolfelt, Susan J	Hartshorn Health Services 8031	7/1/15	7/31/15	12 month REG	LWOP/Departmental
44	Wolfelt, Susan J	Hartshorn Health Services 8031	6/01/15	6/30/15	12 month REG	LWOP/Departmental
45	Wong, Cori Lin	Honors Program 1025	6/6/15	6/30/15	12 month REG	LWOP/Personal
46	Wyman, Kathleen Elizabeth	Communications/Creative Services 6025	6/15/15	6/22/15	12 month REG	LWOP/FMLA

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## COLORADO STATE UNIVERSITY – PUEBLO PRESIDENT’S REPORT

### I. ACADEMIC EXCELLENCE

#### A. Math Professor Invited to Lecture at Summer Mathematics Enrichment Camp

Dr. Janet Barnett has been invited to be a History of Mathematics lecturer during the four-week MathPath camp at Lewis & Clark College in Portland, Oregon. MathPath is a summer math enrichment program for extremely able kids age 11-14 who have been bitten by the math bug. In addition to a series of all-camp History Plenary Lectures, Professor Barnett will teach a special MathPath course on applications of "British Symbolic Algebra" to graph theory and circuit design. Students in this course will complete projects based on original source writings in mathematics, a pedagogical technique with which Barnett has special expertise.

#### B. Engineering Faculty Attend Summer Conferences

All six engineering faculty members attended the annual conference of the American Society for Engineering Education (ASEE) in Seattle in June. Four of the faculty presented the following papers:

- Fraser, Jane M. "Benchmarking IE Programs: 2005-2015"
- Jaksic, Nebojsa. "What to do when 3D Printers go wrong: Laboratory Experiences."
- Jaksic, Nebojsa. "Using 3D Pens for Enhancement and Rework of 3D-Printed Parts."
- Jaksic, Nebojsa. "Printed Smart Lamp Workshop."
- Yuan, Ding, Jane M Fraser, and Ananda Mani Paudel. "Incorporating Sustainable Engineering Design Principles into Senior Design Proposals"

Professor Fraser received the PIC I special recognition award for 2015 for her service as the coordinator of the Engineering Economy Division’s Grant Award Selection Process.

The ASEE Computers in Education Division selected Professor Jaksic's *Computers in Engineering Education (CoED) Journal* article “Novel Experiential Learning Practices in Engineering Education Based on Inexpensive 3D Printers” for the 2014 Merl K. Miller Award. The Merl K. Miller Award is an annual award for the outstanding *CoED Journal* paper on Teaching/Instructional Methods.

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Additionally, Dr. Leonardo Bedoya-Valencia attended the annual conference of the Institute of Industrial Engineers in Nashville, Tennessee in May. He presented three papers:

- “A systems dynamics model for commercial and industrial energy efficiency analysis.” with student Almir Caggy.
- “Developing dispatching rules for a dynamic flexible flow shop scheduling problem at a powder coating facility.” with graduate student Cem Sazara.
- “Analysis of the triage process in an emergency department.” with graduate student Matthew Bailey.

## **II. STUDENT ACCESS AND SUPPORT**

### **A. Couple donates \$100,000 for Education Scholarship**

Students looking to educate the next generation as teachers will get additional incentives to do so thanks to a recent \$100,000 donation to the CSU-Pueblo Foundation by Pueblo residents Robert “Bob” and Kris Strader. Dr. and Mrs. Strader are retired educators who have dedicated their careers to helping young people acquire a college education. The \$100,000 donation will be used to establish an endowment to aid individuals pursuing and/or furthering careers in education. The Robert L. Strader Endowment for Teachers Scholarship will award an annual scholarship to students with a 3.2 GPA or better within the Education Department.

### **B. TRiO Renewed at \$1.4 Million Over 5 years**

The federally funded Student Support Services (SSS) program at CSU-Pueblo has been renewed for \$1.4 million over the next five years to provide services that increase the college success of students who are low-income, first generation, or disabled. The U.S. Department of Education will provide just over \$300,000 in the first year of the grant (09/01/2015-08/31/2016), which will provide academic and other support services to 220 SSS program participants to increase their retention and graduation rates and to foster an institutional climate supportive of their success. Program participants will benefit from services such as academic action planning, tutoring academic peer coaching, monitoring of student academic progress, academic success seminars, as well as academic, financial and graduate school advisement to enhance student postsecondary success.

CSU-Pueblo’s TRIO SSS was first established in 1971 and reflects the University’s commitment to providing educational opportunity to students from disadvantaged backgrounds. The program also complements the institution’s efforts to increase student retention and graduation rates.

### **C. Noyce Scholars Program Update**

A collaborative venture of the Mathematics Department and the Teacher Education Program, the CSU-Pueblo Noyce Scholars Program provides significant scholarships, stipends, and academic programs for qualified individuals to earn a teaching credential and commit to teaching in high-need K-12 school districts, with funding provided by the National Science Foundation. This May three additional scholarship recipients completed their student teaching, bringing the total number of graduates to 11 since 2012 and during a time period when enrollment in teacher education programs has been declining nationally. Graduates commit to teaching 1 year in a high needs school district for every semester of Noyce support. Two other scholarship recipients completed their two-year induction period in May 2015 and will continue to teach in high-needs schools in Pueblo County. Eight interns recently completed the third Annual Noyce Scholars “Explore Teaching” Summer Internship Program and two scholars who previously served as interns completed a “junior mentorship” through the program. In addition to receiving intensive training on teaching techniques for secondary mathematics, interns worked under the supervision of faculty mentors to co-teach classes for secondary students enrolled in the concurrent Noyce Scholars Summer Math Academy, which served approximately eighty area students from grades 6 - 10 who participated in the eight-day Summer Math Academy and completed a variety of hands-on activities in the content area of geometric reasoning and problem solving. In addition to content knowledge gains documented on the pre- and post-assessments, both parents and students reported gains in students’ motivation and confidence levels relative to the study of mathematics.

## **III. DIVERSITY**

### **A. Students and Staff Honored at LULAC Convention**

Several CSU-Pueblo staff were honored as part of the 86th annual 2015 National Convention for League of United Latin American Citizens (LULAC) held in July in Salt Lake City, Utah. The convention convenes the national delegates of LULAC to discuss issues, set policies, and elect the organization’s national leaders. Jennifer DeLuna, CSU-Pueblo director of diversity and inclusion, was inducted into LULAC’s Women’s Hall of Fame, which recognizes individuals who espouse LULAC’S philosophy of creating positive change through personal integrity and ethical leadership and who has sustained a clear vision for the future of the Hispanic community that reflects LULAC’s vision. Victoria Obregon, regional coordinator of the College Assistance Migrant Program (CAMP), was recognized as the 2015 “Mujer Con La Falda Bien Puesta” Award Winner. The Mujer con la Falda Bien Puesta award recognizes an outstanding Hispanic woman who has distinguished herself through her professional accomplishments and/or community involvement. Five CSU-Pueblo students representing the Latino Students



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Unidos (Rosa Ramos, Rocky Ford; Celeste Molina, Pueblo; Rogelio Arreguin-Mancera, Colorado Springs; Maria Zavala, Pueblo; and Fredlina Atencio, Pueblo) attended various workshops on ethical leadership, resume renovation, and conflict resolution, among others, and were able to speak to distinguished legislators such as Senator Hatch and celebrities such as Taboo from the Black Eyed Peas, actress Angelica Vale, and Latin Grammy Award Winner Michael Salgado. The students also met with youth from around the country to engage in conversations around civic engagement, social justice, and mentoring youth to attain degrees of higher education.

#### **IV. IMAGE BUILDING**

##### **A. Forensics Hosts Rocky Mountain Cooperative Forensics Camp**

Students from universities across the country gathered at CSU-Pueblo in early July to facilitate the growth and awareness of debate in the region and support the University's forensics program as part of the Rocky Mountain Cooperative (RMC). Forensics Director Kathryn Starkey was approached early in the year by coaches in the debate community about hosting a summer camp to promote debate and provide an opportunity for students across the country to hone their parliamentary debate skills with experience levels ranging from first-year novice students to college seniors with several years of competition under their belts. Participating students attended more than a dozen lectures ranging from how to write a debate case to topic specific lectures on domestic and international issues and then participate in several practice debates to reinforce the topics learned in the daily lectures, ending in a round-robin style tournament. Registered attendees included students from Texas Tech University, University of Texas at Tyler, Casper College, Eastern Wyoming College, Colorado Christian University, Northwest College, CU Boulder, as well as the host CSU-Pueblo team. Coaches attending hailed from Texas Tech, CSU-Pueblo, University of Montana, CU-Boulder, Stanford University, and Colorado College.

#### **V. COMMUNITY OUTREACH**

##### **A. HSB Summer Notes**

The Hasan School of Business was a proud sponsor of the Colorado FFA Convention that was held at CSU-Pueblo during the first week of June. The event was utilized to continue the HSB brand awareness campaign by providing free t-shirts branded with the HSB logo for 1,400 FFA participants from all across Colorado. During the same week, in cooperation with Junior Achievement of Southern Colorado, HSB hosted 32 middle school students from District 70 for the Summer Business Academy. Students learned

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about business, participated in the high ropes course and attended two seminars, Budgeting 101 and Investment Basics.

On June 9<sup>th</sup> HSB hosted a sponsors meeting for the 2<sup>nd</sup> Annual Pueblo Economic Forum including representatives from the Greater Pueblo Chamber of Commerce, the Pueblo Latino Chamber of Commerce, the Pueblo West Chamber of Commerce, the Pueblo Economic Development Corporation, the Pueblo Board of Realtors, the Pueblo Chieftain and US Bank to begin plans for the upcoming fall event.

Throughout the month of June meetings were held with representatives from the Pueblo Business and Technology Center, HSB and the CSU-Pueblo Extended Studies Division completing the plans for a series of Executive Development Leadership Courses to be held beginning in August 2015 at the PEDCO building.

#### **B. CSU-Pueblo to Host Back to School Friday Nights at Colorado State Fair**

CSU-Pueblo will sponsor Back to School Fridays at the Colorado State Fair, August 28 and September 4, offering free admission to students from Pueblo County schools and the surrounding areas on those two days along with a free ThunderHill ticket to the opening home CSU-Pueblo football game, a free drink from Loag N Jug, and discount carnival band. Rev 89 will broadcast from the Carnival area on those days and the CSU-Pueblo presence will be visible through flags, banners, and advertising.

#### **C. Project SEED Update**

Drs. Sandra Bonetti and David Dillon have been working with local high school students as part of the American Chemical Society's (ACS) Project Seed, which provides an opportunity for local high school students to engage in chemistry research for 8-10 weeks during the summer. ACS and local donors provide funding for the students' stipends and mentors donate their time and consumables used in the labs for student projects. CSU-Pueblo is the only university (entity) in Colorado that offers Project SEED summer programs.

### **VI. GRANTS and CONTRACTS – RECEIVED ONLY:**

#### **College of Education, Engineering, and Professional Studies**

##### Engineering

Sponsor: University of Colorado (NASA)

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Principal Investigator:	Dr. Jude DePalma
Project Title:	Colorado Space Grant Consortium Renewal
Award Dates:	6/1/2015 – 5/31/2016
Amount:	\$10,000.00

### **College of Science and Mathematics**

#### Chemistry

Sponsor:	United States Air Force Academy
Principal Investigator:	Dr. Kristina Proctor
Project Title:	Distinguished Visiting Professor Program
Award Dates:	6/29/2015 – 6/2/2016
Amount:	\$131,891.00

### **Student Services and Enrollment Management**

#### TRIO

Sponsor:	U.S. Department of Education/Office of Postsecondary Education
Principal Investigator:	Brenda Trujillo-Aranda
Project Title:	TRIO-Student Support Services
Award Dates:	9/1/2015 – 8/31/2020
Amount:	\$1,501,255.00 (5 years)

University Total Received:	<b>\$1,643,146</b>
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### **Increase Degree Attainment and Stakeholder Engagement**

- CSU-Global has launched its Degree Optimization program which seeks to more clearly tie its academic curriculum to workplace needs. The Program provides Awards of Achievement and Endorsements earned through courses taken in student degree programs as identified through industry established standards based on CIP codes; and Endorsements earned through General Education courses based on employer-identified soft skills. The Program includes live progress tracking towards Awards and Endorsement that students can monitor in their Student Portal and print out as desired, Career Center resume templates, and student-employer job matching.
- The Colorado Department of Education has approved CSU-Global's application for alternative math and science teacher licensure. The application was sent to the Colorado Department of Higher Education for approval of the standard licensure program. We anticipate opening enrollment in January 2016.
- The university has achieved gtPathways approval on its first seven General Education course submissions. The university's approvals provide value to the System and the State as they will facilitate ease of transfer credit for its students who seek to transfer to other Colorado higher education institutions. CSU-Global has submitted eight additional courses for gtPathways approval for fall 2015 review.
- CSU-Global has been ranked #6 in the nation for Best Online Programs for Veterans by U.S. News and World Report which also ranked the university in the top 50 for Best Online Graduate Business Programs for Veterans and top 100 for Best Online Graduate Education Programs for Veterans.

### **Improve Student Success**

- CSU-Global is continuing to test its new infrastructure designed for Freshmen with live student cohorts. During each test phase, the students in each cohort are being heavily surveyed with their engagement behaviors being carefully tracked as CSU-Global makes modifications to its Freshmen program. The university expects that it will launch its Freshmen outreach strategy in spring 2016.

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- The university has embarked on its strategy to reconstruct its Student Advising services to further elevate the quality of its advising for increased student satisfaction and retention towards graduation as it also prepares for future Millennial and Generation Z students. The three-pronged effort seeks to strengthen the department's academic and financial services advising, increase its anticipation of student needs through the building of stronger student relationships, and heighten individual Advisor accountability for performance standards. The department transformation was initiated as of July 1 and is expected to reach its peak in the change process in early winter.

**Promote Affordability and Efficiency**

- CSU-Global has participated in the drafting of a legislative bill for Competency-based Education. The effort has been headed by Congressman Polis and includes key think-tank advisors, and the CEOs from Southern New Hampshire University and Western Governors University.
- New technology and processes have been added to the university's operations to improve alternative credit efficiencies in how students prepare for, schedule, and take competency based exams. The recent changes are intended to enhance the student experience for those students that choose to try to incorporate alternative credit into their Bachelor's degree programs to reduce their overall costs and time to completion.
- CSU-Global was selected as a Top School by Military Advanced Education Magazine for 2015 based on its military culture, financial aid, flexibility, and on-campus and online support services.

# Section 12

## *System Wide Reports*

### Campus Athletic Reports

- Colorado State University-Pueblo
- Colorado State University



CSU-Pueblo  
Department of Athletics  
Report to the Board of Governors

August 2015

**BOARD OF GOVERNORS** *of the*  
**COLORADO STATE UNIVERSITY SYSTEM**

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  - b. Team Performance Report
- IV. “Pack Quick Facts”



# THE **PACK** WAY

- DO THINGS THE RIGHT WAY
- RETAIN AND GRADUATE OUR STUDENT ATHLETES
- DOMINATE THE RMAC
- GAIN NATIONAL PROMINENCE IN DII
- INSURE STUDENT ATHLETES LEAVE UNIVERSITY EQUIPPED FOR SUCCESS

**“DEVELOPING CHAMPIONS THROUGH ATHLETICS”**

# Academic Performance

- 3.025 GPA for all student athletes (2014-15)
- 81.9% retention rate (F13 to F14)
- 81 student-athletes earned Academic All-RMAC recognition, including 10 first team award winners
- CoSIDA Academic All District Honoree
- Joe Shultz of the football team named NCAA Elite 89 Award recipient
- 24 members of the football team named Academic All-RMAC, including six first team recipients

# Graduation Rates

Rate	CSU- Pueblo Student Athletes	All CSU- Pueblo Students	NCAA DII Student Athletes	All NCAA DII Students	RMAC Student Athletes Avg.	Rank in RMAC
<b>Federal Graduation Rate</b>	53%	32%	55%	48%	49%	4 <sup>th</sup>
<b>NCAA Academic Success Rate</b>	62%**	N/A*	72%	N/A*	64%	7 <sup>th</sup>

\*The NCAA Graduation Academic Success Rate (ASR) is not calculated for non-athletes.

\*\*04-05 ASR 77%, 05-06 ASR 70%

# NCAA ACADEMIC SUCCESS RATE <sup>324</sup>

Cohort	05	06	07
Baseball	77	73	72
M Basketball	63	57	48
Football	X	46	43
M Golf	67	69	90
M Soccer	68	70	70
M Tennis	88	80	67
Wrestling	X	33	46
W Basketball	88	88	93
W Golf	50	44	38
Softball	88	76	58
W Soccer	73	76	82
W Tennis	88	67	30
Track/CC	X	79	76
Volleyball	88	79	91
<b>AVERAGE</b>	<b>70</b>	<b>65</b>	<b>62</b>

*of the*

# Team GPAs

	Spring 2014	Fall 2014	Spring 2015
Men's Soccer	3.04	3.09	2.97
Women's Soccer	3.00	3.12	3.27
Volleyball	3.36	2.94	2.88
Football	2.78	2.78	2.87
W. Tennis	3.26	3.60	3.63
M. Tennis	3.52	3.23	3.04
W. Golf	3.10	2.92	3.31
M. Golf	3.20	3.05	3.30
Softball	2.87	3.05	3.12
Baseball	2.64	2.67	2.76
W. Cross Country	3.24	3.62	3.57
W. Track & Field	3.32	3.39	3.38
M. Basketball	2.47	2.45	2.29
W. Basketball	3.18	3.23	3.26
Wrestling	2.60	2.63	2.79

# Team GPAs

	Spring 2014	Fall 2014	Spring 2015
M. Track & Field		3.04	2.96
Swimming & Diving		2.83	2.92
W. Lacrosse		3.28	2.97
M. Lacrosse		2.22	2.61
M. Cross Country		3.12	2.90
<b>Average</b>	<b>3.04</b>	<b>3.01</b>	<b>3.04</b>

# 2014-15 Athletics Recap

- Fall

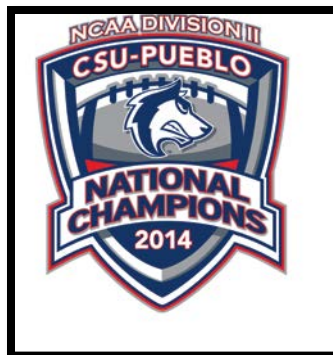
- Football

- Winter

- Women's Basketball
- Men's Indoor Track & Field

- Spring

- Baseball



# 2014-15 Recap Cont.

- Darius Allen (FB) – Two-time Gene Upshaw Award for National Defensive Player of the Year Recipient
- Men's Indoor Track & Field earned four All-Americans
  - 1<sup>st</sup> NCAA Championships in 22 years
- Mike Wagner (BB) – NCBWA South Central Region First Team selection
- Alexa Snyder (SB) – RMAC Player of the Year
- Leina Kim (WG) – Placed 12<sup>th</sup> in NCAA W Golf Tourn.
- Added 6 new sports and soccer/lacrosse complex
- 19 of 22 programs advanced to post season play
- 3<sup>rd</sup> in RMAC Cup-54<sup>th</sup> in DII Learfield Cup



# 2014-15 Athletic Performance <sup>329</sup>

<u>Sport</u>	<u>Overall</u>	<u>RMAC</u>	<u>Post Season</u>
Football	14-1	8-1	Won 4 <sup>th</sup> consecutive RMAC Championship WON NCAA DIVISION II CHAMPIONSHIP
W. Soccer	7-9-2	5-7-2	Qualified for RMAC tournament, 1 <sup>st</sup> time since 2008.
M. Soccer	7-11	6-8	Did not qualify for playoffs
Volleyball	17-12	11-7	Qualified for RMAC Tournament, 1 <sup>st</sup> time since 2011. The 17 victories are the most since the 1997 season.
W. Cross Country	N/A	N/A	Placed 10 <sup>th</sup> out of 15 teams RMAC Championships
M. Cross Country	N/A	N/A	1 <sup>st</sup> year of the program in 22 years
M. Basketball	21-9	16-6	Qualified for RMAC tournament. The 21 overall victories are tied for the third most since 1963. The 16 conference wins are the most in program history.
W. Basketball	18-12	14-8	Qualified for RMAC tournament. The 18 wins marked the fourth straight season the ThunderWolves have eclipsed the 18-win mark. Earned its second consecutive and seventh overall NCAA Tournament berth.
Wrestling	8-9	3-4	Sent three student-athletes to the NCAA Tournament and finished tied for 26 <sup>th</sup> .
Swimming and Diving	N/A	N/A	1 <sup>st</sup> Year Program
Softball	28-23	23-13	Qualified for RMAC Tournament for tenth consecutive season. Alexa Snyder was named RMAC Co-Player of the Year.
Baseball	41-16	28-10	Advanced to NCAA Regional Tournament for ninth time in program history. The Pack reached the 40-win plateau for the seventh time overall.

# 2014-15 Athletic Performance <sup>330</sup>

<u>Sport</u>	<u>Overall</u>	<u>RMAC</u>	<u>Post Season</u>
M. Tennis	6-16	2-3	Qualified for RMAC Tournament, lost in RMAC Semi Final
W. Tennis	7-11	3-2	Qualified for RMAC Tournament, lost in RMAC Semi Final
M. Golf	N/A	N/A	Placed in the top-five in six of its 10 tournaments.
W. Golf	N/A	N/A	Placed in top-ten in seven of its 10 tournaments, including four top-five finishes
W. Track & Field	N/A	N/A	Qualified two for the outdoor national meet. Recorded 64 points and finished sixth overall
M. Track and Field	N/A	N/A	Indoor DMR was national runner-up, team finished 16 <sup>th</sup> in first year of program Qualified four to the NCAA Outdoor Championships; Two All-Americans
W. Lacrosse	4-12	1-5	1 <sup>st</sup> Year Program
M. Lacrosse	0-10	0-6	1 <sup>st</sup> Year Program

# PACK QUICK FACTS

- Membership Affiliation: NCAA II, Rocky Mountain Athletic Conference (RMAC)
  - Over 300 members in DII
  - RMAC membership consists of 16 schools located in Colorado, Nebraska, South Dakota, New Mexico and Utah
- 22 sports programs; 11 male, 11 female
- 557 student athletes; 130 increase over 2013-14
- Support Staff (Adm/Trainers/Strength): 14 FT, 5 PT
- Coaching Staff (FT/PT/Vol.): 28 FT, 15 PT, 15 Vol.

# NCAA DII Philosophy

- Life in Balance
- Partial Scholarship Model
- University Academic Profile
- University Enrollment Growth
- Front Porch for Universities



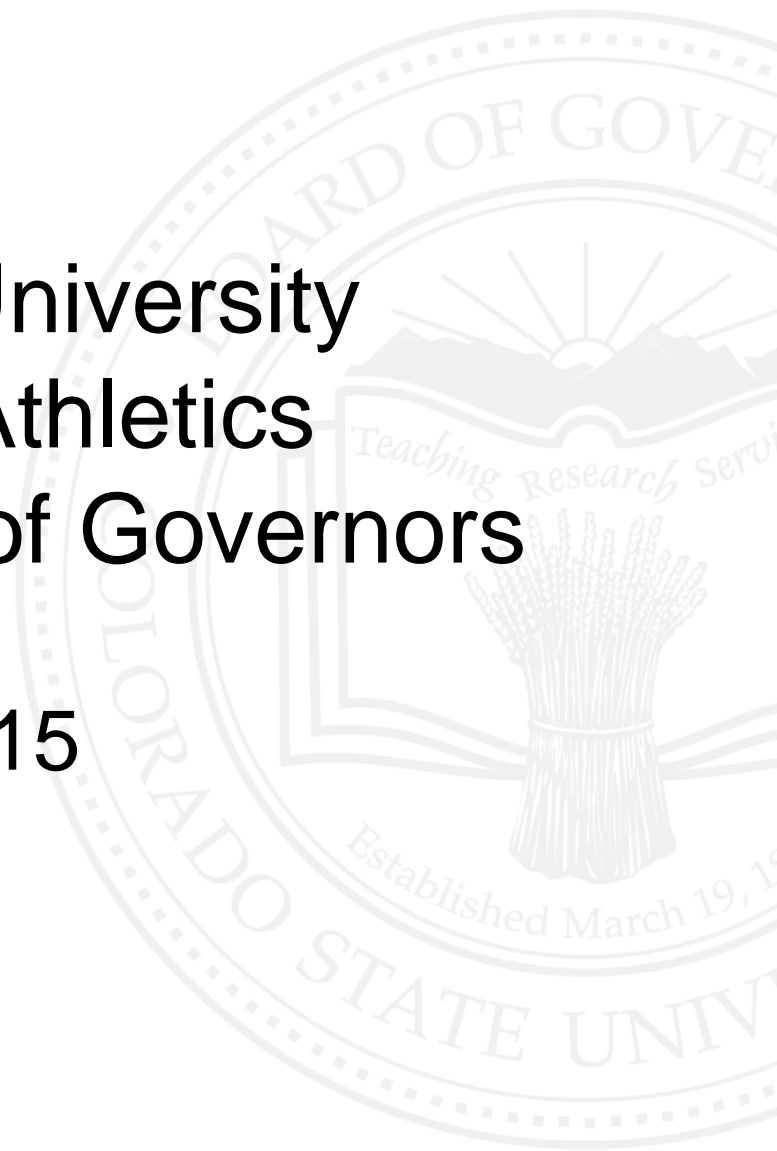
Colorado State University  
Department of Athletics  
**FY 16 Budget Proposal and Supporting Projections**

Expenditures	Actual FY 15	Projected FY 16	Projected FY 17	Projected FY 18	Projected FY 19	Projected FY 20
1 Financial Aid	\$7,526,630	\$8,687,582	\$9,035,085	\$9,396,488	\$9,772,348	\$10,163,242
2 Salaries and Benefits	\$14,587,009	\$15,197,412	\$15,653,334	\$16,122,934	\$16,606,622	\$17,104,821
3 Debt Service	\$376,102	\$376,102	\$376,102	\$376,102	\$376,102	\$376,102
4 Operations	\$11,418,728	\$10,046,854	\$10,288,075	\$10,545,277	\$10,808,909	\$11,079,132
5 Camps	\$838,714	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000
6 Trade Outs	\$714,000	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
7 Total Expenditures	35,461,183	36,307,949	37,352,596	38,440,801	39,563,981	40,723,296
8 Potential Ops Inflation (2.5% of Line 4, see also line 24)	-	241,221	257,202	263,632	270,223	276,978
9 Total Expenditures with Inflation	35,461,183	36,549,171	37,609,798	38,704,433	39,834,204	41,000,275
<b>Revenues</b>						
10 University Support (inc by change in lines 1 and 2)	\$10,017,712	11,986,846	12,552,153	13,640,358	14,763,537	15,922,853
11 Student Fees	\$5,543,568	5,562,938	5,702,011	5,844,562	5,990,676	6,140,443
12 Camps	\$838,714	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
13 Trade Outs	\$714,000	800,000	800,000	800,000	800,000	800,000
14 Self Generated Revenue	\$14,582,522	13,255,365	13,734,741	14,421,478	15,142,551	15,899,679
15 Total Revenue	31,696,516	32,805,149	33,988,904	35,906,397	37,896,765	39,962,974
16 Net (Line 15 minus 9)	(3,764,667)	(3,744,022)	(3,620,894)	(2,798,036)	(1,937,439)	(1,037,300)
17 Reserve - Beginning Balance	228,130	-	-	-	-	-
18 Ending Reserve Target	-	-	-	-	-	-
19 Approved Reserve Utilization	228,130	-	-	-	-	-
20 Alabama Game Guarantee	-	-	750,000	750,000	-	-
21 BC/UTEP Game Guarantee	340,500	609,500	-	-	-	-
22 Florida Game Guarantee	-	-	-	-	1,000,000	1,000,000
23 Net After 1x Money	(3,196,037)	(3,134,522)	(2,870,894)	(2,048,036)	(937,439)	(37,300)
24 University Investment in Potential Ops Inflation (See also Line 8)	-	241,221	257,202	263,632	270,223	276,978
25 Net After University Inv. In Ops Inflation	(3,196,037)	(2,893,300)	(2,613,692)	(1,784,404)	(667,216)	239,678
26 Additional Target SGR	3,196,037	2,893,300	2,613,692	1,784,404	667,216	-
Net Institutional Support (Institutional Support less Tuition Received from Athletics)	\$ 2,491,082	\$ 3,299,264				
Estimated Mean MW Athletic Conference Average Total Operating Expenses	\$ 37,389,090	\$ 38,510,763				

# Colorado State University Department of Athletics Report to the Board of Governors

August 2015

**BOARD OF GOVERNORS** *of the*  
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  - c) Team GPAs
  - d) Accomplishments
  
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  - a) Athletic Performance
  - b) Accomplishments

# Academic Performance 2014 Graduation Rates

Rate	CSU Student-Athletes	All CSU Students	NCAA Div. I Student-Athletes	All NCAA Div. I Students	MW Student-Athletes (avg.)	All MW Students (avg.)	Rank in MW
Federal Graduation Rate	68%	64%	65%	64%	62%	54%	1st (3 way tie with Nevada & Utah State)
NCAA Graduation Success Rate (GSR)*	83%	N/A*	82%	N/A*	78%	N/A*	3rd (behind Air Force Academy & Utah State)

\*The NCAA Graduation Success Rate (GSR) cannot be calculated for non-athletes because it takes NCAA eligibility rules into account.

Information based on most current public data. The 2014 report is based on the 2007-08 cohort year. Scores are a four class average.



# Academic Performance

## 2014 Graduation Rates

- Comparison of Colorado State University student-athletes to peer institutions and University of Colorado:

FEDERAL GRADUATION RATE		NCAA GRADUATION SUCCESS RATE (GSR)	
UC-Davis	78%	Illinois	88%
Illinois	76%	Virginia Tech	88%
Purdue	72%	UC-Davis	88%
Michigan State	69%	Michigan State	86%
Virginia Tech	69%	Colorado State	83%
Colorado State	68%	Colorado	83%
Texas A&M	67%	Purdue	82%
Colorado	65%	North Carolina State	81%
Washington State	65%	Oregon State	79%
North Carolina State	64%	Kansas State	79%
Kansas State	63%	Tennessee	78%
Iowa State	61%	Iowa State	77%
Oregon State	60%	Washington State	77%
Tennessee	59%	Texas A&M	76%
Oklahoma State	53%	Oklahoma State	70%

# Academic Performance

## Academic Progress Rate (APR)

SPORT	Single-Year Rates				Multiyear Rates (4 cohort years)			
	2011-12	2012-13	2013-14	3-year trend	2011-12	2012-13	2013-14	3-year trend
Men's Basketball	966	981	1000	+34	955	971	970	+15
Men's Cross Country	1000	1000	1000	NC	985	1000	1000	+15
Football	916	940	961	+45	947	943	944	-3
Men's Golf	949	1000	969	+20	966	964	977	+11
Men's Indoor Track	973	980	990	+17	973	978	987	+14
Men's Outdoor Track	973	980	990	+17	973	978	982	+9
Women's Basketball	1000	1000	1000	NC	952	959	981	+29
Women's Cross Country	1000	1000	1000	NC	1000	994	994	-6
Women's Golf	1000	938	1000	NC	1000	983	983	-17
Women's Soccer	N/A	N/A	1000	N/A	N/A	N/A	1000	N/A
Softball	1000	987	1000	NC	972	969	987	+15
Women's Swimming	971	964	1000	+29	981	981	982	+1
Women's Tennis	1000	1000	917	-83	992	1000	992	NC
Women's Indoor Track	975	944	992	+17	975	961	976	+1
Women's Outdoor Track	975	944	992	+17	979	965	975	-4
Women's Volleyball	957	1000	978	+21	995	989	983	-12

### Notes:

1. APR measures semester-by-semester retention and eligibility rates for current scholarship student-athletes and is designed to predict future graduation rates.
2. A perfect APR score is 1000. The NCAA imposes penalties when the multiyear rate (4 cohort years) is below 930.
3. APR scores have not yet been calculated for 2014-15.
4. Women's Soccer was not a Division I NCAA sport at CSU until 2013-14.

# Academic Performance Team GPAs

<b>SPORT</b>	<b>Fall 2013</b>	<b>Spring 2014</b>	<b>Fall 2014</b>	<b>Spring 2015</b>
Men's Basketball	2.48	2.45	2.48	2.60
Football	2.48	2.47	2.45	2.78
Men's Golf	2.96	3.17	3.22	3.28
Men's XC & Track	3.08	3.21	3.17	3.13
<b>All Male Student-Athletes</b>	2.70	2.71	2.95	2.91
Women's Basketball	3.31	3.48	3.22	3.34
Women's Golf	3.17	3.44	2.98	3.29
Women's Soccer	2.97	3.07	3.07	3.13
Softball	3.30	3.30	3.08	3.06
Women's Swimming	3.14	3.03	3.41	3.38
Women's Tennis	3.29	3.34	3.21	3.24
Women's XC & Track	3.26	3.26	3.24	3.21
Women's Volleyball	3.06	2.81	2.98	3.08
<b>All Female Student-Athletes</b>	3.21	3.20	3.17	3.23
<b>All CSU Student-Athletes</b>	2.94	2.94	3.09	3.06
<b>All CSU Students</b>	2.97	3.00	2.97	3.02

# Academic Performance 2014-15 Accomplishments

- Fall 2014 marked the highest student-athlete GPA on record in both term (3.096) and cumulative (3.145).
- Spring 2015 marked the second-highest term GPA for student-athletes (3.067).
- A record number of Rams (142) earned Academic All-MW recognition for achieving a grade-point average of 3.0 or better and having competed in at least 50 percent of a team's varsity contests during the year.

# Athletic Performance

## 2014-15

SPORT	CONFERENCE RECORD	OVERALL RECORD	CONFERENCE FINISH	COMMENTS/POST SEASON
Men's Basketball	13-5	27-7	3rd	NIT First Round (Fifth postseason berth in six seasons, tying for most in program history); Program-record 27 victories
Men's Cross Country	N/A	N/A	3rd	Finished 5th in NCAA Mountain Region Cross Country Championship; placed 19th at NCAA Championship (highest postseason finish since 2003)
Football	6-2	10-3	T-2nd (Mountain Division)	Fifth 10-win season in program history; Earned second-consecutive bowl berth, losing to Utah in the Royal Purple Las Vegas Bowl (14th bowl game in program history)
Men's Golf	N/A	N/A	5th	Did not qualify for NCAA Championship
Men's Indoor Track	N/A	N/A	2nd	1 Individual qualifier for NCAA Championship
Men's Outdoor Track	N/A	N/A	1st	No Individual qualifiers for NCAA Championship; Mountain West Team Championship
<hr/>				
Women's Basketball	15-3	23-8	1st	Won second-consecutive MW regular-season championship; Competed in the WNIT First Round
Women's Cross Country	N/A	N/A	4th	Finished 6th in NCAA Mountain Region Cross Country Championship
Women's Golf	N/A	N/A	6th	Did not qualify for NCAA Championship
Women's Soccer	2-9-0	4-15-0	11th	First home win in program history, a 1-0 victory over Northern Colorado, recorded on Aug. 28, 2014
Softball	8-16	27-29	7th	Did not qualify for NCAA Championship
Women's Swimming & Diving	N/A	N/A	10th	Did not qualify for NCAA Championship
Women's Tennis	1-5	8-12	11th	Did not qualify for NCAA Championship
Women's Indoor Track	N/A	N/A	2nd	1 individual qualifier for NCAA Championship
Women's Outdoor Track	N/A	N/A	1st	2 individual qualifiers in 3 events for NCAA Championship; Mountain West Team Championship
Women's Volleyball	17-1	31-3	1st	Won sixth consecutive MW Championship; Qualified for the NCAA Tournament for the 20th consecutive year; Advanced to the 10th NCAA Regional Semifinal in program history and the first since 2009

# Athletic Performance

## 2014-15 Accomplishments

- Colorado State ranked ***No. 1 in the nation for combined winning percentage (.813) between football, women's volleyball and men's and women's basketball programs.*** The combined record of 91-21 in the four revenue-generating sports included a ***school-record 27 wins by the men's basketball team.***
- CSU claimed four Mountain West Championships:
  - Women's Volleyball
  - Women's Basketball (regular season)
  - Men's and Women's Track & Field
- Five programs competed in NCAA Championships or a bowl game, and Men's and Women's Basketball received bids to the NIT:
  - Women's Volleyball – NCAA Sweet Sixteen
  - Men's Cross Country – At-large berth as a team to NCAA Championship Meet
  - Football – Royal Purple Las Vegas Bowl
  - Men's Basketball – NIT
  - Women's Basketball – WNIT
  - Men's and Women's Track & Field – Qualified 26 athletes for the NCAA Preliminary Meet, the most in 10 years

# Athletic Performance

## 2014-15 Accomplishments

- Three CSU student-athletes earned recognition as the best in their sport at the conference level:
  - Garret Grayson – MW Offensive Player of the Year
  - Deedra Foss – MW Volleyball Player of the Year
  - Gritt Ryder – MW Women’s Basketball Co-Player of the Year
- Two Colorado State coaches earned MW Coach of the Year honors for three sport programs:
  - Jim McElwain – Football
  - Brian Bedard – Men’s and Women’s Track & Field
- Over the past two NFL Drafts, Colorado State is one of 15 schools with multiple NFL draft picks in Rounds 1-3 in back-to-back years. This is the first time in school history that Colorado State has had four players selected in the first three rounds of the NFL Draft in a two-year span:
  - 2014 – Weston Richburg and Crockett Gillmore
  - 2015 – Ty Sambrailo and Garrett Grayson

# Section 13

## *Board Meeting Evaluation*

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# APPENDICES

- Appendix I: Correspondence
- Appendix II: Construction Status Reports
- Appendix III: Higher Education Readings

CSUS Board of Governors Correspondence Received 6/19/15-7/29/15				
<u>Date Received</u>	<u>Email/Letter</u>	<u>From</u>	<u>Subject</u>	<u>Response</u>
7/15/2015	both	Bob Vangermeersch	CSU stadium	7/27/2015

**Teufel, Sharon**

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**From:** CSUS Board  
**Sent:** Monday, July 27, 2015 3:23 PM  
**To:** bobvangermeersch@aol.com  
**Subject:** RE: open letter to the BOG

Mr. Vangermeersch,

This acknowledges receipt of your email and the hard copies of your open letter. Your communication will be distributed to the Board of Governors this week.

Sincerely,  
Sharon Teufel

Office of the Board of Governors  
Colorado State University System  
475 17<sup>th</sup> Street, Suite 1550  
Denver, CO 80202  
(303) 534-6290

*Notice: This email (including attachments) is protected by the Electronic Communications Privacy Act, 18 USC 2510-25221. It is confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution, or copying of this communication is strictly prohibited.*

**From:** bobvangermeersch@aol.com [mailto:bobvangermeersch@aol.com]  
**Sent:** Saturday, July 18, 2015 6:40 AM  
**To:** CSUS Board <csus\_board@Mail.Colostate.edu>  
**Subject:** open letter to the BOG

G'Day Sharon  
FYI--- I sent 15 hard copies via USPS on Friday for distribution to the CSU board.  
Would you confirm that the email copy was indeed sent to all 15 members.  
Thanks  
Bob Vangermeersch

## An open letter to the CSU Board of Governors (BOG) 7-12-2015

Will the new CSU football stadium actually generate enough revenue/profits to not require a cash bailout from the students and taxpayers?

To answer this question, let's examine the history.

The BOG policy and procedures manual tasks BOG and the administration to "protect the universities assets." CSU allowed Hughes Stadium deteriorate to the point of being bulldozed because of "chronic deferred maintenance" (their own words).

Rather than court marshal the guilty parties within the administration, the BOG instead rewarded them with a new on-campus football stadium that would cost over \$18,000,000 per year for 40 years! (\$12 M in debt service + \$2.8 M in added operating costs + \$3.6 M to replace the revenue from Hughes.)

This new stadium will be run by the same Athletics Department that, last year, required over \$20,000,000 in student and taxpayer bailouts to survive! See the Matt Stephens Coloradoan article on May 27 2015.

Even the "rose colored glasses" estimate of stadium revenue, as forecasted by the stadium builders, comes up \$6,000,000 short of the needed income.

### **So, how will the CSU administration overcome this lack of revenue and escalating debt?**

According to the administration, they will call the stadium a "multi-event facility" and all their financial woes will disappear. This is certainly magical thinking at its worst! In the December BOG meeting, Governor William Mosher, now chairman, extolled the virtues of the multi-event facility as a revenue generator. Even the BOG financial chairperson voted NO on the stadium bond motion. What does he see that the rest of you don't understand?

Let's now examine what events the CSU administration anticipates will occur to generate needed revenue. Bear in mind that CSU just completed a \$65,000,000 renovation to the Lory Student Center (plenty of event space there):

1. **Graduation/commencement:** If we assume that each student who graduates will celebrate for 6 seconds after their name is called, then the 5,000 graduates will consume over 8 hours of time (weather cooperating).

CERTAINLY NOT A REVENUE GENERATOR!

2. **Ladies Soccer team:** The CSU varsity soccer coach has declined to play his home games on the artificial turf, instead choosing to play on natural grass, as does 10 of the 11 other Mountain West teams.

NO REVENUE GENERATED HERE.

3. **Additional academic classrooms in the facility:** The cost of these classrooms is approximately \$18,200,000 for 82,000 square feet according to the 6-20-2015 Coloradoan article by Rob White. The article goes on to say that this construction will save \$12 M in the long run.

The cost of the added space is \$221 per square foot. Research done at the RS Means and DCD Building Costs website shows that straight classroom space costs between \$123 and \$217 per square foot to build. So, where is this \$12 M in savings coming from?

DEFINITELY NO REVENUE GENERATED AND NO COSTS SAVED!

4. **Other Events, such as music concerts:** I asked the appropriate CSU sources: "Please show me the pro-forma forecast that CSU performed for a music concert." CSU's answer was: "I checked around on this and don't know of any such document."

NO ONE HAS EVEN ATTEMPTED TO PUT PENCIL TO PAPER!

In 2012, Entertainment + Culture Advisors (ECA), an international consultant on entertainment projects, was hired to review the revenue projections from Convention, Sports and Leisure International (CSL) for the new stadium. Even ECA found the projections lacked detailed event planning by CSL and CSU. I will paraphrase their quote below:

"They (CSL) should have developed detailed scenarios about music concerts and those revenue projections for the stadium."

Maybe no one at CSU read that report!

It appears that the BOG has swallowed this multi-event facility hoax, hook, line and sinker, and the bait seems to be a RED HERRING.



The BOG policy and procedures manual clearly states the University should present a 10-year achievable financial plan before bond approval. It seems to me that CSU does not have an achievable plan; in fact, they don't have any plan at all.


It looks like Colorado taxpayers and the CSU students are going to get stuck with a gigantic bill. Time to guard our wallets!



**Before holes are dug and concrete is poured, I recommend that the BOG hire an independent, objective, sports economist to review the financial assumptions and forecasts.**

Bob Vangermeersch  
970-223-0493




## CSU FORT COLLINS-CONSTRUCTION STATUS OF BOND FUNDED PROJECTS

Project	Bond \$	Bond Project Status Picture	Occupancy	Status as of 7/15
<p>Willard O. Eddy Hall Renovation</p> <p>Total budget: \$12,500,000</p>	<p>\$11,800,000</p> <p>General Fund</p> <p>Remaining funds from classroom upgrade project</p>		<p>May 2015</p>	<p>Construction is complete and building is in use.</p>
<p>Aggie Village North</p> <p>Total Budget: \$112,265,000</p>	<p>\$112,265,000</p> <p>Housing and Dining Services</p>		<p>Aug 2016</p>	<p>This project is a redevelopment from the low density Aggie Village married student housing to high density undergraduate and international student apartments.</p> <p>Construction is approximately 45% complete. Anticipate phased occupancy May, June and July of 2016 with complete occupancy by August 2016.</p>

Project	Bond \$	Bond Project Status Picture	Occupancy	Status as of 7/15
<p>Multipurpose Stadium</p> <p>Total Budget: \$220,000,000</p>	<p>\$220,000,000</p> <p>Stadium Revenue</p>		<p>Aug 2017</p>	<p>Construction documents are in progress. Fence is up and parking lot milling is complete. Utility work underway.</p>

Project	Bond \$	Bond Project Status Picture	Occupancy	Status as of 7/15
Plant Environmental Research Center Relocation	\$7,500,000  General Fund		Aug 2015	Headhouse and greenhouses are 95% complete with move-in scheduled for early Aug. Research plots and landscaping to be completed in early Fall 2015.
Research Drive Parking Lot	\$5,400,000  Parking Services		Aug 2015	Parking lot is 80% complete with asphalt paving to begin at the end of July 2015. Transfort bus service from main campus to the lot to begin prior to fall semester move-in.



COLORADO STATE UNIVERSITY - PUEBLO					
CONSTRUCTION PROJECT STATUS REPORT					
Project	Total Budget & Funding Source	Construction Start	Scheduled Completion	STATUS as of 07/24/2015	Description
Corridor Extension @ Student Recreation Center	\$856,260 Student Rec. Ctr. Fee			Construction Completed January 2012	
South Campus Entry Drive, Parking Addition, Foyer addition, Internal Renovation @ Buell Communication Center Building	\$1,062,500 Student Fee-- \$300,000 Parking funds-- \$301,000 Building Repair/Replacement-- \$462,500			Construction Completed February 2012	
Ochiato University Center Renovation and Addition	\$30,000,000 Debt to be repaid with student fee facility fees & auxiliary services revenue			Ochiato University Center Schematic Design completed . Phase is in progress expected by September 2015 from Design-Build Team of Nunn Construction/hord-coplan-macht Architects. Design Development GMP Project Completion estimated 12/2017	
Exterior Door Security Access Control at all Academic Buildings.Phase II	\$998,351 Controlled Maintenance	04/2015	12/2015	Add electronic card access/monitoring, new keyways, and replace worn exterior entrances at 11 academic buildings.	Project Bid on budget. 9 buildings completely wired, entry door and hardware replaced on 2 buildings.
New General Classroom Building	\$16000000 Capital Funds		Construction Start 06/14 Estimated Completion 07/15	Substantial Completion July 28, 2015. On time and on budget. Fall 2015 Classes are scheduled. G H Phipps Construction Co., General Contractor hord-coplan-macht Architects	
Soccer/Lacrosse Complex	\$3,100,000 cash funded project from grants and donations		Construction began 3/2014, Completion Phase I field and bleachers June 2014, Phase 2 Building estimated August 2015	Phase 2 building 90% complete. Occupancy scheduled for September 2015 (Phase I Synthetic turf field completed and in use.) H. W. Houston General Contractor	

### [How a For-Profit's Implosion Could Be a Game Changer for College Oversight](#)

In the wake of the loan forgiveness program for former students of Corinthian Colleges, there are questions on how far such programs will go and about the ramifications to all of higher ed. Proponents of such programs like that the government as well as the student could be on the hook for loans from schools that intentionally defraud their students, while critics worry that going overboard could undermine the financial and political viability of the entire student loan system.

### [Where Dreams Come True](#)

A look at the University of Central Florida's DirectConnect program that aims to ensure that students who enroll in community college are able to make the transition to UCF, get a degree, and pursue a career. Launched in 2006, currently 71% of program participants who make it to UCF receive a bachelor's degree within six years.

### [When College is Free, or Free\(ish\)](#)

There are now several options for students seeking a free or severely reduced cost education, including the all-online University of the People, the ACE Alternative Credit Project, the Saylor Academy (backed by the Saylor Foundation), the subscription based StraighterLine, and the recent initiatives in Tennessee and Oregon that makes community college free.

### [Caught Between a Cap on Tuition Increases and Cuts in State Aid](#)

Universities feel squeezed between government that has disinvested in higher education and pressure from those same officials to keep tuition costs low. Oakland University in Michigan increased tuition by 8.48% last year (well over the legislature's cap of 3.2%); forfeiting \$1.2M in "performance-based funding" for schools that stayed under the cap, but earning \$12M more in tuition than they would have otherwise. Many universities say that increasing tuition is one of their last remaining options to keep up with rising costs, but critics of that argument say the schools just need to learn to operate more efficiently.

### [One Proposal to Help Poor Students Get to College: Pay to Send Them Early](#)

A proposal being offered as an amendment to the Higher Education Act this summer – the "early college high school" concept – allows high school students to enroll in college courses free of charge and earn college credit if they pass. Ideally, the program allows students who are intimidated by college to try it out in a low pressure environment while simultaneously decreasing the overall cost of obtaining a degree. It has been tested in several states and Washington, D.C.

### [The Shrinking Sector](#)

The number of for-profit colleges participating in federal financial aid programs this past academic year dipped 2.6% from the 2012-13 academic year, possibly as a result of recent regulatory and financial strains. Meanwhile, private nonprofit colleges increased marginally and public colleges declined by just under 1%.

### [NMC Horizon Report – 2015 Higher Education Edition](#)

This report looks at the five-year horizon for the impact of emerging technologies in learning communities around the world, based on the collaborative research and discussions of a 56-member body.

## HOW A FOR PROFIT'S IMPLOSION COULD BE A GAME CHANGER FOR COLLEGE OVERSIGHT

*Goldie Blumenstyk, Chronicle of Higher Education*

Last week's [loan-forgiveness plan](#) for students who attended Corinthian Colleges' closed campuses will very likely have ramifications that extend to all of higher education.

The U.S. Department of Education's actions are unprecedented in scope, opening the door to the possibility that thousands of defrauded students could see their federal loan debts wiped away in one fell swoop, at a potential cost to taxpayers of hundreds of millions of dollars.

By many accounts, the move could also change how accreditors, states, and the federal government handle quality assurance of college programs.

"If we are going to be discharging a significant amount of debt, it means we have to pay much more attention," says David A. Bergeron, a senior fellow at the Center for American Progress who long served as an Education Department official.

Pauline Abernathy, vice president of the Institute for College Access and Success, says the move represents a shift in responsibility, making the government, not just the students, financially liable for loans used at colleges that defraud their students.

"The stakes to the students have been very clear for a very long time," says Ms. Abernathy. Now the Education Department, state regulators, and accreditors will face pressure "to all act much sooner" to prevent abuses that could justify a loan discharge, she adds.

Yet it's hardly clear that any of those actors are equipped or inclined to take on the responsibilities the department's latest actions could require. Even though attorneys general across the country have undertaken investigations of for-profit colleges, lawmakers in Florida, for instance [killed a bill](#) this week that would have targeted low-quality institutions.

### **Sticking Taxpayers With the Bill**

In some cases, the parties might not believe they are even justified to act.

That was made visible on Wednesday, during a testy face-off at a Capitol Hill hearing that left several Democratic senators exasperated by the stance of one of the accreditation-agency leaders invited to testify.

Sen. Elizabeth A. Warren, in particular, grilled the president of the Corinthian campuses' accreditor for leaving their accreditations intact "right up to the minute they closed." She also questioned why his agency continued to accredit the campuses of another for-profit-college company, ITT Educational Services, despite the accusations it faces from state attorneys general, the Consumer Financial Protection Bureau, and the U.S. Securities and Exchange Commission.

"How many federal and state agencies need to file lawsuits" before the accreditor takes action? asked Ms. Warren, a Democrat from Massachusetts. "The accrediting agency continued to look the other way, and now students and taxpayers are stuck with the bill."

Albert C. Gray, president of the Accrediting Council for Independent Colleges and Schools, responded that his agency had increased its watch over several of the colleges but had not withdrawn accreditation because "our council makes recommendations based on facts, not allegations."

Although the Education Department has taken several actions against Corinthian, including its decision to [restrict loan advances](#) to the company last summer and its imposition of a [\\$30-million fine](#) against its Heald Colleges in April, the company has disputed the many allegations against it by the federal government and other agencies. ITT also disputes the accusations against it.

"Are you saying there was no evidence that Corinthian Colleges lied to their students?" Ms. Warren pressed, while another skeptical Democrat, Sen. Chris Murphy of Connecticut, advised Mr. Gray "there would be much more faith in the accrediting process" if he would have acknowledged that "we missed this one."

Yet while the caution the accrediting agency showed may have been legally proper, accreditation leaders who watched the Senate hearing and who have been following the news cycles acknowledged that accreditors can't just duck expectations that they play some role in protecting against fraud.

"We need to take a look at whether it ought to be an accreditor responsibility, and if it is an accreditor responsibility, how?" said Judith S. Eaton, president of the Council for Higher Education Accreditation. "How do we get into the appropriate preventative role?"

### **Potential Costs Are Steep**

The details of exactly who will be eligible to have their federal loan obligations wiped away remain to be worked out — to the consternation of both student advocates, who hope the process won't be too restrictive, and fiscal hawks, who worry that these discharges and future ones will become too costly to taxpayers.

"My concern is that, down the road, being 'defrauded' means something different," says Lindsey Burke, an education-policy fellow at the right-leaning Heritage Foundation.

It's not just those in right-leaning organizations who have that worry. Mr. Bergeron, of the Center for American Progress, says there's a danger that "if the department goes overboard in forgiving loans, it could undermine the financial and political viability of the student-loan system."

Along with the Corinthian situation and the pending legal actions against ITT, major legal cases are now underway against colleges owned by the Education Management Corporation and [Stevens-Henager College](#) (both of which are being sued by the U.S. Department of Justice,

among others). Any of those lawsuits could result in findings that justify loan discharges based on fraud.

Strictly speaking, the Education Department hasn't announced a new policy; it's just beginning to put in place a process that will allow borrowers to exercise a legal right they've had since the early 1990s.

But the department's action is notable for several reasons. For one, it has agreed to provide loan discharges to thousands of students at Corinthian's Heald College based on its own [finding](#) that the college systematically misled students about its job-placement rates.

It has also put into motion the steps for a discharge process for other students who believe they have been defrauded by their college. And for the first time in history, the department plans to appoint a special master to review claims by students who contend they deserve loan discharges because they were defrauded by Corinthian or other colleges.

"It's a significant change," says Robyn Smith, a lawyer at the National Consumer Law Center who calls the creation of the process a welcome sign "that the department recognizes there are large numbers of students who have been harmed."

And while some observers have speculated that the policy could also open the door to widespread demands for loan discharges — think disgruntled law students misled by job-placement promises — several higher-education observers call such concerns a red herring. The key problems, they say, come from colleges found to have systematically lied to students. The real question is what standard of proof the department will require to allow a discharge.

For example, several for-profit-college companies have been sued or are under investigation by state attorneys general. And often when such cases are resolved, the settlements include language saying that the college does not admit wrongdoing. Will borrowers from those colleges be able to cite the settlement as grounds for a discharge?

For Eileen Connor, a lawyer with the New York Legal Assistance Group, that's a very real question. The organization represents students who attended colleges owned by the Career Education Corporation, which [settled a case](#) with the State of New York in 2013 for misrepresenting job-placement rates.

Ms. Smith, of the National Consumer Law Center, says she hopes the Corinthian incident will prod the Education Department to become more assertive against colleges that mislead students — and to try to recover the cost of the loan discharges from the colleges, not the taxpayers.

"They should be seeking as much as they can" before the colleges shut down, she says.

But Mr. Bergeron, the former Education Department official, notes that the organizational structure of the department may work against that, since it is responsible both for ensuring fraud does not occur and for granting loan discharges to borrowers who believe they are victims of it.

If the agency is worried about costing the taxpayers money, those two objectives may conflict with each other.

Senator Warren, who has proposed moving the student-loan complaint system out of the Education Department and into the Consumer Financial Protection Bureau, says the department ought to be able to balance the two priorities when it comes to loan discharges for fraud. The department "has power to cut off aid to fraudulent schools long before students are hurt and taxpayer dollars are wasted," she said in a written statement to *The Chronicle*. "If they don't want taxpayers to pay for discharges when students get cheated, [department officials] should invest the time and resources early to make sure predatory schools never cheat those students in the first place."

That may be easier said than accomplished.

## WHERE DREAMS COME TRUE

*Sandra Amrhein, Politico*

Orlando doesn't seem like ground zero for the debate over higher education and social inequality. This Florida city, after all, is still best known for Disney World, the iconic Cinderella Castle and endless days of butter-yellow sunshine.

Yet for much of the past decade, Orlando's University of Central Florida and four Florida state colleges (formerly known as community colleges) have been forging a path that could be as groundbreaking as the dreams that once carved out a magical kingdom here amid cow pastures.

At first glance, the innovative program—known as DirectConnect to UCF—seems to represent a modest goal: Ensure that students who enroll in community college graduate successfully, then make a seamless transition to UCF, a four-year degree and, later, a career. That straightforward mission, though, actually cuts to the heart of the national conversation about access to higher education: Who gets it? Who can afford it? And where will it take you?

Community colleges were originally designed to be affordable and accessible gateways to four-year colleges and middle-class professions. Yet the myriad pressures on community college students—from poor academic preparation, to financial challenges, to the need to often balance education and outside employment—means that the best intentions often don't lead to positive results. Studies have found that while more than 80 percent of the 1.5 million students who enter community colleges every year nationwide say they want a bachelor's degree, just 17 percent reach that goal within six years. And, in a society where high-paying jobs increasingly require advanced or specialized education, the difference between a degree and no degree can mean the difference between making it into the middle class or remaining in poverty.

UCF and its partners are proving a new model, though—heavy on individual attention and clear academic goals—that paves a surer path to a degree. Together, they're charting a new course in a geographic zone roughly the size of Rhode Island and Connecticut combined.

Graduation rates at DirectConnect's two-year colleges have climbed, even as national graduation rates at similar schools have dropped or stalled. Once at UCF, 71 percent of the program's students are completing a bachelor's degree.

“If you want to diversify opportunity, it is the way to go,” says Sanford “Sandy” Shugart, one of the architects of DirectConnect and the longtime president of the Orlando area's Valencia College, which is consistently ranked as one of the top two-year colleges in the nation.

What Shugart saw on the horizon in Central Florida more than a decade ago would become instrumental in the formation of DirectConnect. UCF, the regional university and second-largest public university in the nation, was becoming increasingly selective and out of reach for local students. At the same time, the Hispanic population in the area was exploding, particularly among Puerto Ricans, involving some of the fastest and largest growth rates in the country. High

tech in the Orlando area was booming, creating the need for highly educated workers in the fields of medical and military simulation, gaming, information technologies and health care.

Shugart knew more needed to be done to give his students a better shot at these jobs. Valencia—named after the local citrus—has nearly 60,000 students, about 60 percent of whom represent minority groups. If Shugart couldn't figure out how to get his students prepared for Orlando's growing high-tech and medical fields, they could be relegated to the low-wage tourism sector, the area's biggest employer.

Twenty-year-old Alexandra Castro is exactly the kind of student Shugart had in mind. The daughter of a single, working mother wanted to go to college close to home after high school, but she lived hours away from UCF and was worried about the cost and whether she was academically prepared. Remedial classes and intense academic advising first at Valencia helped shape her career path. "They made you want to do more because they knew you could," Castro says.

Policy discussions about community college often focus on cost—as President Barack Obama did when he proposed in his 2015 State of the Union address that community college should be "as free and universal in America as high school."

The Osceola students gave Gov. Rick Scott a group hug after he came to visit the campus earlier this year. Alex Castro is pictured here directly to the right of the governor. | Valencia College/Flickr

"Forty percent of our college students choose community college," Obama said in January. "Some are young and starting out. Some are older and looking for a better job. Some are veterans and single parents trying to transition back into the job market. Whoever you are, this plan is your chance to graduate ready for the new economy, without a load of debt."

But Shugart understands that cost is just part of the equation—and part of the challenge—facing his students. To address the needs of students like Castro, UCF and its college partners needed to tackle other challenges too, such as language barriers, lack of preparation by underperforming high schools, transportation and—most critically—the often bumpy and complicated transfer process itself.

"The biggest impediment to community college students getting a bachelor's degree is the inefficiency of the transfer process," says Davis Jenkins, senior research associate at the Community College Research Center at the Columbia University Teachers College.

Jenkins called DirectConnect "a very important model for the country."

As the program took root and grew, so did its reach. DirectConnect is now trying to become one seamless pipeline of social mobility, pushing its tentacles both down into local school systems and upward into the private sector.



“That is enormously powerful,” Jenkins says, “because if you want some of the students to get onto a STEM path and into nursing or into the tech field, which, of course, are going to be the high growth fields in Orlando, you are going to have to start early.”

That’s exactly what UCF and its partners had in mind.

**It all began** in a parking lot. Shugart remembers a decade ago sitting through a boring meeting of local higher education administrators that included the highly regarded UCF president, John Hitt.

Hitt, who took over UCF in 1992, had already transformed the college, overseeing rapid growth that took it from 115<sup>th</sup> in enrollment nationally to the second-largest public university in the country, after Arizona State University. (Currently, it boasts more than 60,000 students.) Once dismissed as a commuter school with lax admission standards, UCF remade itself as a selective, major metropolitan research university. Former Florida Gov. Jeb Bush once said he believed [Walt Disney and John Hitt](#) had done more to transform Central Florida into a “vibrant, dynamic place” than any two people.

At that meeting years ago, Shugart felt no one was discussing the elephant in the room— how more two-year colleges were changing their mission and tacking on four-year degrees that made them all compete both for students and shrinking state resources.

“Don’t you think we need some direction?” Shugart recalled asking the group. The room was silent until Hitt spoke up: “I think we need that,” Shugart remembers him saying. Out in the parking lot, Hitt suggested he and Shugart meet to discuss the matter further.

When they spoke again, the first order of business was Florida’s 2+2 program, which guarantees any community college graduate an automatic transfer to a state university. But it doesn’t guarantee *which* university or program. And Shugart knew that the transfer process itself was often a huge stumbling block for students. Hitt thought the 2+2 model was good but that it had “glaring deficiencies.” They needed to take the paper guarantee and work together to realize its actual promise and full potential.

“Why don’t we just put it on steroids and see how far we can take it?” Shugart said.

A few weeks later, the two men came up with the broad outline for what would become DirectConnect. It would be an audacious and closely integrated program that guaranteed admission to UCF for anyone graduating from Valencia with an Associate degree and certain Associate in Science degrees. It would include a heavy emphasis on student advising and the linking and sharing of resources, providing UCF degree offerings on Valencia’s campuses and access for Valencia students to UCF junior- and senior-level programs and faculty on all UCF regional campuses, the mutual use of facilities and faculty and a concerted effort to align the schools’ curriculum to ensure as much continuity for students as possible. They also ultimately agreed that to serve the whole region, they needed to bring in the other three two-year colleges in the area. (Earlier this year, the university announced a fifth partner.)

DirectConnect launched in 2006—and it transformed both the two-year colleges and UCF itself. DirectConnect participants now make up a bigger share of new students at UCF, 41 percent in 2013-14, compared with incoming freshmen, 37 percent. (Transfer students from other institutions make up the rest. All together, more than 37,000 students—half of them minorities—have enrolled at UCF through the program.

**As predawn darkness envelops her house,** Alex Castro sits at a table in her bedroom putting on the last touches of mascara and spritz of perfume before shoving books and frozen waffles in her backpack. “I brought waffles for breakfast since I don’t have a chance to eat anything,” she says.

Castro flicks off the light in her bedroom and makes her way through the dark house by the light of her cellphone, stepping softly down a hallway so she doesn’t wake her mother and two young siblings.

Outside, the street is illuminated by spotlights from neighbors’ garages. She checks the time—almost 6:30 a.m.—while waiting in her driveway for the small connector bus to pull into her subdivision. If she misses the connector or can’t schedule it, she must walk a mile in the dark to the closest bus stop.

On this morning, as it was, she has two more bus transfers ahead of her and more than a two-hour ride to class at the nearest Valencia College campus. “I literally leave at six o’clock in the morning and come back at six o’clock at night,” she says.

The bus pulls out and the sun rises slowly over the sprawl of shopping plazas and subdivisions with names like Solivita and Bellalago. Castro and her family live in Poinciana—a 43-square-mile unincorporated territory, riddled with subdivisions in suburban Osceola County, a still mostly rural county of citrus and cattle, south of Orlando. Part of Disney World sits in Osceola’s northwest corner.

While Valencia’s Osceola campus is only about 18 miles north in the city of Kissimmee, only one main road gets there. And on this morning, like every morning, Pleasant Hill Road is crawling with bumper-to-bumper traffic. Castro, on her second bus ride of the day, sighs as she checks the time on her cellphone. She will miss her next connection and have to take a later bus, leaving just 15 minutes on campus to heat up and eat her waffles before class.

Yet for Castro, Valencia’s Osceola campus is a godsend. Of Dominican descent and raised by a single mother, she wasn’t ready after high school to move away. “I’m a mama’s girl, oh my goodness!” she says. Even if she were admitted to UCF as a freshman, it would have been too expensive and even farther than Valencia, possibly three hours by bus.

She had at first dismissed Valencia, considering it “Grade 13,” as some students called two-year colleges. But a high school teacher convinced her that Valencia would help her, and she entered an intense individualized instruction program at the school that included remedial reading, writing and math. Her schedule was carefully mapped out for her.

She excelled in student leadership and was tapped to meet President Barack Obama twice when he visited campus. A Pell Grant paid for tuition and books, while her work-study job covered expenses. “They pushed me,” she says. “I think that’s what I needed.”

**There was broad skepticism at first** about DirectConnect from the community, Shugart says. Critics thought DirectConnect was “watering down” UCF by admitting students who had not achieved the same SAT scores as freshmen. “This guarantee [of admission to UCF] doesn’t apply to everyone who attends Valencia. It’s everyone who succeeds at Valencia,” Shugart swatted back. “And the data are quite clear: Those who succeed at Valencia are going to succeed at UCF.”

Time has proved Shugart right. At a time when national graduation rates at two-year institutions were stalled or falling, those at DirectConnect partners soared. In DirectConnect’s first six years, the number of Associate in Arts degrees Valencia awarded annually spiked more than 110 percent, from 3,164 to 6,666, far outpacing the college’s enrollment increases. Likewise, at DirectConnect’s second-largest college partner—Seminole State—AA degrees more than doubled, climbing above 2,200 annually.

Valencia saw its graduation rate climbed from 24.6 percent to 35.2 percent for first-time-in-college students five years after starting. (Nationally, the six-year completion rate at two-year institutions is 26.1 percent, according to the National Student Clearinghouse Research Center.)

DirectConnect students continue to succeed once they’re at UCF: 71 percent of a recent DirectConnect cohort graduated from UCF with a bachelor’s degree within six years after transferring.

Minorities—who overwhelmingly start higher education in Florida through community colleges—are especially benefitting from DirectConnect. The number of Hispanics who earned a bachelor’s degree at UCF and who passed through DirectConnect from 2009-10 to 2013-14 shot up 134 percent, from 447 to 1,047. The number of black students in DirectConnect getting bachelor’s degrees in that time nearly doubled, from 242 to 442. DirectConnect has helped diversify UCF’s student body, growing it from 25-percent minority population about a decade ago to about 41 percent currently.

DirectConnect—one of the biggest trailblazing transfer programs in the country—has come to be considered a national model. For one example, Arizona State University—the only school larger than UCF—copied DirectConnect’s concept, creating its own transfer program called MAPP (Maricopa to ASU Pathways Program), which provides guaranteed admissions and building on what Maria Hesse, ASU’s vice provost of academic partnerships, says is UCF’s “impressive” deep partnerships with surrounding community colleges.

MAPP works by providing students at Maricopa Community College with a detailed sequence of coursework that meets both requirements for an associate degree as well as lower-division prerequisites toward an ASU major and bachelor’s degree.

MAPP, Hesse says, has helped the university know well in advance which community college students hope to transfer versus those merely attending workforce-training classes. The road map and strong relationships between the schools helps them efficiently gear guidance toward students who need it and prevents wasteful accumulation of unnecessary credits, she explains. “We would never know at the university which are the specific students who need help until the point they applied for admission to the university,” she says. “But that’s too late to be working with them.”

But DirectConnect’s mere existence doesn’t guarantee access or success for all. It still faces an uphill climb in an economically challenged region.

In 2010, Simone Delerme, an assistant professor of anthropology at the University of Mississippi, started two years of field work nearby, living with residents around Kissimmee, including in the community of Buenaventura Lakes, which, along with Poinciana, is one of the largest enclaves of Puerto Rican residents in the Orlando region.

She found that many Puerto Ricans—both in Puerto Rico and in New York—were drawn to the Orlando area by real estate advertisements that promised “affordable, luxury, country club living,” sunshine, and proximity to beaches and Disney World. But many were also lured by the promise of work in the tourism industry and positions that turned out to be low-wage, dead-end jobs, she says. “They were fooled by the pixie dust,” Delerme recalls one person she interviewed telling her.

Education was a constant frustration among working families she studied was.

“The No. 1 barrier was their work schedules,” she says. “If they had children or families, forget about it. It just wasn’t feasible.”

Their low-wage service and hospitality jobs demanded flexible hours, but left them unable to take classes because they never knew their schedules from week to week, she says. “You need to be able to support yourself financially, but education ended up being a luxury. Most couldn’t afford it even if they could get the financial aid.”

That’s a situation that Kathleen Plinske knows all too well. As president of the Valencia’s Osceola campus, Plinske serves a zone with some of the worst performing public schools in the state and some of the lowest rates of high school graduates continuing on to college.

“A lot of that has to do with access. It was hard to convince the community that UCF was here,” Plinske says of the new joint-facility on Valencia’s Osceola campus.

Valencia’s presence here itself only dates to the mid-1990s. Before then, there was no higher education institution in a county that was experiencing surging growth. In presentations, Plinske shows parents lifetime income earnings for degree earners—trying to convince them of the benefit of sending their kids to college instead of pressuring them to work right away.

A “game-changer” for the county, she says, will be the future Florida Advanced Manufacturing Research Center near the campus on which partners, including UCF, envision developing high-tech jobs and research related to smart sensors for cars and appliances.

Plinske wants to make sure there is a pathway into her community for these jobs. Her campus does a lot with local high schools through dual enrollment and has adopted a local elementary school and holds tours and activities for those students and their parents.

At an open house in May, Jaswantie Loo, from Venezuela, listened intently with her 11-year-old daughter Vanessa at her side, during a presentation about financial aid, the cost of a Valencia education (about \$100 per credit hour, versus twice that at UCF) and DirectConnect.

Vanessa had attended past tours at Valencia with her school.

“Mom, it’s so beautiful there. It’s huge, they have everything,” Loo says her daughter told her.

Loo was thrilled to hear about grants and financial aid and that Vanessa could complete a bachelor’s degree on this campus. The family has one car, used by her husband for his job as a bellman at a resort.

“The teacher said you can do it here,” she tells Vanessa, a fifth-grader. “That makes it so much easier for us.”

**The DirectConnect program** also came at just the right time for the Orlando area. While tourism and hospitality still makes up 20 percent of the labor force—remaining the biggest player in a regional economy dominated by low-wage jobs—the area is seeing important growth in high-tech and health service jobs like at Lake Nona’s Medical City, growth that required better education for better jobs. That diversification is critical for the area, says Orlando Mayor Buddy Dyer. The region loves its tourism, he says, “but you don’t want to be too reliant on one industry.”

The new growth and high-paying jobs are coming from people like Ben Noel, who arrived in Orlando a decade ago with a single task assigned by his bosses at EA (Electronic Arts), one of the world’s largest video gaming companies: Build up the local 150-person gaming studio to 1,000 employees.

Noel had grown up in the area, but had left for Texas when it came time to pick a college in the 1980s. UCF wasn’t considered a top option, he says. The running joke about the school at that time was that its initials stood for “U Can’t Finish.”

When he later returned to head up EA’s efforts in Orlando, just as Shugart and Hitt were launching DirectConnect, he discovered he couldn’t fill his needed positions fast enough. Out-of-state recruits were time consuming and expensive. So he turned to UCF. “We have to have some home-grown talent,” Noel says.

Noel spoke with Hitt at UCF and suggested a new master's degree program in video game design. In 2005, UCF launched the Florida Interactive Entertainment Academy (FIEA) in a former expo building in downtown Orlando that the city leased to UCF for \$1 a year. Noel is now executive director of FIEA, which has graduated more than 400 students, sending many of them to work on popular games from *Madden NFL Football* to *Call of Duty: Black Ops*.

FIEA is a popular example that UCF and DirectConnect partners list when talking about their dual mission of both meeting the needs of Orlando's booming, high-tech industries and helping the region's underserved communities get access to high-wage jobs. FIEA sits at the heart of the planned Creative Village—a 68-acre hub and technology incubator that will hold new UCF and Valencia campuses as well as new urban living spaces, businesses and public schools.

Other long-term local employers like Lockheed Martin rely on UCF to help feed its employee rosters through internships and job placement. "We see an increasing demand for STEM employees, that's why having the relationship with UCF that we do have is critical," says Frank St. John, vice president of tactical missiles and combat maneuver systems with Lockheed Martin.

In addition, UCF's main campus hosts a simulation training institute next to a research park that includes the nation's largest cluster of military simulation and training companies.

Engineering student Caillyn Caba, 19, says starting DirectConnect at Valencia College ensured that he received more individualized attention on crucial math and science classes and in labs than his friends who went straight to UCF. It also helped get personalized references to professors' colleagues that can lead to internships and jobs.

Caillyn, whose family is from the Dominican Republic, is specializing in mechatronics engineering at UCF—the type of technology that drives the Harry Potter rides at Universal Studios. "It's like the perfect job to get in Florida right now," he says.

**It is a warm afternoon in May**, with temperatures near 88. A soft breeze stirs the green fronds atop tall palm trees. The large crowds have already dispersed outside the concrete plaza in front of the CFE Arena on UCF's main campus, one of three commencement ceremonies for UCF's large graduating class.

A smaller crowd is trickling into the parking garages and up the walkways toward the arena—the families and graduates from Valencia College.

Among them is Irene Acevedo-Melendez, 20, dressed in a black, sleeveless dress, red high heel shoes and a graduation cap. Walking alongside her is her father, pushing her disabled mother in a wheelchair. The day represented a milestone for their family, which had come to Orlando from Puerto Rico when Irene was in high school.

Irene received a Pell Grant and scholarships to attend Valencia but felt pressure from her father to work more hours and take fewer classes to help with expenses of the family. Her mother encouraged her to finish her AA degree and move through DirectConnect to attend UCF, where Irene will begin in the fall.

Irene's mom, Milagros Melendez, was distraught thinking she wouldn't be able to see this day when her daughter walked in commencement. She'd been released from another hospital stay five days before.

"I know it's not a bachelor's," she says, starting to cry, "but to me it's important because to come over here from Puerto Rico and be able to study in the United States at a university, for me it's a huge achievement."

Her husband hands her a napkin. She still has an IV port in her arm, covered by her shawl. Her long, black flowing dress covers her surgery scars and other tubes. Irene looks up from checking her lipstick in a compact mirror to make sure her mother is okay.

"I knew she's very determined," Melendez says. "She really wanted to finish. If she doesn't finish [a bachelor's degree] in four years she can finish in five." She tells Irene not to make the same mistakes she did—working on a bachelor's degree later in life when married and with children. It exhausted her. She fell ill just a few years after graduating.

"I always tell her it's such a good feeling to finish something with such effort," she says.

Across the plaza, Alex Castro's mother is racing the car onto campus. Castro jumps out and runs to get in line while her brother and sister, 12 and 9, go with an aunt to find seats.

Castro's mother, Rebecca Duran, had made the family breakfast that morning and gave Castro a pedicure, breaking down in the middle of it. "Mommy, are you crying?" Castro asked her.

The whole family is proud of Castro, Duran says. All those times the bus left Castro in the dark when it was raining, she could have given up. But she didn't. She'll begin classes at UCF's Rosen College of Hospitality Management this fall; she's trying to save money to fix up a broken-down car to make the one-hour commute. "She could have said no, but she knew that wasn't an answer," Duran says. "She grew up with a sense of no excuses."

Her siblings look up to her; her brother cried at an awards ceremony leading up to graduation where Castro was presented with commendations. Tonight, they'll go to Universal CityWalk to celebrate. And tomorrow to the beach on the Gulf side of the state.

But for now, Duran is going to enjoy her daughter's moment.

"She's halfway there," Duran says. "She's halfway there."

## WHEN COLLEGE IS FREE, OR FREE(ISH)

*Goldie Blumenstyk, Chronicle for Higher Education*

The ["free college" idea](#) is back in the headlines. Last week Oregon lawmakers passed legislation similar to Tennessee's to make community college free. And on Wednesday in the U.S. Congress, several Democratic lawmakers and the U.S. secretary of education, Arne Duncan, are expected to unveil the America's College Promise Act of 2015, a federal proposal to make two years of [community college free](#).

But actually those are just a few of the ways students can attend college free, or at little cost — call it "Free(ish) College." Although those free(ish) paths still account for just a small proportion of American college students, the paths are growing bigger by the day.

"We're at an inflection point," said Jeffery S. Davidson, director of strategic relationships at the Saylor Academy, an organization that offers free courses. Several recent efforts have propelled the movement, and within the next year or two, he predicted, "people are going to discover the opportunity."

While students have long had the chance to earn college credits through prior-learning assessments, or the Advanced Placement and College Level Examination Program tests offered by the College Board, the growing public focus on the cost of college has made the idea of free or free(ish) college all the more topical.

Those developments aren't all universally welcomed, particularly when promoted as part of the so-called DIY College movement. The Association of American Colleges and Universities, among others, [maintains](#) that higher education — including lower-level, general-education curricula — shouldn't just be a hodgepodge of MOOCs, free courses, and low-cost community-college classes that students cobble together.

Mindful of that concern, many providers of those courses say they see themselves as a partial alternative to college, not a replacement.

Here are some of the most prominent free and free(ish) options:

### University of the People

This all-online institution [calls itself](#) the world's first nonprofit, tuition-free university "dedicated to opening the gates to higher education for all individuals." The university, which opened in 2009, now enrolls about 2,000 students, who pay nothing to attend, \$50 to apply, and just \$100 per course for an end-of-year examination, if they have the money.

While aimed primarily at students in parts of the world with fewer education options than in the United States, the university is approved by the State of California, [is accredited](#), and has attracted about a quarter of its students from the United States.



## Free Community College

Tennessee paved the way for free community college last year, with the [creation of the Tennessee Promise](#), a program that pays the cost of tuition and fees not covered by Pell Grants or state financial aid. Students may use the scholarship at any of the state's 13 community colleges, 27 colleges of applied technology, or other eligible institutions offering associate degrees. The program begins this fall.

Last week Oregon legislators followed suit, passing a bill that will [waive tuition](#) for students at community colleges as long as they have fewer than 90 college credits. As with the Tennessee program, the Oregon Promise scholarship will kick in after a student has received all other eligible federal and state aid.

To qualify for the award, students must have a 2.5 grade-point average in high school and maintain it in college. Each will be charged a \$50 "copay" per term. The program will start in the 2016-17 academic year, but with just a \$10-million budget allocation, it remains to be seen how extensive the program will be.

The state's Higher Education Coordinating Commission, which will carry out the program, may give preferences to students in certain high schools and districts. Oregon's program appears to be even more generous than Tennessee's; in Oregon, needy students whose cost of tuition is fully covered by Pell or state grants would still each receive \$1,000 a year for educational and living expenses, or proportionately less if they attend less than full time.

Ben Cannon, executive director of the commission, said lawmakers added the extra grant money to help ensure that "the tuition benefits under the program didn't flow exclusively to higher-income students, given the significant nontuition barriers that face many students who receive Pell [Grants]."

## Free Community College — for Some

Public two-year colleges in California have been charging students to attend since 1984, but thanks to Pell Grants and Cal Grants, and the colleges' need-based "fee waiver" program, nearly 46 percent of all community-college students in the state don't pay tuition.

In the 2013-14 academic year, the latest for which figures are available, more than one million financially needy Californians received a free education in the community colleges. Tuition there, by the way, is \$46 a credit, among the lowest in the country.

## ACE's Alternative-Credit Project

With a \$1.9-million grant from the Bill & Melinda Gates Foundation, the College Credit Recommendation Service of the American Council on Education is building what it calls an "ecosystem" of about 100 lower-division courses developed by nonaccredited providers that would be accepted for credit by accredited colleges and universities.

In December the project [selected an initial 25 institutions](#) (including two systems) as founding partners, which means they've agreed to grant credit for "all or most" of the courses at no or low cost to the students who have passed them. Within the next two weeks, the council plans to announce an additional 15, according to Deborah M. Seymour, the council's assistant vice president for education attainment and innovation.

The courses now under evaluation were developed by [seven companies and organizations](#), including a MOOC provider (edX) and a giant publishing company (Pearson). A few that initially signed up have dropped out, she said. The project has also already rejected some courses. The final list will be made public this fall.

The council already makes credit evaluations for courses developed by the U.S. military and companies like McDonald's. Ms. Seymour declined to say how many credits it authorizes for transfer a year. "We consider that proprietary," she said.

The new project builds on that expertise. Ms Seymour said the program's goal is to remove financial and bureaucratic barriers for students. Even with the new courses, she said, she still doubts that a student could use ACE-approved courses as a substitute for college. "This creates a clear pathway," she said, but "I still can't see a full degree, even at the associate's level."

### **Saylor Academy**

The academy, backed by the Saylor Foundation, has recruited professors from around the country to create online courses in a variety of subjects and to offer them free on its website. Saylor has submitted 20 courses for approval to the ACE alternative-credit project.

In addition, 11 of its courses (worth a total of 34 credits, or the equivalent of more than a year of college) were previously approved for credit by either the American Council on Education or the separate National College Credit Recommendation Service.

Students who pass are guaranteed that the credits will transfer to the academy's [13 college partners](#). Besides a \$25 fee for services by the test-monitoring company Proctor U, the only cost for students is the price of a self-addressed stamped envelope for transcripts for the courses approved by the credit-recommendation service, or at least \$40 for ACE transcripts.

Saylor also has a set of courses designed for students who plan to obtain credits via third-party assessments, such as those offered by the College Level Examination Program, or by institutions like Excelsior or Thomas Edison State Colleges. Some of the courses are designed to fill specific degree pathways at those institutions.

More than 100,000 people have taken Saylor courses, though only a few hundred of them have obtained college credit. The academy, a part of the foundation's focus on promoting open educational resources, is eager to advance its credit-focused ventures.

Through an arrangement with an as-yet-undisclosed corporate partner, it expects this fall to bring 10 more courses to ACE for review. The corporate partner has also promised to then promote the courses to its employees and others.

### **StraighterLine**

This for-profit company [offers](#) an unusual low-cost option, charging a \$99-a-month subscription plus a \$49-per-course fee. StraighterLine's offerings now total 60 courses. Its founder, [Burck Smith](#), said that with its approach, a student risks very little financially "until you succeed." At current prices, 10 courses a year costs a student \$1,300. The company also provides mentoring for students.

More than 80 colleges have signed on with StraighterLine as partners, which means they've formally agreed to accept the credits, often as part of particular degrees.

"You can get half your degree with us," said Mr. Smith, although he acknowledged that most students use the company's courses for smaller parts of their education. Last year 13,000 took at least one StraighterLine course, he said, and students have received credit for the courses at more than 600 colleges. The company is also one of the seven providers working with the ACE project.

## CAUGHT BETWEEN A CAP ON TUITION INCREASES AND CUTS IN STATE AID

*Katherine Mangan, Chronicle of Higher Education*

Michigan's public universities have complained for years about being underfunded, but there was one hoop that two of them weren't willing to jump through this year to earn every last dollar of their state appropriations.

That move was to limit their tuition increases to 3.2 percent, as the governor and lawmakers eager to score political points with constituents tried to require of them.

Instead, Oakland University and Eastern Michigan University raised their tuition rates for the coming year by about 8 percent. The money they'd get from the extra tuition, they figured, was about 10 times what they'd forfeit in performance-based funding as a consequence of exceeding the state's cap on tuition increases.

The backlash from students and lawmakers was predictable and swift, but leaders of both universities said the state had left them little choice after years of eroded support. Public money accounted for 71 percent of Oakland's budget in 1972, but it will make up just 16 percent in 2016, university officials said. The university, they added, receives the lowest level of public support per student in the state — \$2,903 in 2016, compared with a state average of \$5,182.

Across the country, similar patterns are occurring in states that have [disinvested in higher education](#) while pressuring colleges to keep a lid on costs, often through tuition caps. Colleges are chafing at the restrictions, which they say make it impossible for them to keep up with their own rising expenses.

Despite [glimmers of hope](#) that state spending may be increasing, the pressure to contain costs remains intense. And in Michigan, state appropriations remain 19 percent below their level five years ago, according to a [recent report](#) by the State Higher Education Executive Officers.

"When state funding is cut, tuition is one of the few levers we have to pull," George W. Hynd, Oakland's president, said in an interview on Thursday.

"It's a sad commentary that today the state corrections system is funded at a higher level than higher education," he added. The university needs the money for a recently approved strategic plan that calls for building improvements and new faculty and staff hires, he said.

State Sen. Tonya Schuitmaker, a Republican who leads the Senate subcommittee that oversees higher-education appropriations, wasn't buying that argument.

"It's disappointing that we have a university choosing to increase the financial burdens on their students rather than operate more efficiently," she wrote in a prepared statement. "This year Oakland University received a 2.6-percent increase in state funding, and the tuition cap allowed them to increase tuition by twice the rate of inflation."

Eleven other universities got smaller increases and still stayed within the cap, added Ms. Schuitmaker, who had previously criticized Eastern Michigan University for its move. One of her goals is making college affordable, she said, "and it's disappointing when universities don't seem to share the same goal."

Gov. Rick Snyder also pointed out, in a written statement, that all of the state's other universities had stayed within the cap.

### **Bucking the Legislature**

The tuition increases in Michigan raise questions about whether such limits, imposed in a growing number of states, really have teeth when universities can choose to ignore them. Michigan's decentralized system of higher education gives universities more leeway than public colleges in other states to set their own tuition rates.

And in most states, universities, or the boards of higher education that regulate them, will agree to a tuition cap rather than upset lawmakers who hold their fraying purse strings, said Dustin Weeden, a policy specialist with the National Conference of State Legislatures.

"I would guess most institutions go along with them to maintain a positive relationship with legislatures," waiting until the next round of budget negotiations to restate their cases, he said. "If an institution wants to raise tuition by 5 percent but the cap is 3 percent, is the additional revenue worth picking a fight with the legislature?"

In Michigan, it apparently was.

On Tuesday, Oakland's Board of Trustees voted to increase tuition for the coming academic year by 8.48 percent, or \$30 per credit for in-state freshmen. It also created a differential-tuition structure for academic programs, like nursing and engineering, that are in high demand and are more expensive to deliver.

By doing so, it forfeited \$1.2 million in "performance-based funding" that was available only if universities kept their increases under 3.2 percent. But the move will generate about \$12 million more tuition dollars than the university would have received if it had remained under the cap, university officials said.

The vote came three weeks after Eastern Michigan's Board of Regents raised its tuition by 7.8 percent. There, too, the \$1 million in state incentive pay the university forfeited will be more than offset by the \$10 million in added tuition revenue it will receive, according to Geoff Larcom, a university spokesman.

In a [news release](#) last month, Mr. Larcom said that over the past six years, Eastern Michigan had kept annual tuition increases under 4 percent despite cuts in state support and that it remained one of the most affordable universities in the state. "We were practicing tuition restraint before there was a state cap," he said.

Both Eastern Michigan and Oakland also pointed out that some of the money generated by the tuition increases will pay for additional financial aid for their steadily growing student bodies.

The only university that has exceeded the state's tuition cap in the past is Wayne State University, which two years ago raised its tuition by 8.9 percent. That increase provided it with an additional \$7 million in tuition revenue.

### **Other States' Approaches**

Other states' tuition caps are not always especially restrictive; a few years ago, Florida's and Colorado's caps were 15 percent and 9 percent, respectively, Mr. Weeden said. Those have dropped to about 6 percent.

In Missouri, by contrast, colleges that raise tuition [beyond the level of inflation](#) have to return 5 percent of their state appropriations, although waivers are occasionally granted, Mr. Weeden said.

Kansas lawmakers this year ordered the six state universities governed by the Kansas Board of Regents to cap tuition increases at 3.6 percent. The regents did so, reluctantly, last month as part of a deal that spared the universities steep budget cuts.

"The Board of Regents maintains that the responsibility for setting tuition and fees at state universities is the responsibility of the board," Shane Bangerter, who recently became the board's chair, said in a [statement](#) released by the board in June. "However," he added, "we are appreciative to legislative leadership, and the legislature as a whole, for holding higher-education funding flat during this difficult budget year."

**ONE PROPOSAL TO HELP POOR STUDENTS GET TO COLLEGE: PAY TO SEND THEM EARLY**

*Moriah Balingit, The Washington Post*

In the push to get more young people from poor households to attend college, some schools have taken an aggressive approach: Enroll them in college classes while they are still in high school.

The concept is called “early college high school” and has been tried in several states and the District of Columbia. The idea is to help high school students take college-level courses — sometimes within the confines of their own school, and sometimes on a college campus — before they have a high school diploma. Unlike Advanced Placement courses, which require students to pass a single end-of-course exam with a certain score to earn college credit, early college high school programs often offer college coursework free of charge and students gain college credit if they pass the course.

The purpose is to give students who might be intimidated by college a taste of it in a low-pressure environment while also reducing the overall cost of obtaining a college degree. Some programs allow students to graduate with both an associate’s degree and a high school diploma.

Now, Sen. Mark Warner (D-Va.), the first in his family to graduate college, wants to give some high school students access to Pell grants to pay for college coursework. Under the proposal, Pell grants could defray the costs to the high schools that are already footing the bill for college coursework for low-income students. The longstanding Pell program has helped millions of poor students attend college by providing them grants.

“First-generation students are not only going to be able to knock off a semester in high school, but as a first-generation college student, seeing you can do college work and that it’s not that intimidating is terribly important as well,” Warner said Wednesday at a briefing on Capitol Hill.

The proposal is sponsored by Warner, Sen. Rob Portman (R-Ohio) and Reps. Marcia Fudge (D-Ohio) and Chris Gibson (R-N.Y.). The grants would only be available to students in schools that are designated early college high schools. Many early college high schools already shoulder the costs of sending students to college classes, so the grants would lessen the burden for the schools.

The proposal is being offered as an amendment to the Higher Education Act, which Congress may take up this summer.

## THE SHRINKING SECTOR

*Doug Lederman, Inside Higher Ed*

As enrollments tumble at for-profit colleges, the number of proprietary institutions is dwindling, too.

[Data released](#) by the Education Department's National Center for Education Statistics Thursday show that 3,436 for-profit colleges participated in federal financial aid programs in the just-ended academic year, down 2.6 percent, from 3,527 such institutions two years earlier, in the 2012-13 academic year.

For all the talk about the financial vulnerability of private nonprofit colleges in the wake of recent campus closures (and near closures), meanwhile, the number of such institutions actually increased marginally from 2012-13 to 2014-15, as seen in the table below. And the number of public colleges dipped by just under 1 percent.

### Title IV-Eligible Institutions

	2012-13	2013-14	2014-15	% Change, 2012-13 to 2014- 15
Total	7,416	7,397	7,310	-1.5%
Public	2,009	2,008	1,991	-0.9%
Private Nonprofit	1,880	1,892	1,883	0.2%
For-Profit	3,527	3,497	3,436	-2.6%

Most of the decline among for-profit institutions occurred in four-year institutions (from 790 to 738) and two-year institutions (1,042 to 965), while the number of fewer-than-two-year campuses rose, to 1,733 from 1,695.

The erosion of for-profit campuses is not surprising, given the various forces -- regulatory and financial -- that have been buffeting the sector.

The NCES report also provides data on enrollments, which parallel those [already reported](#) in [recent months](#) by the National Student Clearinghouse. The clearinghouse's more timely enrollment reports provide year-over-year comparisons each semester; the federal data, from the Integrated Postsecondary Education Data System, provide unduplicated annual enrollments for a full academic year, in this case 2013-14 (a year earlier than the institutional numbers).

The data show that postsecondary enrollment over all dropped by 4.2 percent over two years, with undergraduate enrollment falling by 4.8 percent and graduate enrollment by 1.6 percent.



The overall numbers were skewed heavily by declines in the for-profit sector, at all degree levels, and by a 7.5 percent drop in community college enrollment from 2011-12 to 2013-14, as seen in the table below.

### 12-Month Unduplicated Head Count Enrollment, Title IV institutions

	2011-12	2012-13	2013-14	% Change, 2011-12 to 2013- 14
Total	29,041,553	28,305,025	27,883,323	-4.2%
Undergraduate	25,205,671	24,524,988	24,058,253	-4.8%
Graduate	3,835,862	3,780,037	3,775,070	-1.6%
<b>4-year</b>				
Public	9,731,959	9,677,135	9,759,129	0.3%
Private Nonprofit	4,738,223	4,807,850	4,819,214	1.7%
For-Profit	2,509,477	2,311,768	2,159,520	-16.2%
<b>2-Year</b>				
Public	10,626,384	10,211,926	9,887,224	-7.5%
Private Nonprofit	71,279	59,869	58,637	-21.6%
For-Profit	734,955	657,232	598,676	-22.8%
<b>Fewer than 2 Year</b>				
Public	91,041	84,307	73,975	-23.1%
Private	20,869	17,620	17,221	-21.2%
For-Profit	517,446	477,318	459,727	-12.6%





Interested in these emerging technology topics? Learn more about them and other edtech insights by “liking” us on Facebook at [facebook.com/newmediaconsortium](https://facebook.com/newmediaconsortium) and on Twitter at [twitter.com/nmcorg](https://twitter.com/nmcorg).



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## **The NMC Horizon Report: 2015 Higher Education Edition**

is a collaboration between The NEW MEDIA CONSORTIUM and The EDUCAUSE Learning Initiative, an EDUCAUSE Program.

The research behind the *NMC Horizon Report: 2015 Higher Education Edition* is jointly conducted by the New Media Consortium (NMC) and the EDUCAUSE Learning Initiative (ELI), an EDUCAUSE Program. The ELI's critical participation in the production of this report and their strong support for the NMC Horizon Project is gratefully acknowledged. To learn more about ELI, visit [www.educause.edu/eli](http://www.educause.edu/eli); to learn more about the NMC, visit [www.nmc.org](http://www.nmc.org).

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## Executive Summary

**W**hat is on the five-year horizon for higher education institutions? Which trends and technologies will drive educational change? What are the challenges that we consider as solvable or difficult to overcome, and how can we strategize effective solutions? These questions and similar inquiries regarding technology adoption and educational change steered the collaborative research and discussions of a body of 56 experts to produce the *NMC Horizon Report: 2015 Higher Education Edition*, in partnership with the EDUCAUSE Learning Initiative (ELI). The *NMC Horizon Report* series charts the five-year horizon for the impact of emerging technologies in learning communities across the globe. With more than 13 years of research and publications, it can be regarded as the world's longest-running exploration of emerging technology trends and uptake in education.

The experts agreed on two long-term trends: advancing learning environments that are flexible and drive innovation, as well as increasing the collaboration that takes place between higher education institutions. These are just two of the 18 topics analyzed in the *NMC Horizon Report: 2015 Higher Education Edition*, indicating the key trends, significant challenges, and important technological developments that are very likely to impact changes in higher education across the world over the next five years.

Regarding the challenges for universities and colleges, improving digital literacy is considered one of the solvable challenges. It is already being addressed by actions at individual institutions. At The Open University in the UK, they developed the "Digital and Information Framework" to standardize and implement better digital literacy training in their curriculum. Cornell University also has made available online resources for learning key technology skills. On the other hand, the experts identified rewarding teachers for innovative and effective pedagogy as a wicked challenge — one that is impossible to define, let alone solve. Many institutions provide more incentives for research over exemplary teaching.

In view of the trends and challenges observed, the panel also signalled the technological developments that could support these drivers of innovation and change. Bring Your Own Device (BYOD) and the flipped

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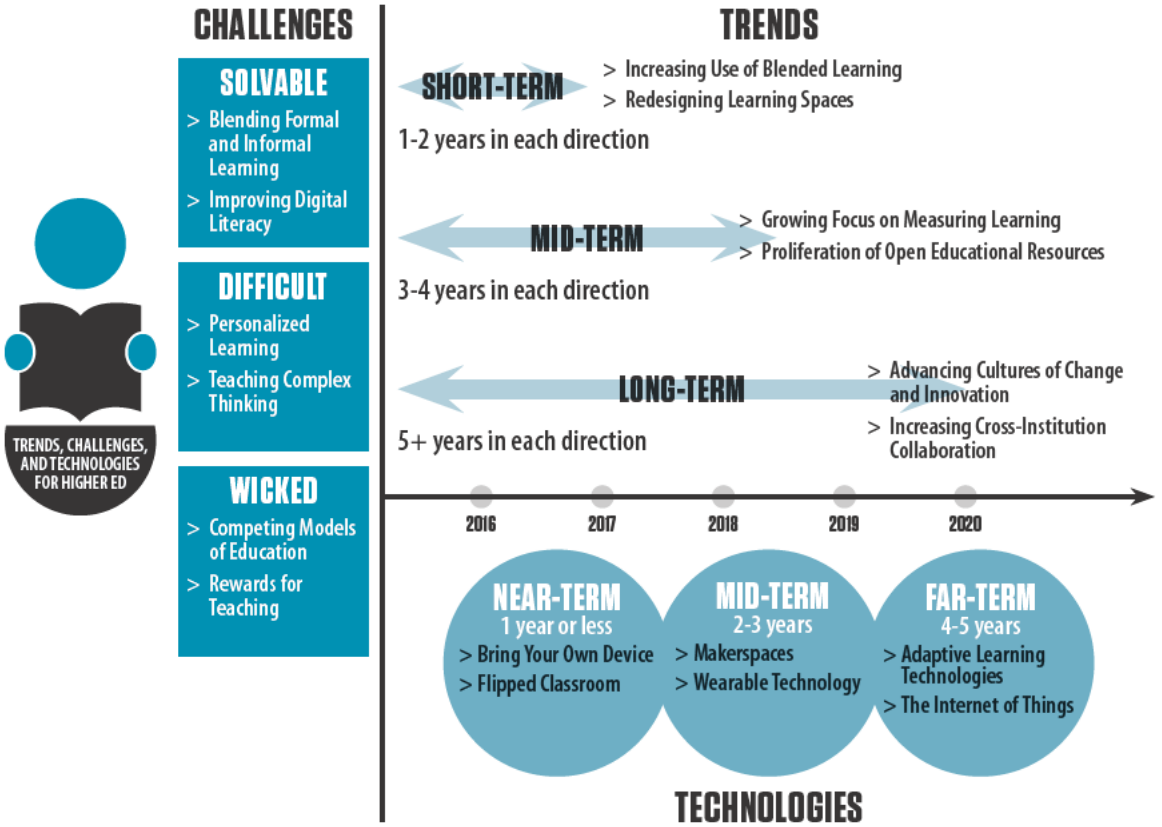
**With more than 13 years of research and publications, the NMC Horizon Project can be regarded as the world's longest-running exploration of emerging technology trends and uptake in education.**

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classroom are expected to be increasingly adopted by institutions in one year's time or less to make use of mobile and online learning. The time-to-adoption for makerspaces and wearable technology are estimated within two to three years, while adaptive learning technologies and the Internet of Things is expected to be mainstream in universities and colleges within four to five years.

The three key sections of this report constitute a reference and straightforward technology-planning guide for educators, higher education leaders, administrators, policymakers, and technologists. It is our hope that this research will help to inform the choices that institutions are making about technology to improve, support, or extend teaching, learning, and creative inquiry in higher education across the globe. Education leaders worldwide look to the NMC Horizon Project and both its global and regional reports as key strategic technology planning references, and it is for that purpose that the *NMC Horizon Report: 2015 Higher Education Edition* is presented.

Topics from the NMC Horizon Report > 2015 Higher Education Edition



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## Introduction

In the pages that follow, 18 topics carefully selected by the 2015 Horizon Project Higher Education Expert Panel related to the educational applications of technology are examined, all of them areas very likely to impact technology planning and decision-making over the next five years (2015-2019). Six key trends, six significant challenges, and six important developments in educational technology are placed directly in the context of their likely impact on the core missions of universities and colleges, and detailed in succinct, non-technical, and unbiased presentations. Each has been tied to essential questions of relevance, policy, leadership, and practice.

The *NMC Horizon Report: 2015 Higher Education Edition* was produced by the NMC in collaboration with the EDUCAUSE Learning Initiative. The internationally recognized *NMC Horizon Report* series and regional *NMC Technology Outlooks* are part of the NMC Horizon Project, a comprehensive effort established in 2002 by the NMC that identifies and describes emerging technologies likely to have a large impact over the coming five years in education around the globe. The *NMC Horizon Report: 2015 Higher Education Edition* is the 12th in the annual higher education series of reports and is produced by the NMC in collaboration with the EDUCAUSE Learning Initiative (ELI).

Key trends, challenges, and technological developments that are detailed here will directly inform policy, leadership, and practice at all levels impacting universities and colleges. This report aims to help universities, governing boards, and education leaders to strategically approach the further evolution of teaching, learning, and creative inquiry. Each topic has been carefully researched and framed in the context of its potential impact on global higher education.

The report's first two sections focus on an analysis of trends driving technology decision-making and planning, and the challenges likely to impede the adoption of new technologies, respectively. Each includes an explicit discussion of the trend or challenge's implications for policy, leadership, and practice in universities and colleges, along with examples and relevant readings.

The third section, in which six important developments in educational technology are described, is ultimately framed by these trends and challenges. The adoption or abandonment of these technologies by higher education institutions will be very much determined by the responses taken across the globe to these drivers of and obstacles to innovation and change.

Each of the four global editions of the *NMC Horizon Report* — higher education, primary and secondary education (K-12), museum, and library — highlights six emerging technologies or practices that are likely to enter mainstream use within their focus sectors over the next five years. Key trends and challenges that will affect current practice over the same period frame these discussions. The discussions of trends and technologies have been organized into three time-related categories; challenges are discussed within a similar three-part framework related to the scope of the challenge.

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**Key trends, challenges, and technological developments that are detailed here will directly inform policy, leadership, and practice at all levels impacting universities and colleges.**

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Each topic closes with an annotated list of suggested readings and additional examples that expand on the discussion in the report. These resources, along with a wide collection of other helpful projects and readings, can all be found in the project's open content database that is accessible via the free NMC Horizon EdTech Weekly App for iOS<sup>1</sup> and Android devices.<sup>2</sup> All the background materials for the *NMC Horizon Report: 2015 Higher Education Edition*, including the research data, the preliminary selections, the topic preview, and this publication, can be downloaded for free on iTunes U.<sup>3</sup>



The process used to research and create the *NMC Horizon Report: 2015 Higher Education Edition* is rooted in the methods used across all the research conducted within the NMC Horizon Project. All editions of the *NMC Horizon Report* are informed by both primary and secondary research. Dozens of meaningful trends, challenges, and emerging technologies are examined for possible inclusion in the report for each edition.

Every report draws on the considerable expertise of an international expert panel that first considers a broad set of important trends, challenges, and emerging technologies, and then examines each of them in progressively more detail, reducing the set until the final listing of trends, challenges, and technologies is selected. This process takes place online, where it is captured in the NMC Horizon Project wiki. The wiki is intended to be a completely transparent window into the work of the project, one that not only provides a real-time view of the work as it happens, but also contains the entire record of the process for each of the various editions published since 2006. The wiki used for the *NMC Horizon Report: 2015 Higher Education Edition* can be found at [horizon.wiki.nmc.org](http://horizon.wiki.nmc.org).

The panel was composed of 56 technology experts from 17 countries on six continents this year; their names and affiliations are listed at the end of this report. Despite their diversity of backgrounds and experience, they share a consensus view that each of the profiled technologies is going to have a significant impact on the practice of higher education around the globe over the next five years. The key trends driving interest in their adoption, and the significant challenges higher education institutions will need to address if they are to reach their potential, also represent their perspective.

The procedure for selecting the topics in the report is based on a modified Delphi process refined over the now 13 years of producing the *NMC Horizon Report* series, and began with the assembly of the panel. The panel represents a wide range of backgrounds, nationalities, and interests, yet each member brings a relevant expertise. Over the decade of the NMC Horizon Project research, more than 1,200 internationally recognized practitioners and experts have participated on the panels; in any given year, a third of panel members are new, ensuring a flow of fresh perspectives each year. Nominations to serve on the expert panel are encouraged; see [go.nmc.org/horizon-nominate](http://go.nmc.org/horizon-nominate).

Once the panel for a particular edition is constituted, their work begins with a systematic review of the literature — press clippings, reports, essays, and other materials — that pertains to emerging technology. Members are provided with an extensive set of

background materials when the project begins, and are then asked to comment on them, identify those that seem especially worthwhile, and add to the set. The group discusses existing applications of emerging technology and brainstorms new ones. A key criterion for the inclusion of a topic in this edition is its potential relevance to teaching, learning, and creative inquiry in higher education. A carefully selected set of RSS feeds from hundreds of relevant publications ensures that background resources stay current as the project progresses. They are used to inform the thinking of the participants.

Following the review of the literature, the expert panel engages in the central focus of the research — the research questions that are at the core of the NMC Horizon Project. These questions were designed to elicit a comprehensive listing of interesting technologies, challenges, and trends from the panel:

**1 Which of the key technologies catalogued in the NMC Horizon Project Listing will be most important to teaching, learning, or creative inquiry within the next five years?**

**2 What key technologies are missing from our list? Consider these related questions:**

- > What would you list among the established technologies that some higher education institutions are using today that arguably all institutions should be using broadly to support or enhance teaching, learning, or creative inquiry?
- > What technologies that have a solid user base in consumer, entertainment, or other industries should higher education institutions be actively looking for ways to apply?
- > What are the key emerging technologies you see developing to the point that higher education institutions should begin to take notice during the next four to five years?

**3 What trends do you expect to have a significant impact on the ways in which higher education institutions approach our core missions of teaching, learning, and creative inquiry?**

**4 What do you see as the key challenges related to teaching, learning, or creative inquiry that higher education institutions will face during the next five years?**

In the first step of this approach, the responses to the research questions are systematically ranked and

placed into adoption horizons by each expert panel member using a multi-vote system that allows members to weight and categorize their selections. These are compiled into a collective ranking, and inevitably, the ones around which there is the most agreement are quickly apparent.

From the comprehensive list of trends, challenges, and technologies originally considered for any report, the dozen that emerge at the top of the initial ranking process in each area are further researched and expanded. Once these interim results are identified, the group explores the ways in which these topics impact teaching and learning in higher education institutions. A significant amount of time is spent researching real and potential applications for each of the topics that would be of interest to practitioners. For every edition, when that work is done, each of these interim results topics is written up in the format of the *NMC Horizon Report*. With the benefit of the full picture of how the topic will look in the report, the topics in the interim results are then ranked yet again, this time in reverse. The final topics selected by the expert panel are those detailed here in the *NMC Horizon Report: 2015 Higher Education Edition*.

## Key Trends Accelerating Technology Adoption in Higher Education

**T**he six trends described in the following pages were selected by the project's expert panel in a series of Delphi-based voting cycles, each accompanied by rounds of desktop research, discussions, and further refinements of the topics. These trends, which the members of the expert panel agreed are very likely to drive technology planning and decision-making over the next five years, are sorted into three movement-related categories — long-term trends that typically have already been impacting decision-making, and will continue to be important for more than five years; mid-term trends that will likely continue to be a factor in decision-making for the next three to five years; and short-term trends that are driving edtech adoption now, but will likely remain important for only one to two years, becoming commonplace or fading away in that time.

While long-term trends have already been the topic of many education leaders' discussions and extensive research, short-term trends often do not have an abundance of concrete evidence pointing to their effectiveness and future directions. All of the trends listed here were explored for their implications for higher education in a series of online discussions that can be viewed at [horizon.wiki.nmc.org/Trends](http://horizon.wiki.nmc.org/Trends).

The NMC Horizon Project model derived three meta-dimensions that were used to focus the discussions of each trend and challenge: policy, leadership, and practice. Policy, in this context, refers to the formal laws, regulations, rules, and guidelines that govern universities and colleges; leadership is the product of experts' visions of the future of learning, based on research and deep consideration; and practice is where new ideas and pedagogies take action, in universities and related settings.

**Policy.** While all of the identified trends had policy implications, two trends in particular are expected to have a strong impact on policy decisions in the next five years. The proliferation of open educational resources has emerged as a major topic of interest to national governments and universities, but requires effective policy to become mainstream in practice. The European Commission's Institute for Prospective Technological Studies (IPTS) launched the "Opening Up Education" to assist in the formulation of guidelines in OER adoption and implementation.<sup>4</sup>

Likewise, measuring learning through data-driven practice and assessment, currently on the rise in universities in the developed world, will reach its maximum impact in higher education in about three to five years, but many leading institutions are moving considerably faster. The Open University in the UK has created policies that support the ethical use of learning analytics,<sup>5</sup> and in the US, the recent Asilomar Conference convened educators, data scientists, and legal scholars to develop a framework to influence policy.<sup>6</sup>

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**These trends, which the members of the expert panel agreed are very likely to drive technology planning and decision-making over the next five years, are sorted into three movement-related categories.**

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**Leadership.** While there are leadership implications for all the identified trends that are discussed in the following pages, two trends stand out as unique opportunities for vision and leadership. The redesign of learning spaces requires initiative to imagine how the physical set-up of classrooms can better accommodate progressive teaching, but also how to share those ideas broadly. Launched by SUNY's University at Buffalo, FLEXspace is an interactive online database that highlights best practices in design from universities all over the world.<sup>7</sup>

A long-term trend is the growth of collaboration between different higher education institutions. This trend reflects the notion that innovation can scale better when ideas are shared between institutions. The University of California Riverside is a notable example, co-founding the University Innovation Alliance with ten other universities to investigate emerging technologies and determine how they can best scale.<sup>8</sup>

**Practice.** Each of the six trends identified by the expert panel has numerous implications for teaching and learning practice, and current examples are easy to find. The increase of blended learning, highlighted as one of two developing short-term trends in the following pages, is bringing both technical and pedagogical enhancements to online and blended learning. Channel 9, for example, is a website that encompasses a library of training resources in computer coding and programming, with streaming videos and interactive events.<sup>9</sup>

All over the world, universities and colleges have been gradually rethinking how their organizations and infrastructures can be more agile. The thought is that if institutions are more flexible, they will be better able to support and promote entrepreneurial thinking — a long-term trend. At the University of Florida, the Innovation Academy acts as an incubator for students to plan and develop products and businesses, and even seek external funding.<sup>10</sup>

The following pages provide a discussion of each of the trends highlighted by this year's expert panel that includes an overview of the trend, its implications, and a set of curated recommendations for further reading on the topic.

# Advancing Cultures of Change and Innovation

## Long-Term Trend: Driving Ed Tech adoption in higher education for five or more years

**M**any thought leaders have long believed that universities can play a major role in the growth of national economies. Research universities are generally perceived as incubators for new discoveries and innovations that directly impact their local communities and even the global landscape.<sup>11</sup> In order to breed innovation and adapt to economic needs, higher education institutions must be structured in ways that allow for flexibility, and spur creativity and entrepreneurial thinking. There is a growing consensus among many higher education thought leaders that institutional leadership and curricula could benefit from agile startup models. Educators are working to develop new approaches and programs based on these models that stimulate top-down change and can be implemented across a broad range of institutional settings.<sup>12</sup> In the business realm, the Lean Startup movement uses technology as a catalyst for promoting a culture of innovation in a more widespread, cost-effective manner, and provides compelling models for higher education leaders to consider.<sup>13</sup>

### Overview

This topic reflects a broader trend in society in which businesses are adapting their strategies to remain relevant to consumers. A well-known example is the publishing industry, which has transitioned their focus in the past decade from print to digital to keep pace with the rapidly changing technology landscape. Similarly, many companies that once manufactured hardware and software packages have shifted to providing cloud-based services. In the business of higher education, the consumers are the students, and there is a need to better cater to them as their expectations and behaviors evolve. In many ways, this shift is being driven by the technologies that students use in their daily lives and that extend to learning. For example, once it was clear that smartphones could play a major role in teaching and learning, institutions updated their infrastructures to accommodate BYOD programs. In this sense, it has become the responsibility of universities to foster environments that accelerate learning and creativity.<sup>14</sup>

The onus is on universities to create the conditions for innovation to happen. In a recent speech to the

Detroit Economics Club, the outgoing University of Michigan president asserted that the institution could be paramount in promoting more entrepreneurship throughout the state.<sup>15</sup> She emphasized the need for universities to establish policies that spur more creativity and encourage more risk-taking, collaboration, and activities that more accurately reflect the contemporary workplace. Bringing university organizational models into the future can translate into advancing local and global economies and cultures. A university lecturer and researcher from the University of Tampere in Finland published “The Roles of Universities in the Chinese Innovation Systems,” which showed a correlation between universities that emphasize technology use in improving China’s economy, especially in cultivating more technologically savvy graduates.<sup>16</sup>

Attitude is also key in adopting more organizational flexibility and innovative practices. The SUNY System hosted a conference in late 2014 — “Higher Education Reconsidered: Executing Change to Drive Collective Impact” — to identify tactics for SUNY universities to be more agile and forward-thinking. Their goal is to develop leadership that “understands the science of change,” systems that are more adaptive, and a culture that relies more on real evidence and data for decision making.<sup>17</sup> The US Department of Commerce published a report entitled “The Innovative and Entrepreneurial University,” which depicted the ways in which universities around the country are nurturing entrepreneurship within their infrastructure. Many examples highlight partnerships between the institutions with businesses and government agencies, including Clemson University’s International Center for Automotive Research.<sup>18</sup>

### Implications for Policy, Leadership, or Practice

There is a need for policies that more aggressively support agility. The European Commission’s “Modernizing Universities” agenda focuses on implementing reform in higher education by restructuring institutions to enable faculty and students to be more active participants in the global marketplace of research and innovation. The EC’s goals include stimulating a more open research environment, fostering stronger partnerships with businesses, and rethinking how qualifications are recognized.<sup>19</sup> In the US, university consortia are

leading the charge. The Association of American Universities is dedicated to spreading innovation across campuses. They are championing a number of agendas and policies, including the Task Force on American Innovation, which advocates for greater government investments in innovative research projects in the fields of physical science and engineering.<sup>20</sup> They also work with universities, government agencies, and businesses to implement more policies and university competitions that stimulate innovation and economic growth.<sup>21</sup>

It will require visionary leadership to build higher education environments that are equipped to quickly change processes and strategies as startups do. If these organizational models are designed well, universities can experience more efficient implementation of new practices and pedagogies. Aalborg University in Denmark is designed to spur more creativity and entrepreneurship, as it is a problem-based learning (PBL) university with the central values of interdisciplinary studies and innovation.<sup>22</sup> UNESCO has placed its only Danish Chair at the university to oversee the continued development of the PBL model as it relates to students and faculty solving local and global issues.<sup>23</sup>

There are many opportunities for higher education institutions to become leaders in promoting innovation across their campuses. The University of Florida, for example, launched the Innovation Academy, a community of students from more than 30 majors who are mentored in the areas of entrepreneurship and creativity. These students are encouraged to start and grow their own small businesses.<sup>24</sup> Similarly, the Singapore Management University's Institute of Innovation and Entrepreneurship helps faculty and students grow their own businesses through a variety of competitions and initiatives. Thus far, they have raised \$3.7 million in grant funding and \$9.4 million more in follow-up funding to further invest in the 110 companies they have helped generate.<sup>25</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about advancing cultures of change and innovation:

### A New Vision for California Higher Education:

#### A Model Public Agenda

[go.nmc.org/vision](http://go.nmc.org/vision)

(Nancy Shulock et al., Institute for Higher Education Leadership & Policy, March 2014.) This report constructs a model public agenda for California higher education that is more dynamic than the current state. > [Policy](#)

### Report to the European Commission on New Modes of Learning and Teaching in Higher Education

[go.nmc.org/highlev](http://go.nmc.org/highlev)

(European Commission, October 2014.) The European Commission's High-Level Group on the Modernization of Higher Education has created guidelines for governments and institutions to develop comprehensive strategies at both the national and institutional level for the adoption of new modes of learning and teaching.

> [Policy](#)

### Creating an Ever-Flexible Center for Tech Innovation

[go.nmc.org/everflex](http://go.nmc.org/everflex)

(Avi Wolfman-Arent, 10 August 2014.) A collaboration between Cornell University and the Technion-Israel Institute of Technology seeks to create an environment that allows for repurposing of materials, supports variety and accessibility, and promotes agility in technology experimentation. > [Leadership](#)

### Looking to Future, Educators and Policymakers See Universities as Agents for Change

[go.nmc.org/agents](http://go.nmc.org/agents)

(Daniel Day, Princeton University, 11 April 2014.) Leaders and policymakers from across the globe met this past year in Paris at the Princeton-Fung Global Forum to discuss how universities can anticipate, influence, and drive change. > [Leadership](#)

### Universities Must Adapt to Evolution of Student Body

[go.nmc.org/must](http://go.nmc.org/must)

(Anthony Davis and Michael Whalen, *The Chronicle Herald*, 18 November 2014.) This article argues that universities in Nova Scotia transferring to hybrid delivery could eliminate the need for multiple small departments across each university campus in favor of significant centers of excellence at each institution.

> [Leadership](#)

### Education-as-a-Service: 5 Ways Higher Ed Must Adapt to a Changing Market

[go.nmc.org/eaas](http://go.nmc.org/eaas)

(Ryan Craig, *Venture Beat*, 11 May 2014.) This article argues that higher education will soon transition from selling expensive degree programs to "Education-as-a-Service," and explains lessons colleges and universities can learn from SaaS market leader Salesforce. > [Practice](#)

### Online Skills Mastery - Training for Faculty

[go.nmc.org/osm](http://go.nmc.org/osm)

(University of Colorado Denver, accessed 8 January 2015.) University of Colorado Denver created and implemented a ten-week Online Skills Mastery training program to prepare online instructors to excel in teaching and reward them for professional development through a badging program. > [Practice](#)

# Increasing Cross-Institution Collaboration

## Long-Term Trend: Driving Ed Tech adoption in higher education for five or more years

**C**ollective action among universities is growing in importance for the future of higher education. More and more, institutions are joining consortia — associations of two or more organizations — to combine resources or to align themselves strategically with innovation in higher education. Today's global environment is allowing universities to unite across international borders and work toward common goals concerning technology, research, or shared values. Support behind technology-enabled learning in higher education classrooms has reinforced the trend toward open communities and university consortia, as educators and administrators recognize collective action as a sustainable method of supporting upgrades in technological infrastructure and IT services.

### Overview

The tradition of university associations and consortia originates in the early 20th century in the US, when universities began aligning with one another to meet common goals. Although purposes for creating consortium have grown more varied over time, the oldest collegiate partnerships were based on creating a network for which every associated institution could benefit from a collective pool of resources. One of the oldest consortia, Claremont Colleges, was established in 1925 and today joins five undergraduate colleges and two graduate universities. While each institution rewards degrees independently, enrolled students have access to specialized programs and expensive facilities of the partner schools outside of their institution.

A sense of solidarity with learners is leading institutions to join together with the objective of increasing accessibility, affordability, and the quality of education on a global scale. The World University Consortium, for example, operates under these values, adopting a human-centric approach to education, developing a system that leverages online and hybrid learning strategies to reach people of all ages globally.<sup>26</sup> Technology also plays a key role in the creation of consortia. Universities are increasingly competitive environments, and campuses must constantly review and upgrade infrastructure to optimize their capacity. Deemed as a long-term trend, the prevalence of consortia underscores a vision of institutions as

belonging to part of a larger ecosystem in which long-term survival and relevance in higher education relies on the mutually beneficial partnerships.

Emerging consortia are founded with the express purpose of helping institutions continuously adopt best practices for digital learning. Founded in 2014, Unizin is a non-profit association that aims to create a common, scalable digital infrastructure through its role as a cloud-based services operator.<sup>27</sup> Steered by its members, Unizin offers content, platforms, and analytics that are sourced from its community of the nation's top research institutions. Among the first commercial services offered to its members at scale is Canvas by Infrastructure, an open source LMS that aligns with Unizin's commitment to global open standards.<sup>28</sup> Guided by its focus on interoperability and open standards, Unizin will continue to develop services that help members to manage content their students and faculty create; to share this content across universities cost effectively; to promote interoperability among systems for teaching and learning; and to facilitate learning analytics with the aim of improving student outcomes.<sup>29</sup>

### Implications for Policy, Leadership, or Practice

Institutional policies often dictate the nature of consortia that university leaders are seeking. Carnegie Mellon University (CMU), for example, has a strong ethos about open access and open data for scholarly communications. This approach has been called strategic by the institution's president who has underlined the importance of developing sustainable financial models for open access in order to disseminate works as broadly as possible.<sup>30</sup> This is underscored by CMU's membership in the Open Cloud Consortium (OCC), an open cloud computing infrastructure that facilitates community based science, in which researchers from member institutions, including the University of Chicago and Johns Hopkins University among others, can compile, analyze, and share huge data sets via the Open Science Data Cloud. Bolstered by the shared cloud computing service, researchers from CMU can work collaboratively with other scientists in a common area, increasing the efficacy and speed of research activities.

Joining a consortium is often an institution's way of

defining its position as a leader of innovation and progress in a certain area. In a recent interview with *The Chronicle of Higher Education*, the Chancellor of University of California at Riverside discussed how the institution has managed to evolve with student success as a focal point.<sup>31</sup> UC Riverside is a large public institution with a socio-economically diverse student population, yet it has fostered a system in which the number of underrepresented minority and low-income students graduate at the same rate as the campus average. In 2014, UC Riverside became one of 11 founding members of the University Innovation Alliance, a consortium dedicated to making high-quality degrees accessible to all students regardless of background. This specialized group of large, public research universities will be experimenting with new technologies, such as predictive analytics, in order to build on their success and bring innovation to scale.<sup>32</sup>

BCNET is a consortium that has a long history of helping its members upgrade and maintain their technological infrastructure and IT services. Since 1998, BCNET has been unifying British Columbia's public, post secondary sector as they explore and develop solutions to mutual IT challenges, bringing together 25 public universities and 18 research institutions in the region. In BCNET's 2014 annual report, *ROC: Return on Collaboration*, the consortium presented several examples of successful initiatives at member sites, including an account of how BCNET engineers helped Kwantlen Polytechnic University (KPU) build the IT foundation to realize its vision for 2018. In order to achieve its goals of 5% annual growth, expansion of continuing and professional studies, and improvement in learner engagement and retention, KPU turned to BCNET to support them as they planned and implemented a strategy that incorporates a high-capacity campus network and cloud video conferencing services at scale.<sup>33</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about increasing cross-institution collaboration:

### More Collaboration Needed to Fix Higher Education, Experts Say

[go.nmc.org/morecoll](http://go.nmc.org/morecoll)

(Carla Rivera, *Los Angeles Times*, 23 January 2014.) A recent report by the nonprofit California Competes proposes the creation of an autonomous citizens' Higher Education Investment Board that would collect data and help inform policy decisions by the governor, legislature, and leaders of public and private institutions.

> [Policy](#)

### Competency-Based Education Network

[go.nmc.org/c-ben](http://go.nmc.org/c-ben)

(Competency-Based Education Network, accessed 4 January 2015.) The Competency-Based Education Network is a group of colleges and universities working to address challenges in designing, developing, and scaling competency-based degree programs.

> [Leadership](#)

### Global University Network for Innovation

[go.nmc.org/guni](http://go.nmc.org/guni)

(GUNI, accessed 4 January 2015.) GUNI is an international network supported by three partner institutions — UNESCO, the United Nations University, and the Catalan Association of Public Universities — that encourages higher education institutions to redefine their role, embrace the process of transformation, and strengthen their critical stance within society. > [Leadership](#)

### Innovative Internet Drives Collaborative EU-Central Asian Research and Education

[go.nmc.org/caren](http://go.nmc.org/caren)

(Central Asia Research and Education Network, 1 October 2014.) The data network for research and education in Central Asia, CAREN, has connected with GÉANT, a pan-European network that will increase the capacity and efficiency of over 300 universities and research centers across Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan. > [Leadership](#)

### The Open Education Consortium

[go.nmc.org/oec](http://go.nmc.org/oec)

(OE Consortium, accessed 5 January 2015.) The Open Education Consortium is a worldwide community of hundreds of higher education institutions and associated organizations committed to advancing open education and its impact on global education.

> [Leadership](#)

### University Innovation Alliance

[go.nmc.org/uia](http://go.nmc.org/uia)

(University Innovation Alliance, accessed 12 January 2015.) The University Innovation Alliance is a group of 11 universities across the country that have organized to test and scale solutions to problems of access and graduation in higher education. > [Leadership](#)

### 7 Ways Higher Ed Institutions are Increasingly Joining Forces

[go.nmc.org/seven](http://go.nmc.org/seven)

(Keith Button, *Education Dive*, 18 December 2014.) Collaboration between institutions is key to scaling sustainable technology efforts. Colleges and universities are sharing cloud-based supercomputing tools, data storage, and online course material and platforms.

> [Practice](#)



## Growing Focus on Measuring Learning

### Mid-Term Trend: Driving Ed Tech adoption in higher education for three to five years

**T**here is an increasing interest in using new sources of data for personalizing the learning experience, for ongoing formative assessment of learning, and for performance measurement; this interest is spurring the development of a relatively new field — data-driven learning and assessment. A key element of this trend is learning analytics, the application of web analytics, a science used by businesses to analyze commercial activities that leverages big data to identify spending trends and predict consumer behavior. Education is embarking on a similar pursuit into data science with the aim of learner profiling, a process of gathering and analyzing large amounts of detail about individual student interactions in online learning activities.<sup>34</sup> The goal is to build better pedagogies, empower students to take an active part in their learning, target at-risk student populations, and assess factors affecting completion and student success. For learners, educators, and researchers, learning analytics is already starting to provide crucial insights into student progress and interaction with online texts, courseware, and learning environments used to deliver instruction. Data-driven learning and assessment will build on those early efforts.

#### Overview

Data are routinely collected, measured, and analyzed in the consumer sector to inform companies about nearly every aspect of customer behavior and preferences. A number of researchers and companies are working to design similar analytics that reveal patterns in learning-related data that can be used to improve learning both for individual students, and across institutions and systems. The types of student data being analyzed vary, but include institutional information such as student profile information (age, address, and ethnicity), course selections, and pace of program completion; engagement data such as number of page views, contributions by students to discussion threads, percentage of students completing assignments, and number of logins; and learning analytics such as which concepts were mastered and which concepts were particularly difficult for a student.<sup>35</sup> While many experiments are underway, leaders are just beginning to understand which data is useful for advancing learning, as well as the scope of privacy and ethics issues.<sup>36</sup>

The emerging science of learning analytics is providing the statistical and data mining tools to recognize challenges early, improve student outcomes, and personalize the learning experience. With recent developments in online learning in particular, students are generating an exponential amount of data that can offer a more comprehensive look at their learning.<sup>37</sup> A recent report by the National Institute for Learning Outcomes and Assessment found that student assessment is emerging as a leading priority for institutions of higher education because of pressure from accrediting and governing entities and the growing need for more and better evidence of student achievement. They reported that in 2013, nearly 84% of colleges and universities surveyed adopted stated learning outcomes for all of their undergraduates, up from 10% in 2009, and the range of tools and measures used to assess student learning has expanded greatly.<sup>38</sup>

While maintaining its position as a mid-term trend from last year's report, this topic is experiencing increasing activity as projects around the world launch pilots and implementations. Victoria University in Australia, for example, moved to a blended learning strategy that required a change in their LMS. They revitalized their e-learning environment by using the data analytics platform Brightspace for detailed reporting, assessment, and collaboration.<sup>39</sup> After a pilot of four courses confirmed the potential high value of adopting learning analytics, Nottingham Trent University (NTU) in the UK introduced the NTU student dashboard that features learning analytics software that aggregates data on library use, attendance, and grades.<sup>40</sup> In the US, California State University is also developing a Student Success Dashboard to help university leaders better understand problematic areas and assist in determining the effectiveness of specific interventions they have implemented.<sup>41</sup>

#### Implications for Policy, Leadership, or Practice

In online environments especially, students are generating a large amount of learning-related data that could inform important decisions in addition to the learning process, but there is more work needed to structure appropriate policies to protect student privacy. There is a growing concern that ethical and

privacy considerations are not advancing as quickly as practice.<sup>42</sup> The Open University in the UK produced policy on the ethical use of student data for learning analytics, grounded on eight key principles that are linked to particular facets of collecting and analyzing student data.<sup>43</sup> Progress is also being made in the US. In 2014, educators, scientists, and legal/ethical scholars gathered at the Asilomar Conference in California to develop a framework that will inform the ethical use of data and technology in learning research. Six principles emerged: respect for the rights of learners, beneficence, justice, openness, the humanity of learning, and continuous consideration.<sup>44</sup>

University leaders are demonstrating their commitment to the use of learning data through the addition of new offices and partnerships, including the University of Maryland's new Office of Analytics and their cooperation with the Predictive Analytics Reporting (PAR) Framework, Civitas Learning, and Transfer Data Repository. By sharing data on retention and progression with other institutions, universities can benchmark their progress. In the PAR project, the University of Maryland found that they had higher freshman retention rates than many of their peers, but fell behind others for students in years two and three.<sup>45</sup> Similarly, the Marist College and University of Amsterdam announced the Apereo Learning Analytics community in 2014 to accelerate the operationalization of learning analytics software and frameworks, support cross-institutional pilots, and avoid duplication.<sup>46</sup> The sharing of best practices, research, emerging tools, and proven strategies are hallmarks of this trend.<sup>47</sup>

Data-driven projects at universities are beginning to mature and are revealing promising results. At the University of Wisconsin, the Student Success System pilot program was initiated to identify struggling students and behavioral patterns. In addition to expanding pilot courses and institutional partners in the project's second year, there is an effort to foster a community of interest and practice, which is being accomplished by incorporating data analytics discussions into faculty professional development and inviting experts in the field of learning analytics to engage with the faculty community.<sup>48</sup> Dashboards, visual representations of data that are integrated in many management systems, are also currently being used by a number of universities as a way to personalize the learning experience. These sorts of tools can provide students with the means of understanding their progress.<sup>49</sup> Examples of new commercially available dashboards include Enterprise Analytics,<sup>50</sup> Campus Quad Engage,<sup>51</sup> and Jenzabar Analytics.<sup>52</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about the growing focus on measuring learning:

### Code of Practice for Learning Analytics

[go.nmc.org/codeof](http://go.nmc.org/codeof)

(Niall Sclater, JISC, November 2014.) The complex ethical and legal issues surrounding student data are creating barriers to the development and adoption of learning analytics. In response, this review draws from 86 publications to express the questions raised on the subject, and extract the ethical principles that can be used to advise a code of practice. > [Policy](#)

### Lecturer Calls for Clarity in Use of Learning Analytics

[go.nmc.org/clar](http://go.nmc.org/clar)

(Chris Parr, *Times Higher Education*, 6 November 2014.) The Open University has produced a publicly available written policy on the ethical use of student data for learning analytics and hopes the new policy will begin a debate in higher education about what level of consent is required from students before universities can use their data. > [Policy](#)

### Carnegie Mellon Leads New NSF Project Mining Educational Data To Improve Learning

[go.nmc.org/sphere](http://go.nmc.org/sphere)

(Carnegie Mellon University, 2 October 2014.) The National Science Foundation is sponsoring Carnegie Mellon University in creating a distributed storage system that will serve as an enabling and collaborative data infrastructure that gives researchers control over which elements of their data can be accessed by outsiders. > [Leadership](#)

### Iowa Community College Online Consortium

[go.nmc.org/ean](http://go.nmc.org/ean)

(Next Generation Learning, accessed 4 January 2015.) The Iowa Community College Online Consortium's eAnalytics system provides instructors with the ability to identify at-risk students and provide support to improve their performance. > [Practice](#)

### Learning Analytics Don't Just Measure Students' Progress – They Can Shape It

[go.nmc.org/learnan](http://go.nmc.org/learnan)

(Rebecca Ferguson, *The Guardian*, 26 March 2014.) This article describes how learning analytics can combine data analysis and visualization to offer ways for learners to improve while a course is in progress. > [Practice](#)

# Proliferation of Open Educational Resources

## Mid-Term Trend: Driving Ed Tech adoption in higher education for three to five years

**D**efined by the Hewlett Foundation in 2002, open educational resources (OER) are “teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others.”<sup>53</sup> Momentum behind OER began early on, getting a major boost when the Massachusetts Institute of Technology founded the MIT OpenCourseWare (OCW) initiative in 2001, making MIT instruction materials for over 2,200 of its courses available online, free of charge. Soon after, prestigious universities including Carnegie Mellon University and Harvard University, among others, pushed forward their own open learning initiatives. Understanding that the term “open” is a multifaceted concept is essential to following this trend in higher education; often mistaken to simply mean “free of charge,” advocates of openness have worked towards a common vision that defines it more broadly — not just free in economic terms, but also in terms of ownership and usage rights.

### Overview

Altogether, OER represents a broad variety of digital content, including full courses, course materials, modules, textbooks, videos, tests, software, and any other means of conveying knowledge. OER uses Creative Commons and alternative licensing schemes to more easily distribute knowledge, media, and educational resources, which guarantees that content is freely copiable, freely remixable, and free of barriers to access, cultural sensitivities, sharing, and educational use. Open textbooks are being considered as a viable means for cutting excess costs with the goal of making education more affordable for students. According to a 2014 study by US PIRG Education Fund and the Student PIRGs, of 2,039 students surveyed, 65% said that they had not bought a textbook due to its high price. Open textbooks are open-source e-books that are freely available with nonrestrictive licenses, and have been popularized by projects such as Rice University’s Open Stax College<sup>54</sup> and College Open Textbooks,<sup>55</sup> a non-profit collaborative of over 200 universities and 29 organizations.

While OER is gaining traction across campuses, its broader acceptance into higher education hinges on

the issue of awareness and accessibility.<sup>56</sup> Babson Survey Research Group published an in-depth exploration of OER uptake in higher education throughout the US and found that among 2,144 faculty members surveyed, the majority demonstrated benevolent attitudes about using OER, unlike other technological advances in teaching.<sup>57</sup> Yet the survey revealed that awareness of OER and related issues was significantly scarce, with only 5.1% of respondents answering that they were “very aware” of OER and its use in the classroom.<sup>58</sup> More than half of the respondents said they were deterred by the lack of search tools or a comprehensive catalog of materials.<sup>59</sup> While understanding about OER is lacking, Babson researchers highlighted why knowledge in this area has the potential to increase greatly over the next three years; more than three-quarters of faculty members indicated that they expected to use OER or would consider using OER in the future.<sup>60</sup>

There are a number of existing OER repositories and search tools in place for the higher education community. Among the first, MERLOT was started in 1997 by California State University, and has since been offering its members a platform to create, share, and curate online learning materials.<sup>61</sup> Similarly, Jorum is a portal for university educators in the UK to collect and share OER.<sup>62</sup> Funded by JISC, Jorum allows users to filter materials based on community, institution, author, keyword, and license, among other search criteria.<sup>63</sup> Mexico’s Tecnológico de Monterrey has been compiling and sharing OER through “Temoa,” an online portal with over 500,000 learning materials, each subject to different conditions related to control of use, reproduction, interpretation, and material distribution established by each author. Started in 2008, “Temoa” invites users to participate as collaborators, cataloguers, and auditors, to evaluate the credibility of materials in their areas of expertise.<sup>64</sup>

### Implications for Policy, Leadership, or Practice

Governmental policies have done much to shape OER’s path through higher education environments around the world. Researchers from IPTS documented the trajectory of OER policies, attitudes, and trends in “OER: A European Policy Perspective.” They highlight the creation of the “Opening Up Education” initiative in

2013 as an essential framework to develop integrated economies of access and unimpeded exchange of knowledge across borders in order for Europe to remain competitive.<sup>65</sup> Experts point out that although the OER has solid footing in secondary schools, policies for higher education are scarcer due to institutional autonomy. Yet top-down initiatives funded by public institutions and foundations exist to help universities pursue large-scale OER integration, such as the Support Centre for Open Resources in Education led by the Open University.

While data shows that some faculty are integrating OER on their own,<sup>66</sup> institutional leadership can reinforce the use of open content. Produced by the Office of the Pro Vice Chancellor, the University of South Africa (Unisa) developed an Open Education Resources Strategy for 2014-2016 to introduce a new business model and detailed plan for the assimilation of open resources into courses. The Unisa strategy acknowledges that emerging technologies, such as MOOCs and open badges, have disrupted the institution's traditional means of earning revenue, and emphasizes OER's potential for helping the university redirect its focus from content delivery to the improvement of academic and administrative services. Furthermore, Unisa highlights open licensing and sharing as a method of promoting their learning experience to prospective students, with the larger goal of becoming a major producer and distributor of high-quality instructional materials and information.<sup>67</sup>

Regional communities of practice have formed to provide a foundation of knowledge and tools for educators as they integrate OER into their instruction. The North-West OER Network, for example, is an online resource that encourages collaboration between 13 higher education institutions in the North-West of England.<sup>68</sup> The project began in Spring 2014 with a five-day open online course called "Openness in Education" as a way of on-boarding its member institutions during Open Education Week. Learners were encouraged to participate in Google Hangouts, share their thoughts in Twitter discussions, or reflect on their learning via the Facebook community page.<sup>69</sup> Led by the Centre for Excellence in Teaching and Learning at Manchester Metropolitan University, the project maintains a website that offers several ways for member institutions to stay informed including a dedicated Google+ community and a comprehensive list of OER search engines.<sup>70</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about the proliferation of open educational resources:

### European Open Edu Policy Project

[go.nmc.org/oerpolicy](http://go.nmc.org/oerpolicy)

(OER Policy, accessed 5 December 2014.) Open Educational Resources Policy in Europe is a Creative Commons project that launched a coalition of international experts to strengthen the implementation of open education policies across Europe. > [Policy](#)

### North Shore Community College Library Action Plan: 2014–2015

[go.nmc.org/northshore](http://go.nmc.org/northshore)

(North Shore Community College, accessed 4 January 2015.) The North Shore Community College Library plans to collaborate with the academic technology department to help faculty develop and promote open educational resources in an effort to ensure students across all disciplines have access to a full range of information resources and services. > [Policy](#)

### Online Einstein Project Reveals Scientist's Magnitude and Minutiae

[go.nmc.org/onein](http://go.nmc.org/onein)

(Peter Monaghan, *The Chronicle of Higher Education*, 5 December 2014.) The Princeton University Press has made freely available online a digital edition of The Collected Papers of Albert Einstein that permits seamless searching and comparison among Einstein's papers. > [Leadership](#)

### Opening the Curriculum: Open Education Resources in US Higher Education, 2014

[go.nmc.org/babson](http://go.nmc.org/babson)

(I. Elaine Allen and Jeff Seaman, Babson Survey Research Group, 2014.) Funded by The William and Flora Hewlett Foundation, this study found that the majority of faculty in higher education are not very aware of open educational resources, though they appreciate the concepts. > [Leadership](#)

### Open Washington

[go.nmc.org/opwa](http://go.nmc.org/opwa)

(Open Washington, 3 December 2014.) "Open Washington" is an open educational resources network managed by the Washington State Board for Community and Technical Colleges and is dedicated to providing pathways for faculty to learn, find, use, and apply OER. > [Leadership](#)

### US PIRG Report Finds Students Would Perform Better with Open Textbooks

[go.nmc.org/PIRG](http://go.nmc.org/PIRG)

(Jane Park, *Creative Commons*, 30 January 2014.) A report released by the US PIRG Education Fund revealed that in the over 2,000 college students surveyed, 65% refuse to buy a college textbook if it is too expensive, and 94% said they suffered academically because of this choice. > [Practice](#)

# Increasing Use of Blended Learning

## Short-Term Trend: Driving Ed Tech adoption in higher education for the next one to two years

**O**ver the past several years, perceptions of online learning have been shifting in its favor as more learners and educators see it as a viable alternative to some forms of face-to-face learning. Drawing from best practices in online and face-to-face methods, blended learning is on the rise at universities and colleges. The affordances blended learning offers are now well understood, and its flexibility, ease of access, and the integration of sophisticated multimedia and technologies are high among the list of appeals. Recent developments of business models for universities are upping the ante of innovation in these digital environments, which are now widely considered to be ripe for new ideas, services, and products. While growing steadily, the recent focus in many education circles on the rapid rise and burnout of massive open online courses (MOOCs) has led to the view that these sorts of offerings may be fad-like. However, progress in learning analytics; adaptive learning; and a combination of cutting-edge asynchronous and synchronous tools will continue to advance the state of online learning and keep it compelling, though many of these methods are still the subjects of experiments and research by online learning providers and higher education institutions.

### Overview

Recently, the US National Center for Education Statistics reported that one in ten students were enrolled exclusively in online courses.<sup>71</sup> Studies conducted by the Babson Research Group reveal that 7.1 million American students are engaged in online learning in some form.<sup>72</sup> As online learning garners increasing interest, higher education institutions are developing more online courses to both replace and supplement existing courses. While the effectiveness varies from course to course, it has become clear that there is a demand from students for more accessible learning opportunities, and blended learning — the combination of online and face-to-face instruction — is a model currently being explored by many higher education institutions.

The University of Central Florida examined face-to-face, blended, and fully online models and found that blended approaches were most successful in “unbundling” the classroom — students felt that instructors were more accessible when learning materials and discussion forums were placed online and there was altogether more

persistent communication through the use of virtual learning environments.<sup>73</sup> When assessing the quality of courses, researchers pinpointed clarity, authenticity, unity, suspense, economy, depth, proportion, vividness, brilliance, sensitivity, emphasis, authority, flow, and precision as the ultimate benchmarks. Institutions and instructors now have a better understanding that online learning opportunities need to encompass each of these characteristics; the task for higher education leaders for the next two years will revolve around how courses can be better designed, from conception to execution.

According to the University of Illinois, effective blended learning instructors must find ways to stimulate social activities and critical thinking within an online environment — just as they are expected to do in face-to-face experiences.<sup>74</sup> They also emphasize the need to support different learning preferences by enabling multiple ways for learners to engage with a concept.<sup>75</sup> Some students may absorb the material better through reading passages in online textbooks, while others may respond better by progressing through a playlist of video lectures and other supporting media. Furthermore, instructors are thinking more deeply about mimicking the types of interactions learners are accustomed to in brick-and-mortar settings. Cloud-based audio tools such as VoiceThread<sup>76</sup> and SoundCloud,<sup>77</sup> along with video creation tools such as iMovie<sup>78</sup> and Dropcam,<sup>79</sup> allow faculty to capture important human gestures, including voice, eye contact, and body language, which all foster an unspoken connection with learners.

### Implications for Policy, Leadership, or Practice

Many higher education institutions recognize the need for concrete online learning guidelines and are taking it upon themselves to devise effective policies. The University of Glasgow, for example, released “E-Learning Strategy 2013-2020,” a whitepaper that outlines best practices for the campus and increases the range and accessibility of the online learning methods that faculty can adopt.<sup>80</sup> Among their priorities is the use of a flexible virtual environment that incorporates interactive features to make learning more social for students. In regards to how online learning programs can be best managed and organized at an institutional and departmental level, California State University,

Sacramento has published their own policies.<sup>81</sup> On their campus, online course evaluation has been standardized to mirror face-to-face evaluation, and all resources that are placed online must satisfy current CSU policy to improve accessibility for students with disabilities.

Advancing the field of blended learning will require continuous visionary leadership. The European Distance and E-Learning Network (EDEN) consists of 200 member institutions and was founded to spread knowledge and best practices across the continent. EDEN is currently involved in a number of online initiatives that promote the use of emerging technologies and pedagogies for online learning, including LACE (Learning Analytics Community Exchange) and POERUP, which focuses on the integration of open educational resources in learning. The *European Journal of Open, Distance and E-Learning* is also supported by EDEN as a forum for sharing the latest research and development in online learning practices.<sup>82</sup> In the US, Penn State University and the Sloan Consortium are advancing a similar push for innovation in blended learning. The two organizations joined forces to launch the Institute for Engaged Leadership in Online Learning — a blended learning leadership development program that identifies key challenges and focus areas for the field.<sup>83</sup>

In practice, there are a number of innovative examples of online learning programs, some of which specialize in helping students acquire in-demand skill sets. Channel 9 provides users with a growing library of training resources in nearly any type of computer coding and programming, and offers streaming videos and interactive events.<sup>84</sup> While they remain a controversial topic laden with mixed reviews and opinions, MOOCs have enabled students to engage in learning at their own pace. Johns Hopkins University offers a MOOC through Coursera — “Getting and Cleaning Data.” Video lectures and online quizzes help students learn about obtaining data through APIs and databases, and includes peer-to-peer assessments to make for a more social experience.<sup>85</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about the increasing use of blended learning:

### Trends and Policy Issues for the e-Learning Implementation in Libyan Universities

[go.nmc.org/libyan](http://go.nmc.org/libyan)

(Thuraya Kenan et al., *International Journal of Trade, Economics and Finance*, February 2014.) This paper describes trends and policy issues for e-learning implementation in Libyan universities and provides recommendations for how higher education institutions can influence governmental policies. > [Policy](#)

### When MOOC Profs Move

[go.nmc.org/profs](http://go.nmc.org/profs)

(Carl Straumsheim, *Inside Higher Education*, 18 March 2014.) Many universities are realizing they must create policies to clarify who has intellectual property rights to online courses. This article describes how a few major universities have addressed the issue. > [Policy](#)

### A Catalyst For Change: Developing A Blended Training Model For The Liberal Arts Institution

[go.nmc.org/Roll](http://go.nmc.org/Roll)

(Carrie Schulz et al., *The Academic Commons*, 2013.) Rollins College created a professional development program to assist faculty in redesigning existing courses as blended learning offerings. > [Leadership](#)

### CSU Innovation in Online Learning

[go.nmc.org/uim](http://go.nmc.org/uim)

(Charles Sturt University News, 1 September 2014.) The “ulmage Digital Learning Innovation Laboratory” at Charles Sturt University is bringing together leading academic staff, educational designers, and students to drive innovation in digital learning by investigating new technologies and online teaching practices. > [Leadership](#)

### Google Sponsors Carnegie Mellon Research To Improve Effectiveness of Online Education

[go.nmc.org/cmu](http://go.nmc.org/cmu)

(Byron Spice, Carnegie Mellon University, 24 June 2014.) A new Google-sponsored effort will allow Carnegie Mellon University to develop its online courses through techniques that automatically analyze and provide feedback on student work. > [Leadership](#)

### ARTé

[go.nmc.org/arte](http://go.nmc.org/arte)

(Texas A&M Live Lab, accessed 8 January 2015.) Art History faculty at Texas A&M University have created an online game to complement the classroom experience in Art History survey classes for undergraduate students. > [Practice](#)

### Innovation in Online Learning (Video)

[go.nmc.org/seel](http://go.nmc.org/seel)

(World Economic Forum, 4 March 2014.) Tina Seelig from Stanford University explains her role as instigator in her online course, presenting challenges to thousands of students as they worked together in the virtual environment to create solutions. > [Practice](#)

### What is E-Learning?

[go.nmc.org/elearning](http://go.nmc.org/elearning)

(Nicole Legault, *E-Learning Heroes*, accessed 16 December 2014.) This overview of online learning describes how it has evolved over time and provides examples of both form-based and free-form authoring tools, methods for tracking learner results, and more. > [Practice](#)

## Redesigning Learning Spaces

**Short-Term Trend: Driving Ed Tech adoption in higher education for the next one to two years**

**S**ome thought leaders believe that new forms of teaching and learning require new spaces for teaching and learning. More universities are helping to facilitate these emerging models of education, such as the flipped classroom, by rearranging learning environments to accommodate more active learning.<sup>86</sup> Educational settings are increasingly designed to facilitate project-based interactions with attention to mobility, flexibility, and multiple device usage. Wireless bandwidth is being upgraded in institutions to create “smart rooms” that support web conferencing and other methods of remote, collaborative communication. Large displays and screens are being installed to enable collaboration on digital projects and informal presentations. As higher education continues to move away from traditional lecture-based programming and to more hands-on scenarios, university classrooms will start to resemble real-world work and social environments that facilitate organic interactions and cross-disciplinary problem solving.

### Overview

A student-centered approach to education has taken root, prompting many higher education professionals to rethink how learning spaces should be configured.<sup>87</sup> The mold of the traditional classroom is being broken by several institutions to accommodate new pedagogies; instead of the traditional rows of chairs with writing surfaces facing a podium, universities are creating more dynamic classroom layouts, often with seating arrangements that foster collaborative work. These redesigned spaces support what is often referred to as flexible or active learning.<sup>88</sup> While active learning spaces vary, they share many common features. The typical podium is moved from the front of the classroom to the center and is surrounded by round or oval tables with movable chairs that enable students to shift between groups as needed. Each table may be technology-enabled, with interactive whiteboards or other marking surfaces. Many examples of these arrangements, such as at McGill University and Dawson College in Canada, have been in use for several years.<sup>89</sup>

This shift is also requiring universities to examine how informal campus environments can be modified to become theaters for learning.<sup>90</sup> Casual spaces in high-

traffic areas such as lobbies, atriums, and hallways are being purposefully redesigned so that they can become locations where students congregate and work more productively. They often feature comfortable furniture, power outlets for charging mobile devices, and LCD monitors for connecting laptops.<sup>91</sup> Loughborough University in the UK has created three distinct informal learning areas where students can work collaboratively or independently. Their Learning Lounge features 16 PCs and an interactive Utouch display; the Learning Zone is outfitted with 12 PCs, two interactive whiteboards with connected PCs, two group tables, and flipcharts; and the Learning Lab contains three collaborative work zones, a group table, and vending facilities to keep students fueled during their study sessions.<sup>92</sup>

Academic libraries across the globe are seeing a flurry of activity as their informal learning spaces are being reimaged to take advantage of the emerging maker movement. Libraries have always been spaces to find tools for learning and some argue that in addition to books, 3D printers, laser cutters, and even sewing machines should be available to students. The physical layout of university libraries is currently being redrawn so that row upon row of stacks containing books that have not been touched in decades can be archived to make room for more productive use of floor space.<sup>93</sup> The DeLaMare Science and Engineering Library at the University of Nevada Reno, for example, was recently named one of the most interesting makerspaces in America by *Make* magazine. Over the summer of 2014, the ground floor of their facility was remodeled to create a more functional space for self-directed learning using new visualization hardware and software.<sup>94</sup>

### Implications for Policy, Leadership, or Practice

While many learning space policies fall under a university's general appropriate use of information technology resources and systems principles, the evaluation of new spaces is being guided by a new Learning Spaces Rating System (LSRS) which provides a set of measurable criteria to assess the effectiveness of classroom design for promoting active learning activities. This rating system eliminates competing internal guidelines to enable benchmarking across institutions, helping universities identify lower- or higher-performing spaces within their

portfolios. The preliminary rating system currently allows the measurement of formal learning spaces, but future iterations will include informal and specialized learning spaces.<sup>95</sup> The LSRS is based on Leadership in Energy and Environmental Design (LEED) green building ratings systems, which promote sustainability in the planning of buildings, interiors, and schools. Policymakers can refer to this emerging system of rating and underlying research to support decisions to scale innovative classroom layouts with technology.

Campus leaders can work with instructional technologists and strategists when building technology ecosystems that are compatible, secure, and easy to update. One noteworthy resource is the Flexible Learning Environments eXchange (FLEXspace), an interactive, searchable online database containing best practices in active learning design. The site contains three main taxonomies that focus on technology integration, facilities integration, and learning and assessment.<sup>96</sup> The Learning Spaces Collaboratory (LSC) is another initiative that is gathering findings in contemporary research and practice to guide the creation and assessment of learning environments in undergraduate settings. This collaboration involves the perspectives of academics, architects, and other stakeholders.<sup>97</sup>

Before new technologies are introduced, faculty must consider how they fit into the current course structure and make necessary changes to the physical space. Australia's University of Western Sydney recently updated their curriculum to provide more options for their students. By 2016, all undergraduate courses will be offered in blended form.<sup>98</sup> To support this new structure, the university created collaborative learning spaces that support group activities outside of classroom settings through mobile furniture, dual projection screens, and maximized wall-writing surfaces — among other amenities. More authentic learning experiences are also driving the redesign of learning spaces in the medical field. George Washington University's Nursing Simulation Lab, for example, is an experiential learning space designed to provide a more realistic learning laboratory that mimics the actual hospital environment. Key features of the laboratory include a model emergency room suite, strategically embedded cameras and microphones to capture trainings, live streaming access to the lab, and a system capable of closed-circuit broadcast to a 100-seat lecture hall and 50-seat classroom.<sup>99</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about redesigning learning spaces:

### Blended Synchronous Learning

[go.nmc.org/blendsync](http://go.nmc.org/blendsync)

(Matt Bower et al., Macquarie University, 2014.) Macquarie University's Blended Synchronous Learning project sponsored by the Australian Office for Learning and Teaching created a Blended Synchronous Learning Handbook from an analysis of seven case studies.

> *Policy*

### ELI Learning Space Rating System

[go.nmc.org/rating](http://go.nmc.org/rating)

(EDUCAUSE, accessed 8 January 2015.) EDUCAUSE Learning Initiative's Learning Space Rating System project provides institutions with measurable criteria to assess how well their learning spaces encourage active learning. > *Leadership*

### How Do Your Learning Spaces Measure Up?

[go.nmc.org/meas](http://go.nmc.org/meas)

(David Rath, *Campus Technology*, 5 March 2014.) This article describes how FLEXspace, an online database of learning spaces, and Learning Space Rating System, a set of measurable criteria to assess classroom design, are helping learning institutions share and evolve best practices in classroom design. > *Leadership*

### 7 Design Trends in Higher Education

[go.nmc.org/destrends](http://go.nmc.org/destrends)

(Linda Pye, *Academia.edu*, accessed 4 January 2015.) This paper is directed at interior designers, architects, and facility managers charged with the task of creating and maintaining high-performance learning environments based on emerging trends in higher education. > *Practice*

### The Evolving Classroom: Creating Experiential Learning Spaces

[go.nmc.org/exper](http://go.nmc.org/exper)

(P.B. Garrett, EDUCAUSE, 13 October 2014.) Meshing technology with classroom elements such as furnishings, lighting, and writing surfaces is helping educators create an environment that allows near-ubiquitous use of computers and networked devices, as well as facilitating experiential learning through simulations and collaborative projects. > *Practice*

### Idea Spaces

[go.nmc.org/ideaspaces](http://go.nmc.org/ideaspaces)

(Tom Haymes, Houston Community College, accessed 8 January 2015.) In Fall 2016, the West Houston Institute will finish its massive learning space redesign that combines experiential classrooms and labs, a fully outfitted makerspace, a facilitated collaboration space, a conference space, and a connecting learning commons.

> *Practice*



## Significant Challenges Impeding Technology Adoption in Higher Education

The six challenges described on the following pages were selected by the project's expert panel in a series of Delphi-based cycles of discussion, refinement, and voting; the expert panel was in consensus that each is very likely to impede the adoption of one or more new technologies if unresolved. A complete record of the discussions and related materials were captured in the online work site used by the expert panel and archived at [horizon.wiki.nmc.org/Challenges](http://horizon.wiki.nmc.org/Challenges).

Because not all challenges are of the same scope, the discussions here are sorted into three categories defined by the nature of the challenge. The Horizon Project defines solvable challenges as those that we both understand and know how to solve; difficult challenges are ones that are more or less well-understood but for which solutions remain elusive; and wicked challenges, the most difficult, are categorized as complex to even define, and thus require additional data and insights before solutions will even be possible. Once the list of challenges was identified, they were examined through three meta-expressions: their implications for policy, leadership, and practice.

**Policy.** While all of the identified challenges had policy implications, two specific challenges are driving policy decisions on many campuses at the moment. The easiest one to address is creating policies that better advance digital literacy. Governments at both the national and local level are already making ample headway. The Massachusetts Department of Education, for example, has convened expert panelists from higher education and K-12 to develop "Digital Literacy and Computer Science Standards." Tapping into the knowledge and experiences of university leaders and instructors, the goal is to better prepare students in understanding and creatively applying technology before they even step foot on campus.<sup>100</sup>

A more challenging policy area is that there is a great deal of competition from new models of education. The growing abundance of free online learning courses and resources that can be digested at the learner's own pace is calling into question the need for traditional four-year institutions. In the US, President Obama and the US Department of Education took actions to redefine the

credit hour to encompass different kinds of activities that reflect learning outcomes.<sup>101</sup>

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**Because not all challenges are of the same scope, the discussions here are sorted into three categories defined by the nature of the challenge.**

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**Leadership.** Again, while all the identified challenges have leadership implications that are discussed in the following pages, two pose roadblocks to employing effective vision and leadership. There is a major need to integrate more personalized learning into university courses and accommodate each student's needs, but this will not be possible overnight. The Bill & Melinda Gates Foundation has been instrumental in working to solve this challenge. They recently founded the Personal Learning Network which convenes more than one dozen colleges and universities to investigate and implement potential applications of personalized and adaptive learning.<sup>102</sup>

The lack of rewards for exemplary teaching is considered by the panel as a wicked challenge that requires visionary leadership. Universities are set up in ways that inherently emphasize research over teaching. Carnegie Mellon University's Center for Teaching Excellence and Educational Innovation is focused on being an incubator for progressive pedagogies. Noteworthy professors are selected for the Spotlight on Innovative Teaching program, where they impart their wisdom to other educators in the form of workshops.<sup>103</sup>

**Practice.** Each of the six challenges identified by the expert panel presents numerous impediments for advancing teaching and learning, but two in particular are presenting unique obstacles. Fortunately, the expert panel perceives the blending of formal and informal learning to be a solvable challenge. Cork Institute of

Technology in Ireland is providing a compelling model for other universities by incorporating and rewarding work experience and other kinds of learning experience into a formal setting.<sup>104</sup>

Teaching more complex thinking has also been a challenge for higher education institutions, especially in very singularly focused disciplines such as biology and mechanical engineering. At Yale University, a molecular, cellular, and developmental virology professor designed a four-course series to train postdoctoral and graduate science students in creating effective presentations and public speeches.<sup>105</sup>

The following pages provide a discussion of each of the challenges highlighted by this year's expert panel that includes an overview of the challenge, its implications, and a set of curated recommendations for further reading on the topic.

## Blending Formal and Informal Learning

### Solvable Challenge: Those that we understand and know how to solve

**T**raditional approaches to teaching and learning with roots in the 18th century and earlier are still very common in many institutions, and often stifle learning as much as they foster it. As the Internet has brought the ability to learn something about almost anything to the palm of one's hand, there is an increasing interest in the kinds of self-directed, curiosity-based learning that has long been common in museums, science centers, and personal learning networks. These and other more serendipitous forms of learning fall under the banner of informal learning, and serve to enhance student engagement by encouraging them to follow their own learning pathways and interests. Many experts believe that a blending of formal and informal methods of teaching and learning can create a higher education environment that fosters experimentation, curiosity, and above all, creativity.<sup>106</sup>

#### Overview

The blending of informal learning into formal education is an intriguing notion, but hampered by the lack of ways to acknowledge and qualify learning that happens beyond the classroom. Adding complexity to the matter is the ability for institutions to quantify the kinds of informal learning experiences in which students engage. Some argue that in order to integrate informal education into the formal higher education system, skills that have tangible, transferable value in the real world must be identified and promoted as key competencies.<sup>107</sup> Many workplaces already encourage informal learning methods for professional development; Cisco's Technology Evangelist even cites the act of convening with like-minded people at a restaurant or coffee shop to discuss pressing topics in the IT industry as a creative example.<sup>108</sup> However, people rarely receive formal or substantial recognition for these experiences, setting a shaky precedent for informal learning at universities and colleges.

Regardless of whether or not it is being rewarded, informal learning is already impacting how students gain and demonstrate knowledge. According to an article published in the *EDUCAUSE Review*, "A growing appreciation for the porous boundaries between the classroom and life experience, along with the power of social learning, authentic audiences, and integrative contexts, has created not only promising changes in

learning but also disruptive moments in teaching."<sup>109</sup> Indeed, the ways in which people learn have been expanding as more and more interactive content has been made freely available via the web. *The Hechinger Report* points to games and videos as two of the primary ways that students learn outside of their schooling. Games are cited specifically for their applications in developing inductive reasoning skills.<sup>110</sup> An increasing number of universities, such as Stanford University<sup>111</sup> and MIT<sup>112</sup> are leveraging the soft skills that games have proven to instill in learners, integrating games into their curriculum designs to simulate real world activities.

Social media and its tapestry of networks, articles, videos, and other resources are also making learning more ubiquitous. The 2013 "E-Expectations Report" found that students trust information delivered through universities' social media more than if the same content was posted to universities' websites.<sup>113</sup> Social media has transcended its initial usage for building social connections;<sup>114</sup> people increasingly rely on their Facebook and Twitter newsfeeds, for example, to stay up to date on major global events, and even use these platforms as a vehicle for sharing and garnering feedback on personal creative works. The book *Personal Learning Networks* explores the ways in which social media can stimulate new learning pathways.<sup>115</sup> As an example, social networks enable the creation of learning teams that mimic interest groups — students are able to congregate by areas of curiosity and even learn from each other.

#### Implications for Policy, Leadership, or Practice

While much work has been done to define and explore aspects of informal learning, ways to formally evaluate those experiences are not as well understood. There is a need for national policies that guide the substantiation of informal learning across education systems. Launched by European University Continuing Education Network, VALERU is the development of methodology for validating informal learning in Russia.<sup>116</sup> VALERU is focused on how students' learning outcomes that were generated outside of higher education can be integrated into study programs. Using the framework that initiative leaders aim to devise over the next few years, more experts will be trained to expand the pool of informal learning validators in Russia.

At a global leadership level, OECD has acknowledged that learning happens constantly, and that capturing insights around informal learning can provide governments with critical information for improving educational opportunities. In 2010, they worked with representatives from 22 countries to compile their experiences in a report entitled “Recognising Non-Formal and Informal Learning,” which provides a foundation for countries to begin defining learning and skills gained outside of formal institutions.<sup>117</sup> The goal of this work is a massive undertaking — to be able to accurately assess human capital within a nation with the aim of strengthening the economy.<sup>118</sup> A similar report by JISC, “Learning in a Digital Age,” discussed the growing use of blogs, wikis, podcasting, social networking, and other tools as vehicles to deepen learning.<sup>119</sup> In the US, the National Science Foundation Directorate for Education and Human Resources is funding grants that emphasize the need to gain a better grip on informal learning,<sup>120</sup> with projects including Advancing Informal STEM Learning.<sup>121</sup>

Researchers and faculty at the Cork Institute of Technology in Ireland have been dedicated to incorporating informal learning experiences into their offerings. As described in the paper “Capturing and Valuing Non Formal and Informal Learning: Higher Education can Support Learning Gained in Life,” they hosted Cork City’s Lifelong Learning Festival, which joined together adult learners who had re-enrolled at local universities and colleges. The event highlighted the development of a digital archive where students can present on their most influential informal learning experiences as they unfold. Additionally, the Institute held a workshop that introduced students to e-portfolios with the goal of understanding how they can be best applied to showcase informal learning and creative projects that occur outside of the college.<sup>122</sup> Educators are also major beneficiaries of solutions to this challenge as there is a growing host of informal professional development opportunities for them — many of which take place exclusively online, including the NMC’s own Academy for teacher training,<sup>123</sup> HP LIFE e-Learning,<sup>124</sup> and the European Schoolnet Academy.<sup>125</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about blending formal and informal learning:

### Building an Expanded, Effective, and Integrated Post-School System

[go.nmc.org/post](http://go.nmc.org/post)

(South Africa Department of Higher Education and Training, 20 November 2013.) This white paper lays out a plan to introduce community colleges that will be differentiated from the university systems. > [Policy](#)

### The Digital Degree

[go.nmc.org/digdeg](http://go.nmc.org/digdeg)

(*The Economist*, 28 June 2014.) The European Union signed the Lisbon Recognition Convention to recognize skills and competences gained informally to promote student mobility throughout EU Member States. This agreement is presented as a model for the gradual integration and validation of informal learning into formal education. > [Policy](#)

### Formalizing Informal Learning: Assessment and Accreditation Challenges Within Disaggregated Systems

[go.nmc.org/accredit](http://go.nmc.org/accredit)

(Rory McGreal et al., Open Praxis, April 2014.) This report presents key economic and governance challenges for universities to consider when implementing assessment and accreditation policies in efforts to validate post secondary informal learning experiences. > [Policy](#)

### Building Learning Societies: Promoting Validation of Non-formal and Informal Learning

[go.nmc.org/validation](http://go.nmc.org/validation)

(EUCIS-LLL, 17 October 2014.) This project aims to develop an awareness-raising campaign for the validation of learning outcomes of non-formal and informal learning as a tool to improve adults’ career perspectives and stimulate their further education and training. > [Leadership](#)

### ePortfolios and Open Badges Maturity Matrix

[go.nmc.org/matr](http://go.nmc.org/matr)

(LearningFutures.eu, 6 July 2014.) The ePortfolios and Open Badges Maturity Matrix is an initiative to provide a framework for practice and future improvement of ePortfolio and open badge use. > [Leadership](#)

### Capturing and Valuing Non Formal and Informal Learning; Higher Education can Support Learning Gained in Life

[go.nmc.org/captur](http://go.nmc.org/captur)

(Phil O’Leary, ResearchGate, 31 May 2014.) This article describes the need to teach students to develop a habit of lifelong learning, so that they are self-aware in the skills and competencies they learn outside of a formal education environment. > [Practice](#)

### Open Education Resources and the Rising Importance of Non-Formal and Informal Learning

[go.nmc.org/iflatrend](http://go.nmc.org/iflatrend)

(IFLA, accessed 4 January 2015) In a review of literature of social trends, IFLA highlighted that increasing use of OER will intensify the need for recognizing skills gained informally by learners. > [Practice](#)

## Improving Digital Literacy

### Solvable Challenge: Those that we understand and know how to solve

**W**ith the proliferation of the Internet, mobile devices, and other technologies that are now pervasive in education, the traditional view of literacy as the ability to read and write has expanded to encompass understanding digital tools and information. This new category of competence is affecting how education institutions address literacy issues in their curriculum objectives and teacher development programs. Lack of consensus on what comprises digital literacy is impeding many colleges and universities from formulating adequate policies and programs that address this challenge. Discussions among educators have included the idea of digital literacy as equating to competence with a wide range of digital tools for varied educational purposes, or as an indicator of having the ability to critically evaluate resources available on the web.<sup>126</sup> However, both definitions are broad and ambiguous. Compounding this issue is the notion that digital literacy encompasses skills that differ for educators and learners, as teaching with technology is inherently different from learning with it. Supporting digital literacy will require policies that both address digital fluency training in pre- and in-service teachers, along with the students they teach.

#### Overview

While this challenge is widespread in higher education, the 2015 Horizon Project Expert Panel recognized it as solvable as it has already been made actionable by local and national governments. In the UK, the Leicester City Council hosted a live panel to tackle this challenge, and set out to establish a common definition of digital literacy, characterizing it as a life-long practice that includes critical thinking about how the skills can be applied and used for social engagement.<sup>127</sup> A JISC consultant at the event stated that developing digital literacy in practice requires individual scaffolding and support along with helping learners as they manage conflict between practice and different contexts. As an example, a student's notion of what is considered referencing a resource versus plagiarizing it may differ from that of their university's official policy.

Researchers at Kennesaw State University recently published the paper "Unraveling the Digital Literacy Paradox: How Higher Education Fails at the Fourth

Literacy," which critically examines the current landscape of this topic. They believe that an often-overlooked aspect of digital literacy is finding training techniques that prioritize creativity. Understanding how to use technologies is a key first step, but being able to leverage them for innovation is vital to fostering real transformation in higher education.<sup>128</sup> Current definitions of literacy only account for the gaining of new knowledge, skills, and attitudes, but do not include the deeper components of intention, reflection, and generativity. The addition of aptitude and creativity to the definition emphasizes that digital literacy is an iterative process that involves students learning about, interacting with, and then demonstrating or sharing their new knowledge.

Now that a deeper understanding of the topic is emerging, higher education institutions have recognized that in order to instill digital literacy in their students, they must better equip their faculty. While universities and colleges around the world have launched a number of professional development programs and centers, not all of them are entirely effective. *Campus Technology* cautions that programs with one-size-fits-all training approaches that assume all faculty are at the same level of digital literacy pose a higher risk of failure. The Director of the Center for Academic Technology at the University of the District of Columbia asserts that university leaders must first comprehend the wide spectrum of faculty IT needs before designing professional development opportunities. A data-driven approach that depicts faculty use of the university's technology can reveal patterns of their literacy and help leaders to identify areas for improvement.<sup>129</sup>

#### Implications for Policy, Leadership, or Practice

Governing bodies are developing guidelines for digital literacy to help students learn skills that will be critical to their success in the workplace. The Australian government recently established the Commonwealth Science Council,<sup>130</sup> chaired by the Prime Minister, to advise on science and technology issues and policies and help the education system produce workplace-ready graduates.<sup>131</sup> At a local government level, the Massachusetts Department of Education is designing "Digital Literacy and Computer Science Standards" with

an expert panel that consist of leaders in both K-12 and higher education.<sup>132</sup> Library organizations have also been instrumental in creating literacy standards. The Association of College & Research Libraries developed the “Information Literacy Competency Standards for Higher Education,” which provide a framework to evaluate students’ literacy levels, including their lower and higher order thinking skills.<sup>133</sup> Individual institutions are also creating their own standards. In the UK, The Open University designed the “Digital and Information Framework,” and emphasizes the importance of students learning how to collaborate with technology.<sup>134</sup>

In order for educators to better integrate digital literacy into curricula, they must receive ongoing training. It requires substantial leadership to create effective programs that enable busy educators to take time to learn new skills. St. Mary’s University of Texas, for example, institutionalized their faculty development structure, offering a yearlong program with ongoing follow-up workshops.<sup>135</sup> So far, this initiative has aided instructors in flipping their classrooms, incorporating mobile devices into their curriculum, and using video assessment. Additionally, the St. Mary’s Faculty Institute includes roundtable discussions with the students to get a better sense of their digital literacy and technology use.<sup>136</sup> Through Arcadia University, teachers have the opportunity to pursue a Certificate in Digital Literacy, which focuses on integrating technology into innovative pedagogies.<sup>137</sup>

Solving this challenge also calls for better digital literacy support for students. Cornell University developed the public “Digital Literacy Resources” to help their student body become more adept at creating media-centric presentations, conducting research, understanding intellectual property rights, and more.<sup>138</sup> As part of their Mobile Development Bachelor’s Degree plan, Full Sail University offers a digital literacy course, teaching students to leverage digital tools in order to navigate, evaluate, create, and critically apply information.<sup>139</sup> Many graduate programs are also increasingly emphasizing the importance of digital literacy. Medical students at the University of California-Irvine, for example, can enroll in “Health 2.0 + Digital Literacy” to learn about trends in healthcare technology and social media.<sup>140</sup> Content from the course has been made freely available in a special collection in iTunes U.<sup>141</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about improving digital literacy:

### JISC Developing Digital Literacies Infokit

[go.nmc.org/digitlit](http://go.nmc.org/digitlit)

(Northumbria University, 6 March 2014.) JISC has created a set of practical guidelines, tools, and approaches to digital literacy, examining both the ‘top down’ strategic considerations involved in developing digital literacies across an institution, as well as an ‘on the ground’ view of what this means in practice. > [Policy](#)

### The Digital Literacies Working Group

[go.nmc.org/digitlit](http://go.nmc.org/digitlit)

(University of Liverpool, accessed 7 January 2015.) The Digital Literacies Working Group at the University of Liverpool facilitates projects and activities that encourage students and faculty to explore the capabilities that an individual needs to live, learn, and work in a digital society. > [Leadership](#)

### Journal of Digital and Media Literacy (JoDML)

[go.nmc.org/jod](http://go.nmc.org/jod)

(Sarah Williams et al, *JoDML*, 15 December 2014.) *JoDML* is an academic, peer-reviewed journal that seeks to examine the ways people use technology to create, sustain, and impact communities on local, national, and global levels. > [Leadership](#)

### Tools of Engagement Project (TOEP)

[go.nmc.org/toep](http://go.nmc.org/toep)

(The State University of New York, accessed 7 January 2015.) The TOEP community launched by the State University of New York provides a safe and supportive environment for faculty to work alongside peers in understanding, using, and reflecting on how emerging technology tools impact the ways we collaborate and communicate. > [Leadership](#)

### 20 Things Educators Need To Know About Digital Literacy Skills

[go.nmc.org/exce](http://go.nmc.org/exce)

(Saga Briggs, *Innovation Excellence*, 12 August 2014.) This article describes some practices that can have a negative impact on cultivating digital literacy as well as habits that naturally promote the understanding and leveraging of technology. > [Practice](#)

### Grand Valley State University Technology Showcase

[go.nmc.org/gvsu](http://go.nmc.org/gvsu)

(Grand Valley State University, accessed 12 January 2015.) The Information Technology department at Grand Valley State University created an open technology showcase to immerse faculty, staff, and students in discovering how emerging technologies can enhance teaching and learning. > [Practice](#)

## Personalizing Learning

### Difficult Challenge: Those that we understand but for which solutions are elusive

**P**ersonalized learning refers to the range of educational programs, learning experiences, instructional approaches, and academic-support strategies intended to address the specific learning needs, interests, aspirations, or cultural backgrounds of individual students.<sup>142</sup> While there is a demand for personalized learning, it is not adequately supported by current technology or practices. The increasing focus on customizing instruction to meet students' unique needs is driving the development of new technologies that provide more learner choice and allow for differentiated instruction. Advances such as online learning environments and adaptive learning technologies make it possible to support a learner's individual learning path. The biggest barrier to personalized learning, however, is that scientific, data-driven approaches to effectively facilitate personalization have only recently begun to emerge; learning analytics, for example, is still evolving and gaining traction within higher education.

#### Overview

The goal of personalized learning is to enable students to determine the strategy and pace at which they learn. Though effective personalized learning strategies focus on the learner and not the technology, personalized learning may significantly draw on enabling technologies and tools. The underlying technologies needed to support personalized learning are relatively straightforward and readily available. For example, a person's smartphone or tablet and their personal collection of apps directly represents their assortment of interests. Universities are taking advantage of mobile technology to meet students where they are to offer tailored educational content and tools. The University of Texas System, for example, is creating a mobile-first stack of technology services called TEX (Total Educational Experience) for use in STEM and medical science courses in order to improve completion rates in areas of high employment demand.<sup>143</sup>

Education researchers have emphasized the need for learning settings to be adaptable and flexible in order for personalized learning to take root. Students' preferences and needs must be understood accurately before designing or implementing personalized learning scenarios and activities. The goal is to give the student

the flexibility to make their learning as effective and efficient as possible, but adequate mentorship is still a clear necessity.<sup>144</sup> Enabling technology, such as E2Coach, is helping to address this challenge of inadequate support for faculty in high-enrollment introductory science courses at the University of Michigan. The E2Coach web application delivers customized student websites and pushes out personalized messages about course content, advice on study methods and resources, and reminders. An evaluation on the effectiveness of this personalized learning tool found that users of the service performed better academically than nonusers by a notable amount.<sup>145</sup>

While the benefits of personalized learning are becoming increasingly clear, there is still debate on what defines personalized learning and an unwillingness of some faculty to embrace new technological advancements — some are concerned that the use of automated software for tutoring is of lesser quality than traditional college approaches.<sup>146</sup> There is also a lack of research on the effectiveness of personalized learning in higher education. The assessments that exist are primarily in the K-12 arena and offer words of caution. A recently released report by the National Education Policy Center found that personalized instruction shows mixed results ranging from modest impacts to no impact at all in K-12 settings.<sup>147</sup>

#### Implications for Policy, Leadership, or Practice

While scalable methods and concepts will take some time to refine, there is considerable consensus among government, policymakers, funders, and higher education leaders of the growing importance of personalized learning. The Association of Public and Land-grant Universities (APLU), in coordination with the Coalition of Urban Serving Universities, has awarded grants to seven universities including Florida International University, Georgia State University, University of Akron, and others, to improve student success through different personalized learning strategies. University of Akron, for example, is investigating how to measure, assess, and credential what students learn on their own, on the job, or at the university — by using modularized course content, students can test out of certain concepts, accelerating

the time needed to graduate. The findings from these different projects are being shared beyond the cohort to more than 200 public universities in the APLU, helping to create greater awareness of best practices in this emerging field for action in the policy arena.<sup>148</sup>

Early research conducted through Carnegie Mellon University's Open Learning Initiative revealed that the intelligent tutoring characteristic of adaptive learning environments proved almost as effective as one-on-one human tutors.<sup>149</sup> For the past few years, the Bill & Melinda Gates Foundation has been leading the charge in the field of adaptive learning. In 2012, they announced that they would be allocating \$9 million in grants to support breakthrough learning models, specifically investing in several organizations and institutions that were developing adaptive learning solutions.<sup>150</sup> Later that year, they established a Personal Learning Network, consisting of leaders at more than one dozen universities, colleges, and university systems in an effort to advance the field of adaptive learning by launching research initiatives and incubating pilot programs.<sup>151</sup>

Innovations in personalizing the consumer experience are now being harnessed for higher education, fulfilling the role of academic advisor and recommender service. One such example is the SHERPA at Saddleback College. The SHERPA software uses the types of algorithms found in recommender services of Netflix and Amazon to personalize course enrollment. Student preferences, schedules, and courses help to create individual profiles that respond to their individual needs. For instance, if a student enters their work schedule and they encounter a class that is full, SHERPA suggests other classes that are open at an individual's preferred times.<sup>152</sup> Similarly, the bX Recommender being used at Flinders University in Australia is a resource that offers students article suggestions based on their individual area of interest. The service takes an article a researcher is viewing and displays a list of relevant articles that were accessed by other users of the platform.<sup>153</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about personalizing learning:

### Career Pathways Explained: A Strategy to Help Workers and Employers Meet Today's Job Skill Demands

[go.nmc.org/pathway](http://go.nmc.org/pathway)

(Center for Law and Social Policy, 2014.) This article describes how personalized career pathways and systems can integrate four functions: quality education and training, consistent and non-duplicative assessments of assets and needs, support services and

career navigation assistance, and employment services and work experiences. > [Policy](#)

### Innovations in Personalized Learning

[go.nmc.org/personalised](http://go.nmc.org/personalised)

(Criterion Conferences, accessed 5 January 2015.)

The Innovations in Personalized Learning Conference in Australia brought together higher education educators to discuss emerging technologies, learning environments, and online delivery models that support more personalized learning experiences. > [Leadership](#)

### Personalized Learning Strategies for Higher Education

[go.nmc.org/aut](http://go.nmc.org/aut)

(Mike Keppell, Australian Digital Futures Institute, accessed 4 January 2015.) This excerpt describes personalized learning as consisting of six broad

concepts: digital citizenship, seamless learning, learner engagement, learning-oriented assessment, life-long and life-wide learning, and desire paths. > [Leadership](#)

### The University of Texas System Makes Bold Move into Competency-Based Education

[go.nmc.org/utcbe](http://go.nmc.org/utcbe)

(Jenny LaCoste-Caputo and Karen Adler, The University of Texas System, 3 November 2014.) The University of Texas is launching a statewide personalized, competency-based education program offered in flexible online and hybrid options that allow learners to start as early as high school and progress through post-graduate studies.

> [Leadership](#)

### FlexPath

[go.nmc.org/flexp](http://go.nmc.org/flexp)

(Capella University, accessed 4 January 2015.) Capella University's FlexPath is a self-paced competency-based learning option that allows students to gain a degree by paying a flat tuition rate each quarter and progressing through content without preset deadlines. > [Practice](#)

### Personalized Learning Changes Everything

[go.nmc.org/umpi](http://go.nmc.org/umpi)

(The University of Maine at Presque Isle, accessed 4 January 2015.) The University of Maine at Presque Isle's proficiency-based learning approach allows students to choose how they learn best and progress at their own speed, demonstrating their knowledge regardless of whether the learning takes place online, in the classroom, or through an off-campus internship. > [Practice](#)



# Teaching Complex Thinking

## Difficult Challenge: Those that we understand but for which solutions are elusive

**In today's world, higher-order thinking is not only a valuable skill, but necessary for understanding and solving complex, real world problems. Equally important is the ability to communicate complex information surrounding global dilemmas in ways that are accessible to the general public. In the age of big data, conditions are optimal for developing new research processes to examine systems and our environment in greater depth. Massive quantities of data traverse the Internet every day, and many sectors are tapping into these myriad data sets to decipher and resolve complex issues. As a result, demand for data specialists is expected to rise by 243% over the next five years in the UK alone, according to SAS.<sup>154</sup> In this environment, institutions have a responsibility to prepare learners to take advantage of the latest tools and techniques to help them tackle complex problems and influence systemic change through their mode of communication. Other emerging technologies including semantic web and modeling software, among other innovations, are contributing to the experimental conditions that have the potential to train learners in complex and systems thinking.**

### Overview

The term “complex thinking” refers to the ability to understand complexity, or to comprehend how systems work in order to solve problems.<sup>155</sup> Complex thinking is the application of systems thinking, which is the capacity to decipher how individual components work together as part of a whole, dynamic unit that creates patterns over time.<sup>156</sup> Computational thinking is another higher-order thinking skill that complements complex thinking, and it entails logical analysis and organization of data; modeling, abstractions, and simulations; and identifying, testing, and implementing possible solutions.<sup>157</sup> Emphasis on these approaches in education is helping equip learners with essential skills for deciphering the real-world systems and solving complex problems on a global scale. The difficulty in this challenge is in introducing complex thinking to students that have not yet had exposure to these modes of problem-solving along with related communication techniques.

Making complex ideas digestible for students has become easier with the use of innovative approaches such as data visualization, also referred to as infographics,

a form of visual communication that conveys a succinct narrative. This method of data analysis and presentation has moved beyond the sciences to a more mainstream platform — journalism. Data journalism is an emerging field that leverages data visualization and engaging infographics to tell compelling stories, and the Open Knowledge Foundation and the European Journalism Centre who partnered to produce *The Data Journalism Handbook* in 2011 have formalized its use.<sup>158</sup> With over 70 contributors sourced from universities and media firms from around the world, *The Data Journalism Handbook* includes chapters about the symbiotic relationship between journalists and coders, the various methods of gathering and presenting data, as well as a range of case studies to support this mode of storytelling.

Creating compelling presentations is also becoming more important to scientists and researchers at universities, as they are increasingly expected to be able to communicate their findings and connect with the public. A growing number of universities have established programs that are focused on developing young scientists in this area. Typically guided by an artistic director or acting coach, learners are taught improvisational techniques that encourage relaxed communication and positive attitudes about failure. The Alan Alda Center for Communicating Science at Stony Brook University has pioneered instruction in this area. Located within the Stony Brook School of Journalism, the project has been helping young scientists deliver on their responsibility of sharing the meaning and implications of their work since 2009.<sup>159</sup>

### Implications for Policy, Leadership, or Practice

Encouraging complex thinking and communication is challenging because educators have only just started articulating this multifaceted need in higher education. PBS's Media Shift coordinated educators from University of Miami, Columbia University, Temple University, University of Wisconsin-Madison, and technology contributors from *The New York Times* to discuss the rising importance of integrating data visualization into journalism education.<sup>160</sup> Via a Twitter-mediated discussion, these leaders touched on the power of visualization to reveal patterns that are shrouded in complexity and data. Commentators also remarked

on data visualization's ability to convey complex relationships to the public that are not possible through traditional forms of reporting. Dialogs like this are paving the way for policies in support of integrating complex thinking and communication into core activities.

Much of the difficulty of this challenge lies in the diversity and intricacy of the skills it entails, which means there is no one-size-fits-all solution. Some institutions, however, are developing specialized schools of thought to address complex problem-solving and systemic change. In 2012, Stanford University's Hasso Plattner Institute of Design launched the d.school fellowship program, which invites burgeoning and experienced professionals to learn formal design-thinking processes as they develop human-centric solutions that influence systems-level impact in their areas of expertise. Supported by instruction and resources from Stanford and Silicon Valley, the fellows represent a diverse group of multidisciplinary thinkers with strong communication skills. Among the 2014-15 d school fellows are journalists, artists, educators, and public servants that have developed prototypes for innovative organizational models they intend to reinforce through systems and design-thinking processes.<sup>161</sup>

Some departmental leaders are emphasizing communication as an integral skill for scientists, and have made significant progress on this front for their institutions. Robert Bazell, a molecular, cellular, and developmental virology professor at Yale University was instrumental in the development and implementation of a novel, four-course program at his institution for postdoctoral and graduate students in the sciences that focus on presentation and public speaking. Bazell, the former chief science and health correspondent for NBC News, said that he was intent on starting the program to develop Yale's emerging scientists as competent communicators.<sup>162</sup> Focused on improvisation and acting games, the sessions have earned positive feedback from the students who have expressed their satisfaction with gaining new-found perspectives and understanding of their fields.

## For Further Reading

The following resources are recommended for those who wish to learn more about teaching complex thinking:

### Thinking Chair

[go.nmc.org/chair](http://go.nmc.org/chair)

(Colleen Flaherty, *Inside Higher Ed*, 16 September 2014.) RIT has developed an endowed chair to promote critical thinking. This person works closely with faculty to bring them together across disciplines around addressing issues with and better incorporating applied critical thinking. > [Policy](#)

### The National Council for Excellence in Critical Thinking

[go.nmc.org/ncect](http://go.nmc.org/ncect)

(Critical Thinking, accessed 5 January 2015.) The National Council for Excellence in Critical Thinking seeks to articulate, preserve, and foster intellectual standards in critical thinking research, scholarship, and instruction by disseminating information that aids educators and others in identifying quality critical thinking programs and approaches. > [Leadership](#)

### Natural Born Engineers

[go.nmc.org/born](http://go.nmc.org/born)

(Kate Parker, *E&T*, 22 October 2014.) Examining studies from around the world on the role of habits of mind in education systems, the Centre for Real-World Learning developed six engineering habits of mind: systems thinking, problem-finding, visualizing, improving, creative problem-solving, and adapting. > [Leadership](#)

### The Persuasive Power of Data Visualization

[go.nmc.org/nyviz](http://go.nmc.org/nyviz)

(Anshul Vikram Pandey et al., New York University Public Law and Legal Theory Working Papers, July 2014.) A group of researchers from New York University School of Law studied data visualization as a communication tool to answer the question: "Does graphical depiction of data have a more persuasive effect than textual or tabular information?" > [Practice](#)

### PhD Candidate Makes Complex Scientific Research Sound Simple

[go.nmc.org/tomlin](http://go.nmc.org/tomlin)

(Paula Katinas, *Brooklyn Daily Eagle*, 21 April 2014.) A young scientist won the National FameLab USA competition, a contest that challenges students to present their research in a way that can be easily understood by the general public. > [Practice](#)

### UW Interactive Data Lab

[go.nmc.org/idl](http://go.nmc.org/idl)

(University of Washington, accessed 5 January 2015.) Faculty and students at the University of Washington's Interactive Data Lab design new interactive systems for data visualization and analysis for domains ranging from large-scale text analysis to population genomics. > [Practice](#)

### Why Systems Thinking Is the Next Step in Sustainability

[go.nmc.org/sysinc](http://go.nmc.org/sysinc)

(Maureen Kline, *Inc.*, 23 October 2014.) An expert in corporate sustainability and social responsibility writes about the "fourth wave" in sustainability — systems thinking — an approach that frames problems and solutions in terms of systems, which rely on cooperation and coordination to effect dramatic change. > [Practice](#)

## Competing Models of Education

**Wicked Challenge: Those that are complex to even define, much less address**

**N**ew models of education are bringing unprecedented competition to the traditional models of higher education where students typically receive instruction by faculty or teaching assistants per credit hour over four years, on-campus. Across the board, institutions are looking for ways to provide a high quality of service and more learning opportunities at lower costs.<sup>163</sup> While massive open online courses are at the forefront of these discussions, a range of adult learning programs are creating innovative models that emphasize human interaction and multidimensional learning by cultivating 21st century skills such as intercultural communication and social entrepreneurship.<sup>164</sup> Additionally, competency-based education, which tracks student skills instead of credit hours, is emerging to disrupt existing credit-hour systems.<sup>165</sup> As these new platforms arise, there is a growing need to frankly evaluate the models and determine how to best support collaboration, interaction, and assessment at scale. It is clear that simply capitalizing on new technology is not enough; the new models must use these tools and services to engage students on a deeper level.

### Overview

With free and low-cost, high-quality content accessible via the Internet, both formal and informal online learning is becoming increasingly widespread, which some fear could dampen the appeal of traditional higher education degrees and institutions. MOOCs have surfaced as one of the highest profile examples of a competing model. While MOOCs have experienced a meteoric rise followed by skepticism, experts believe that they will continue to be a potent disruptive technology that will jeopardize the futures of many inefficient universities. The rising cost of private and public university tuition is compounding this challenge, making students rethink the value of a traditional college education across the globe.<sup>166</sup> New models that provide both the opportunity to save money and progress more quickly through degree programs will become increasingly sought after.<sup>167</sup>

Interest in competency-based degree programs, which allow for more flexible and personalized degree options, is on the rise. According to EDUCAUSE, competency-based education provides academic credit for the

mastery of clearly defined competencies, and it leverages the potential of online learning by saving students time and money.<sup>168</sup> Northern Arizona University is one of a handful of online competency-based programs that enables students to earn degrees through self-paced modules and assessment rather than in traditional semester-long programs. Capella University also offers FlexPath degree programs for Business, Information Technology, and Psychology. FlexPath is a style of learning that allows students to work at their own pace and spend more time working through new and challenging material by recognizing knowledge already gained on the job.<sup>169</sup> The appeal of these more flexible models is how the degrees are earned — as direct-assessment degrees, students receive competencies rather than credits. Along with their credit equivalencies, students must pass a summative assessment that is based on their learning portfolio.<sup>170</sup>

Experimentation using alternative models of learning is beginning to increase in both size and type to address challenges related to high costs, deficient student engagement, and unsatisfactory student graduation rates in higher education.<sup>171</sup> Three examples include Northeastern University's cooperative education courses that offer on-the-job experience,<sup>172</sup> Western Governors University competency-based education that involves the combination of expertise in both industry knowledge and academics,<sup>173</sup> and Florida College System's meta-majors or pathways that are a collection of related content aligned with potential academic and career goals.<sup>174</sup> Critics caution that there is a need to examine these new approaches through a critical lens to ensure they are effective and provide long-term benefits equivalent to a traditional higher education experience.<sup>175</sup>

### Implications for Policy, Leadership, or Practice

Competition from new pedagogies is not likely to foster widespread change unless there is regulatory reform in the political arena. While the general sentiment is that the US federal government has been primarily hands-off, existing regulatory barriers such as accreditation, state authorization regulations for distance learning, and federal financial aid eligibility rules still favor traditional institutions of higher education. In the US, recent actions

by the President and US Department of Education in redefining the credit hour to include amount of work represented by learning outcomes is a step forward, helping foster the growth of these innovative approaches.<sup>176</sup> While there is a more supportive environment in the US, there is concern in India that over-regulation is stifling innovation and impeding the growth of online courses there. Government leaders there cite that ensuring quality control is the main obstacle, while businesses such as Coursera argue that MOOCs should be embraced and allowed to flourish because they do a better job at preparing students for the workforce.<sup>177</sup>

Increasing workforce preparedness has been cited as one of the forces encouraging more innovative pedagogical models, and projects such as Liverpool John Moores University's World of Work program is serving as a leader in this area. As one of the UK's new generation universities, the research university stresses work-related learning and skill development through the involvement of business experts from leading organizations such as Airbus, Ford Europe, and Sony. Students develop a set of skills that are verified through an employer-approved Skills Statement and interview during the course of their studies. Quest University in Canada is a lauded example of how institutions are engaging students at a deeper level. During the first two years of study, students complete the same foundational courses in a seminar-discussion format then select individual learning paths based on their personal interests and passion. There are no grades or lectures at Quest University; instead students receive check marks to indicate they are engaged in their learning.<sup>178</sup>

Online learning is helping to facilitate entire new areas of focus and growth beyond MOOCs at global higher education institutions. Minerva University, for example, is a radically different university that focuses on key skill building in various cities instead of information transferring on a single campus. The university recently took in its first cohort of 33 students from different parts of the world — they do not take classes, but engage in intensive interactive online seminars. Students begin their journey their first year in California, then spend each semester in a different city around the world where they use the cities' infrastructures to explore and create their own university experiences.<sup>179</sup> Creating a new model that reduces geographical barriers and exposes students to global issues is also the focus of the work of Aga Khan University and University of Toronto. They have recently begun using blended learning strategies to connect students from different backgrounds and expose them to challenges facing the global health community.<sup>180</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about competing models of education:

### Are We Ready for Innovation? A Bold New Model for Higher Education

[go.nmc.org/bold](http://go.nmc.org/bold)

(Mohammad H. Qayoumi et al., San Jose University, accessed 6 January 2015.) San Jose State has proposed a framework that universities can use to transform their undergraduate education offerings in ways that adapt to the modern educational landscape. > [Policy](#)

### Universities of Art and Design Adapt to Show the Value of Their Degrees

[go.nmc.org/value](http://go.nmc.org/value)

(Rosanna Tamburri, *University Affairs*, 29 October 2014.) In response to pressures from the job market and to prove their degrees are valuable, many universities of art and design are evolving to combine other disciplines into their programs like engineering, business, science, and research. > [Policy](#)

### Is Minerva University Redefining 21st Century Education?

[go.nmc.org/experience](http://go.nmc.org/experience)

(Laju Arenyeka, *All Africa*, 7 November 2014.) Minerva University is a new model of higher education that offers intensive, interactive seminars in a virtual environment. The students spend each semester in a different part of the world, and at the end of their four-year degree will have experienced living in at least seven different cities. > [Leadership](#)

### Students Explore New Models of Higher Education with Dean Pritchett

[go.nmc.org/pritch](http://go.nmc.org/pritch)

(University of Pennsylvania Law School, 8 December 2014.) The University of Pennsylvania Law School created a course called "New Models for Post-Secondary Education" in which students examine and confront challenges to earning a degree by exploring alternative educational models. > [Leadership](#)

### What MOOCs Are Teaching Universities About Active Learning

[go.nmc.org/mteach](http://go.nmc.org/mteach)

(*MindShift*, 30 October 2014.) While MOOCs have yet to replace expensive college degrees, the edX CEO maintains that MOOCs have made a powerful impact on the higher education environment by inspiring new approaches to learning such as the flipped classroom.

> [Practice](#)

## Rewarding Teaching

### Wicked Challenge: Those that are complex to even define, much less address

**T**eaching is often rated lower than research in academia. In the global education marketplace, a university's status is largely determined on the quantity and quality of its research. In the Times Higher Education's World University Rankings methodology, an institution's research influence is the single most influential indicator out of their 13 criteria.<sup>181</sup> There is an overarching sense in the academic world that research credentials are a more valuable asset than talent and skill as an instructor. Because of this way of thinking, efforts to implement effective pedagogies are lacking. Adjunct professors and students feel the brunt of this challenge, as teaching-only contracts are underrated and underpaid, and learners are subject to the outdated teaching styles of the university's primary researchers. Overemphasis on research has caused a number of negative ramifications, including an excessive dependence on part-time faculty, which has diminished mobility within higher education, complicating the dilemma even further.<sup>182</sup>

#### Overview

It is largely understood that when university administrators are considering candidates for tenured, full-time positions, extent of research is weighted more heavily than student evaluations or effectiveness of instruction.<sup>183</sup> This is the result of a higher education system in which funding and prestige are derived from an institution's scholarly imprint, which has created an inhospitable environment for educators who like to teach.<sup>184</sup> *The Guardian* explored this dilemma in the context of the EU where universities are competing to earn funding from the Research Excellence Framework (REF), an initiative of the UK government that will provide funding to institutions with outstanding rankings. Because of REF, universities are putting pressure on faculty to publish research, invoking negative reactions among professors and teaching fellows who believe that quality of instruction is undervalued.<sup>185</sup>

One of the effects of this wicked challenge is that reliance on part-time faculty has increased substantially, but this is not necessarily a benefit for adjunct instructors. More and more American universities are favoring part-time employment over long-term, tenured positions.<sup>186</sup> A 2014 report by the American Association of University

Professors showed that adjunct professors comprise 76.4% of US faculty across institutions, from liberal arts colleges to research universities to community colleges.<sup>187</sup> This challenge has engendered a struggle for teachers in higher education. *The Atlantic* recently covered a labor movement that has coalesced as more part-time professors find themselves living below the poverty line and working between several colleges. The affected instructors are calling for systemic change that will allow them mobility in higher education, which requires time, space, and resources to develop as educators and scholars.

The roots of this issue are interwoven with past trends in university funding, which have generated a host of negative consequences. According to Jeffrey Selingo, author of *College (Un)Bound: The Future of Higher Education and What It Means for Students*, changes in hiring practices have been caused by shifting priorities of university administrators.<sup>188</sup> As the competition among colleges in the US grows fiercer, universities have focused funding on improving student services and amenities over improving teaching and learning within the classroom. Moreover, in a recent commentary for *The Chronicle on Higher Education*, Selingo points to this "mission creep" as a result of institutions trying to gain prestige by inflating their degree offerings to justify increases in tuition and the hiring of more administration. These funding trends have affected students at regional public colleges the most because they are expected to pay more for a mediocre graduate experience that fails to live up to the quality of its associated flagship research university.<sup>189</sup>

#### Implications for Policy, Leadership, or Practice

Acknowledgement of the issue at a national level has offered a starting point for addressing this complex issue. The EU has recognized this multifaceted dilemma in the 2013 "Report to the European Commission on Improving the Quality of Teaching and Learning in Europe's Higher Education Institutions," which laid out three main points of this challenge: the need to prioritize teaching and learning over research, the importance of training faculty members to teach at a first-rate standard, and for policymakers and thought leaders to push institutions of higher education to reevaluate their missions so that teaching is a keystone.<sup>190</sup> The Australian government

has also recognized the quality of learning experiences in higher education by allocating grant funds from their 2014-2015 Department of Education and Training Budget to the Promotion of Excellence in Learning and Teaching in Higher Education.<sup>191</sup>

There are a number of institutions that have taken the lead in improving and prioritizing the quality of instruction. At the Eberly Center for Teaching Excellence and Educational Innovation, professors at Carnegie Mellon University are selected for the Spotlight on Innovative Teaching, a semester-long period of recognition where they host workshops to impart their techniques to other educators.<sup>192</sup> In Canada, administrators at York University plan to hire over 200 faculty members that will be teaching-focused. While the workload balance between research and instruction is more even in Canadian higher education, administrations have justified the need to create more teaching-centered positions, especially in regional public universities rather than flagship research institutions. It is important to point out that for Canadian universities, teaching-focused faculty are offered comparable pay, benefits, and tenure.<sup>193</sup>

Overemphasis on research can be corrected within the classroom, through the use of more effective pedagogies, which are often adopted at the departmental level. At The University of Texas, instructors in the Department of Mathematics have turned to inquiry-based learning (IBL) to help students become active generators of mathematical concepts instead of passive consumers of lectures. Since their initial success with Number Theory, the department now employs IBL across a range of mathematics courses.<sup>194</sup> Similarly, the flipped classroom promotes hands-on learning and interaction during class, and has been adopted by faculty at the Department of Electrical and Computer Engineering (ECE) at the University of Utah. In discussing the hype surrounding this method of instruction, an ECE educator commented that the flipped classroom is simply an application of technology that enables high-quality teaching practices.<sup>195</sup>

## For Further Reading

The following resources are recommended for those who wish to learn more about rewarding teaching:

### Faculty Not On Tenure Track Rises Steadily Over Past 4 Decades

[go.nmc.org/strike](http://go.nmc.org/strike)

(NPR, 20 February 2014.) A faculty strike canceled classes at the University of Illinois at Chicago. Tenure track, non-tenure track, and contingent faculty all stood together to push for contingent faculty members who are full-timers to have their pay increased. > [Policy](#)

### Student Outcomes Assessment Among the New Non-Tenure-Track Faculty Majority

[go.nmc.org/outcomes](http://go.nmc.org/outcomes)

(Adrianna Kezar and Daniel Maxey, Learning Outcome Assessment, July 2014.) This paper presents three current courses of action for campus leaders to consider that would allow them to foster more robust assessment models to support the work of today's faculty and improve conditions facing non-tenure-track faculty.

> [Policy](#)

### The Wal-Mart-ization of Higher Education: How Young Professors are Getting Screwed

[go.nmc.org/walmart](http://go.nmc.org/walmart)

(Keith Hoeller, *Salon*, 16 February 2014.) This article highlights that 75% of all college professors in the US teach off the tenure track. Thus the academic two-tier system must change so that it includes rewards and recognition for non-tenure track educators instead of only the tenured. > [Policy](#)

### The Core

[go.nmc.org/core](http://go.nmc.org/core)

(University of Oklahoma, accessed 8 January 2015.) The University of Oklahoma created an Active Learning Faculty Fellows program in which professors are awarded a stipend for their participation and paired with an active learning mentor to assist with transitioning an existing course into an outstanding example of an innovative, team-based active learning class. > [Leadership](#)

### Rewarding Creative Curriculum

[go.nmc.org/creacurr](http://go.nmc.org/creacurr)

(Brendan Cosgrove, Northwestern University, 19 May 2014.) Northwestern University recently awarded two professors a \$12,500 grant cosponsored by the Alumnae of Northwestern University and the Office of the Provost that will support the development of their innovative course ideas. > [Leadership](#)

### I Used to Be a Good Teacher

[go.nmc.org/usedto](http://go.nmc.org/usedto)

(Alice Umber, *Chronicle Vitae*, 20 August 2014.) In this article an adjunct professor explains why she gave up the tenure track and the difficulties that have come with that decision. > [Practice](#)

## Important Developments in Educational Technology for Higher Education

Each of the six developments in educational technology detailed in this section were selected by the project's expert panel using the Horizon Project's Delphi-based process of iterative rounds of study, discussion, and voting. In the NMC Horizon Project, educational technology is defined in a broad sense as tools and resources that are used to improve teaching, learning, and creative inquiry. While many of the technologies considered were not developed for the sole purpose of education, they have clear applications in the field.

The technologies, which the members of the expert panel agreed are very likely to drive technology planning and decision-making over the next five years, are sorted into three time-related categories — near-term technologies that are expected to achieve widespread adoption in one year or less; mid-term technologies that will take two to three years; and far-term technologies, which are forecasted to enter the mainstream of education within four to five years. Each technology topic opens with an overview of the topic.

The initial list of topics considered by the expert panel was arranged into categories that were based on the primary origin and use of the technology. The potential applications of the technologies featured, specifically in the context of global higher education, were considered in a series of online discussions that can be viewed at [horizon.wiki.nmc.org/Horizon+Topics](http://horizon.wiki.nmc.org/Horizon+Topics).

The expert panel was provided with an extensive set of background materials when the project began that identified and documented a range of existing technologies used in both education and beyond. The panel was also encouraged to consider emerging technologies whose applications for higher education institutions may still be distant. A key criterion for the inclusion of a new technology in this edition was its potential relevance to teaching, learning, and creative inquiry in higher education.

In the first round of voting, the expert group reduced the master set, shown on the next page, to 12 technologies that were then researched in much greater depth by the NMC staff. Each was then written up in the format of the *NMC Horizon Report* and used to inform the final round of voting. Technologies that do not make the

interim results or the final report are often thoroughly discussed on the project wiki at [horizon.wiki.nmc.org](http://horizon.wiki.nmc.org). Sometimes a candidate technology does not get voted in because the expert panel believes it is already in widespread use in higher education, or, in other cases, they believe the technology is more than five years away from widespread adoption. Some technologies, while intriguing, do not have enough credible project examples to substantiate them.

There are currently seven categories of technologies, tools, and strategies for their use that the NMC monitors continuously. These are not a closed set, but rather are intended to provide a way to illustrate and organize emerging technologies into pathways of development that are or may be relevant to learning and creative inquiry. The list of seven categories has proven fairly consistent, but new technologies are added within these categories in almost every research cycle; others are merged or updated. Collectively, the categories serve as lenses for thinking about innovation; each is defined below.

- > **Consumer technologies** are tools created for recreational and professional purposes and were not designed, at least initially, for educational use — though they may serve well as learning aids and be quite adaptable for use in universities and colleges. These technologies find their ways into institutions because people are using them at home or in other settings.
- > **Digital strategies** are not so much technologies as they are ways of using devices and software to enrich teaching and learning, whether inside or outside of the classroom. Effective digital strategies can be used in both formal and informal learning; what makes them interesting is that they transcend conventional ideas to create something that feels new, meaningful, and 21st century.
- > **Enabling technologies** are those technologies that have the potential to transform what we expect of our devices and tools. The link to learning in this category is less easy to make, but this group of technologies is where substantive technological innovation begins to be visible. Enabling technologies expand the reach of our tools, make them more capable and useful, and often easier to use as well.

- > **Internet technologies** include techniques and essential infrastructure that help to make the technologies underlying how we interact with the network more transparent, less obtrusive, and easier to use.
- > **Learning technologies** include both tools and resources developed expressly for the education sector, as well as pathways of development that may include tools adapted from other purposes that are matched with strategies to make them useful for learning. These include technologies that are changing the landscape of learning, whether formal or informal, by making it more accessible and personalized.
- > **Social media technologies** could have been subsumed under the consumer technology category, but they have become so ever-present and so widely used in every part of society that they have been elevated to their own category. As well established as social media is, it continues to evolve at a rapid pace, with new ideas, tools, and developments coming online constantly.

- > **Visualization technologies** run the gamut from simple infographics to complex forms of visual data analysis. What they have in common is that they tap the brain's inherent ability to rapidly process visual information, identify patterns, and sense order in complex situations. These technologies are a growing cluster of tools and processes for mining large data sets, exploring dynamic processes, and generally making the complex simple.

The following pages provide a discussion of the six technologies highlighted by the 2015 Higher Education Expert Panel, who agree that they have the potential to foster real changes in education, particularly in the development of progressive pedagogies and learning strategies; the organization of teachers' work; and the arrangement and delivery of content. As such, each section includes an overview of the technology; a discussion of its relevance to teaching, learning, or creative inquiry; and curated project examples and recommendations for further reading.

#### Consumer Technologies

- > 3D Video
- > Drones
- > Electronic Publishing
- > Mobile Apps
- > Quantified Self
- > Tablet Computing
- > Telepresence
- > Wearable Technology

#### Digital Strategies

- > Bring Your Own Device (BYOD)
- > Flipped Classroom
- > Games and Gamification
- > Location Intelligence
- > Makerspaces
- > Preservation/Conservation Technologies

#### Internet Technologies

- > Cloud Computing
- > The Internet of Things
- > Real-Time Translation
- > Semantic Applications
- > Single Sign-On
- > Syndication Tools

#### Learning Technologies

- > Badges/Microcredit
- > Learning Analytics
- > Massive Open Online Courses
- > Mobile Learning
- > Online Learning
- > Open Content
- > Open Licensing
- > Virtual and Remote Laboratories

#### Social Media Technologies

- > Collaborative Environments
- > Collective Intelligence
- > Crowdfunding
- > Crowdsourcing
- > Digital Identity
- > Social Networks
- > Tacit Intelligence

#### Visualization Technologies

- > 3D Printing/Rapid Prototyping
- > Augmented Reality
- > Information Visualization
- > Visual Data Analysis
- > Volumetric and Holographic Displays

#### Enabling Technologies

- > Affective Computing
- > Cellular Networks
- > Electro vibration
- > Flexible Displays
- > Geolocation
- > Location-Based Services
- > Machine Learning
- > Mesh Networks
- > Mobile Broadband
- > Natural User Interfaces
- > Near Field Communication
- > Next-Generation Batteries
- > Open Hardware
- > Speech-to-Speech Translation
- > Statistical Machine Translation
- > Virtual Assistants
- > Wireless Power



## Bring Your Own Device (BYOD)

### Time-to-Adoption Horizon: One Year or Less

**B**YOD, also referred to as BYOT (Bring Your Own Technology), refers to the practice of people bringing their own laptops, tablets, smartphones, or other mobile devices with them to the learning or work environment. Intel coined the term in 2009, when the company observed that an increasing number of its employees were using their own devices and connecting them to the corporate network. Since implementing BYOD policies, the company has reported up to 5 million hours of annual productivity gains, a statistic that is compelling many other companies to consider BYOD.<sup>196</sup> In higher education, the BYOD movement addresses the same reality; many students are entering the classroom with their own devices, which they use to connect to the institutions' networks. While BYOD policies have been shown to reduce overall technology spending, they are gaining traction more so because they reflect the contemporary lifestyle and way of working. A 2013 Cisco Partner Network Study found that BYOD practices are becoming more common across industries, particularly in education; over 95% of educators surveyed responded that they use their own device for work purposes.<sup>197</sup> Although higher education institutions have cited IT security concerns, technology gap issues, and platform neutrality as challenges to the uptake of this technology, a growing number of models in practice are paving the way for BYOD to enter the mainstream.

#### Overview

The link between the use of personal devices and increases in productivity gets stronger each passing year as more organizations adopt BYOD policies. The integration of personal smartphones, tablets, and PCs into the workflow supports an on-the-go mentality, changing the nature of work and learning activities so that they can happen anywhere, at anytime. Employers and higher education institutions are finding that when given the opportunity to choose their device, users are saved from the effort and time needed to get accustomed to new devices and can therefore accomplish tasks with more ease and efficiency. A recent study by Gartner predicted that by 2017, half of the world's employers will expect their employees to supply their own device for work.<sup>198</sup>

Adoption of BYOD policy into the corporate sphere has provided a model for educational contexts, and the practice is gaining acceptance in universities and colleges all over the world. The latest "College Explorer" study from re:fuel reveals that on average, college students spend more than 3.5 hours per day using their mobile phones,<sup>199</sup> and *Information Week* reports that students own an average of 2.7 devices.<sup>200</sup> Using this technology has become an essential part of the learning process; a study at California State University found that students could only engage in educational activities for six minutes before turning to their devices for support.<sup>201</sup> Devices have become the gateways to personal working and learning environments that facilitate the exploration of new subjects at a pace that is unique to each learner.

BYOD proponents at Griffith University in Australia cite personal mobile device use as a way for students to engage with learning material more effectively; they have instant access to more resources to gain a better understanding of the subjects at hand.<sup>202</sup> The BYOD movement is enabling students to learn using the technology with which they are already familiar and comfortable. Universities and colleges are following suit as a Bradford Network Study revealed that 85% of the responding educational institutions allow faculty and students to use their own devices on campus, and 52% said that those devices are being integrated into the class experience.<sup>203</sup> However, discussions around the topic have raised concerns regarding a digital divide — some pundits caution that BYOD could alienate students who cannot afford the latest technologies. To alleviate this issue, several institutions purchase tablets for all students who need them, including Bethel University, Seton Hill University, and Illinois Institute of Technology.<sup>204</sup> Södertörn University in Sweden provides 13,000 students and 850 staff with access to both PCs and Macs.<sup>205</sup>

#### Relevance for Teaching, Learning, or Creative Inquiry

For higher education institutions, often BYOD is less about the devices and more about the personalized content that users have loaded onto them. Rarely do two devices share the same content or settings, and BYOD enables students and educators to leverage the tools that make them most efficient. In many cases, their devices are already populated with productivity apps,

such as Skitch<sup>206</sup> and iTunes U,<sup>207</sup> helping them to better organize their notes, syllabi, and schedules on campus and beyond. Furthermore, instructors can leverage this mobile device use by implementing polling and other interactive features during class. At Manchester Medical School, students use iPads during class to annotate instructors' slides, record lectures, take notes, and create mind maps to illustrate their understanding of complex topics. Students are also able to share documents with each other more easily through the Dropbox app.<sup>208</sup> In a do-it-yourself manner, biology students at Missouri University of Science and Technology are using their smartphones, along with cheap plywood, Plexiglass, and LED laser pointers to design their own microscopes to use for lab work.<sup>209</sup>

Higher education institutions are increasingly updating their IT infrastructures to accommodate BYOD policies. University College London, for example, is home to a dedicated IT service desk that helps connect students to their wireless network, Eduroam.<sup>210</sup> However, one of the inherent challenges in the growing BYOD trend is facilitating learning environments that are device-agnostic; when students have the flexibility to use the technology of their choosing, sufficient infrastructure must be in place to support devices of all kinds. University CTOs are being tasked with forging solutions. In an article from *Higher Ed Tech Decisions*, campus IT experts provided critical tips for success, including the need for more radio waves within the wireless access points and focusing on devising BYOD policies well ahead of deployment.<sup>211</sup>

EDUCAUSE has published BYOD considerations for higher education, emphasizing best practices for secure networks, systems, and sensitive data. The CIO of Roche Diagnostics asserts that creating effective BYOD policy is less about the technology and more about understanding and anticipating the needs and behaviors of students and faculty.<sup>212</sup> In 2014, the University of Scranton published their BYOD strategy, which outlined their plans for students to access virtual laboratories through their mobile devices. Additionally, they believe implementing BYOD will foster better hybrid learning models, allowing faculty and students to both capture and access lectures online. University of Scranton leaders assert that BYOD policies will also impact the physical environment of the classroom, and that rigid furniture should be replaced with more flexible workspaces to accommodate the collaboration that mobile apps and other features promote.<sup>213</sup>

### Bring Your Own Device in Practice

The following links provide examples of BYOD in use that have direct implications for higher education settings:

#### Managing the BYOD Program at Broward College

[go.nmc.org/ster](http://go.nmc.org/ster)

Broward College in Florida has successfully managed their BYOD at a large scale. They currently have an estimated 20,000 personally and college-owned devices on the network. > [Leadership](#)

#### BYOD at King's College London

[go.nmc.org/kin](http://go.nmc.org/kin)

King's College London implemented a private cloud platform that allows students and faculty from 150 countries to use their own devices to access a virtual desktop. > [Practice](#)

#### Scalable Collaborative Learning Spaces at Pitt

[go.nmc.org/scal](http://go.nmc.org/scal)

The University of Pittsburgh is constructing three innovative classrooms that will serve as models for future learning spaces, featuring technologies that enable students and instructors to use their own mobile devices to wirelessly and securely share documents, collaborate on projects, and display content in the rooms. > [Practice](#)

### For Further Reading

The following articles and resources are recommended for those who wish to learn more about BYOD:

#### Preparing for the BYOD Invasion on Your Campus

[go.nmc.org/inv](http://go.nmc.org/inv)

(Frank Andrus, *University Business*, January 2014.) This list of guidelines describes how universities can prepare for BYOD while balancing critical security needs by conducting an in-depth analysis of network visibility and security, creating a policy that enables remote registration and guest access, and communicating that policy effectively. > [Policy](#)

#### Bring Everything: BYOD's Evolution in Higher Education

[go.nmc.org/helman](http://go.nmc.org/helman)

(Brian Helman, *Information Week*, 28 February 2014.) A university technologist describes how campus wireless infrastructure has been challenged to meet the needs of students that are connecting more than just laptops and smartphones to their campus network. > [Leadership](#)

#### How Can We Get the Best Devices into HigherEd BYOD Classrooms?

[go.nmc.org/howcan](http://go.nmc.org/howcan)

(*Edcetera*, 11 February 2014.) This list of dos and don'ts aims to help teachers, administrators and IT staff as they guide students in bringing the best devices to class.

> [Practice](#)

# Flipped Classroom

## Time-to-Adoption Horizon: One Year or Less

**T**he flipped classroom refers to a model of learning that rearranges how time is spent both in and out of class to shift the ownership of learning from the educators to the students. In the flipped classroom model, valuable class time is devoted to higher cognitive, more active, project-based learning where students work together to solve local or global challenges — or other real-world applications — to gain a deeper understanding of the subject. Rather than the instructor using class time to dispense information, that work is done by each student after class, and could take the form of watching video lectures, listening to podcasts, perusing enhanced e-book content, or collaborating with peers in online communities.<sup>214</sup> Students access the online tools and resources any time they need them. Faculty can then devote more time to interacting with each individual. After class, students manage the content they use, the pace and style of learning, and the ways in which they demonstrate their knowledge; the instructor adapts instructional and collaborative approaches to suit their learning needs and personal learning journeys.

### Overview

The flipped classroom model is part of a larger pedagogical movement that overlaps with blended learning, inquiry-based learning, and other instructional approaches and tools that are meant to be flexible, active, and more engaging for students. The first well-documented example of the flipped classroom was in 2007 when two chemistry teachers at Woodland Park High School in Colorado wanted to address the issue of students missing class when they were traveling to and from school activities. Students were struggling to keep up with their work. The teachers experimented with using screen capture software and PowerPoint to record live lessons and post them on YouTube. They immediately observed a dramatic change in the classroom: the focus shifted to increasing interactions and fostering deeper connections between them and their students, as well as between students.<sup>215</sup>

Eight years after the first iteration of flipped learning, educators all over the world have successfully adopted the model. Whereas many learning technology trends first take off in higher education before seeing

applications in schools, the flipped classroom reflects an opposite trajectory. Today, many universities and colleges are increasingly embracing this approach. Flipped learning is seen as especially suited for higher education because the rearranging of class time gives students in large introductory lecture courses more opportunity to engage and interact with their peers. Instructors also make more efficient use of their time by focusing on content that is especially challenging for students — handheld clickers in large seminars are often paired with this method in order to help understand students' comprehension of material and customize discussions accordingly.<sup>216</sup>

The flipped classroom is seeing its most widespread use in the US. The Center for Digital Education's survey of higher education instructors found that 29% of faculty were using the flipped classroom and another 27% said they planned to use it within a year.<sup>217</sup> Cultural differences may contribute to the lack of mainstream adoption worldwide. In the report, "The Flipped Classroom: Viewpoints in Asian Universities," researchers claim that Western and Eastern differences in learning styles may explain why the model is still in infancy in Asian countries. The flipped classroom requires a lot of autonomous work, which may be disorienting to students who prefer to rely on the teacher as the leading source of information.<sup>218</sup>

### Relevance for Teaching, Learning, or Creative Inquiry

The flipped classroom can invoke a broad spectrum of implementation — from an instructor integrating several minutes of hands-on learning in exchange for less lecture time to designing an entire course where content is delivered through video lectures or pre-class readings, with class time used solely for group work activities. To help both researchers and practitioners make sense of this vast landscape, there is a growing array of resources available. The Flipped Learning Network is an organization working to help define and differentiate flipped learning approaches by providing an analysis of research studies, archived webinars, examples of instructor videos, and more.<sup>219</sup> Additionally, at the institution level, Cornell University's Center for Teaching Excellence provides resources on their website that detail how instructors can flip their classroom, what

types of learning and assessment opportunities can be accomplished, and who to contact on campus to consult on flipping a particular course.<sup>220</sup>

Beyond watching recorded video lectures, other technologies such as e-books with collaborative annotation and discussion software enable instructors to be more in tune with their students' learning patterns. By reviewing the comments and questions that students pose online, instructors can better prepare for class and address particularly challenging ideas. The learning environment transforms into a dynamic and more social space where students can participate in critiques or work through problems in teams. A Columbia University biochemistry professor flipped his large lecture course because of the troubling number of students who came to class unprepared. His strategy was to create weekly PowerPoint presentations paired with screen-recording software ScreenFlow and post them to YouTube and his learning management system. Using embedded quizzes, he could ensure that the students would come to class ready to engage in livelier discussions.<sup>221</sup>

While there is little national research on the effectiveness of the flipped classroom model as compared with traditional lectures, there are several experiments underway that are helping to establish a valuable baseline. Villanova University piloted four flipped introductory engineering classes in 2013 that were so successful that they ran eight additional flipped classes in the fall of 2014. Students in the bottom third performed on average seven percentage points better than their counterparts in a traditional classroom.<sup>222</sup> Faculty at Harvey Mudd College are currently in the second year of a four-year controlled study comparing active learning lecture classes in flipped classrooms in engineering and math courses. While preliminary results show no significant difference in learning, metacognitive, or affective gains, students reported preferring the flipped classroom model because they had access to lectures online and could replay sections they did not understand. While class subject might be a factor in the success of the project, more data is needed to verify this hypothesis.<sup>223</sup>

## Flipped Classroom in Practice

The following links provide examples of the flipped classroom in use that have direct implications for higher education settings:

### **SwinEcho Lecture Recording**

[go.nmc.org/swinech](http://go.nmc.org/swinech)

Swinburne University has implemented Echo360 across the campus to automate lecture capture and deliver the recordings into the relevant unit within the Learning Management System. > [Policy](#)

### **Flipped and Blended Learning Course**

[go.nmc.org/ubcflipped](http://go.nmc.org/ubcflipped)

The University of British Columbia created a course on flipped learning that outlines teaching philosophies aligned with the model and explores four case studies. The course provides three discussion activities to promote dialog between educators on the utility of the approaches. > [Leadership](#)

### **Collaborative Lecture Annotation System (CLAS)**

[go.nmc.org/clas](http://go.nmc.org/clas)

CLAS is a social annotation technology being developed at the University of South Australia to allow students to annotate lecture videos, giving instructors the ability to identify group areas of convergence or divergence, and allowing students to assess and organize their learning. > [Practice](#)

## For Further Reading

The following articles and resources are recommended for those who wish to learn more about the flipped classroom:

### **BU Collaboration and Network Enhanced Course Transformations**

[go.nmc.org/bucon](http://go.nmc.org/bucon)

(Boston University, accessed 8 January 2015.) Boston University has developed and begun implementing a new flipped course model that depends on building local, collaborative learning communities of faculty, graduate, and undergraduate students in departments and colleges. > [Policy](#)

### **A Novel Integration of Online and Flipped Classroom Instructional Models in Public Health Higher Education**

[go.nmc.org/fliphealth](http://go.nmc.org/fliphealth)

(Galway et al., *BMC Medical Education*, 2014.) This paper describes an analysis of flipping a master's level Environmental and Occupational Health course at a Canadian University. Students in the flipped course rated their course experience more highly and reported positive learning experiences and an increase in self-perceived knowledge. > [Practice](#)

### **The Promise of the Flipped Classroom in Higher Education**

[go.nmc.org/prom](http://go.nmc.org/prom)

(Tanya Roscoria, Center for Digital Education, 27 May 2014.) A chemistry lecturer at Ohio State University has been flipping his classroom for the past two and a half years, and is now revising his model by leveraging the Learning Catalytics response system to increase classroom interaction. > [Practice](#)

# Makerspaces

## Time-to-Adoption Horizon: Two to Three Years

**T**he turn of the 21st century has signaled a shift in what types of skillsets have real, applicable value in a rapidly advancing world. In this landscape, creativity, design, and engineering are making their way to the forefront of educational considerations, as tools such as 3D printers, robotics, and 3D modeling web-based applications become accessible to more people. Proponents of makerspaces for education highlight the benefit of engaging learners in creative, higher-order problem solving through hands-on design, construction, and iteration.<sup>224</sup> The question of how to renovate or repurpose classrooms to address the needs of the future is being answered through the concept of makerspaces, or workshops that offer tools and the learning experiences needed to help people carry out their ideas. Makerspaces are intended to appeal to people of all ages, and are founded on openness to experiment, iterate, and create. The driving force behind makerspaces is rooted in the maker movement, a following comprised of artists, tech enthusiasts, engineers, builders, tinkerers, and anyone else with a passion for making things.<sup>225</sup> The foundation of the maker movement was built on the success of the Maker Faire, a gathering that launched in 2006 and has since propagated itself into numerous community-driven events all over the world.<sup>226</sup>

### Overview

Makerspaces, also referred to as hackerspaces, hack labs, or fab labs, are community-oriented workshops where tech enthusiasts meet regularly to share and explore electronic hardware, manufacturing tools, and programming techniques and tricks.<sup>227</sup> Much of the hype around this cultural trend burgeoned around 3D MakerBot printers, a rapid-prototyping technology that requires a DIY mentality to assemble, operate, and replicate it.<sup>228</sup> Other tools that are commonly found in makerspaces include laser cutters, soldering irons, Legos, Arduinos and Raspberry Pi computers, and circuitry gadgets, among others. Whatever the supplies, the overarching goal of a makerspace is to be a place where people are free to experiment and make things, on their own, and as part of a productive community.

Widespread enthusiasm behind makerspaces is steadily growing. Dale Dougherty, the CEO of Maker Media,

Editor of *Make* magazine, and creator of Maker Faire, is a major advocate of installing makerspaces into learning environments and has been helping put the concept at the forefront of national discussions. This year, the White House hosted its first ever Maker Faire, leading President Obama to publicly highlight the power of DIY to revolutionize American manufacturing and stoke innovation and job growth.<sup>229</sup> During a recent talk at ISTE 2014, Dougherty related his experience of bringing the Maker Faire to the White House, and described “making” as a universal language of learning and discovery.<sup>230</sup> Dougherty continues to educate the public about makerspaces and maker culture in schools, college campuses, and communities everywhere.

Makerspaces are becoming a more relevant part of cultural and economic discussions, and universities are taking notice. Florida Polytechnic University, a STEM-focused college and new school of the State University System of Florida, recently partnered with MakerBot 3D Printing. Its inaugural class is already benefitting from the Innovation, Science, and Technology building, a state-of-the-art facility that is home to the Rapid Application Development (RAD) makerspace, which is equipped with 55 MakerBot 3D Printers and Scanners.<sup>231</sup> The Plymouth College of Art administration has entered a partnership with Europe’s leading fab labs as part of the Made@EU project in order to design a program of workshops and residencies that will facilitate exchange of ideas across borders. In the Fab Lab Plymouth, students and members of the community can freely access 3D printers and scanners, CNC milling machines, a CNC router, a laser cutter, and a vinyl cutter.<sup>232</sup>

### Relevance for Teaching, Learning, or Creative Inquiry

Institutions are taking advantage of makerspaces to provide students and faculty a place that is integrated into the community to do their tinkering. Sierra College in Rocklin has partnered with the Hacker Lab of Sacramento, California to open a co-working makerspace that offers office space at accessible month-to-month rates. The Sierra Joint Community College District President commented that the makerspace’s downtown location makes it more accessible to members of the community beyond the university, including local startups and small businesses.<sup>233</sup> In a similar agreement, the

Nova Scotia College of Art & Design (NSCAD) worked with the Halifax Makerspace to create a place on campus that can be accessed by the entire community.<sup>234</sup> Located in the NSCAD Institute for Applied Creativity on the Halifax Seaport, the makerspace invites students, faculty, retired people, high schoolers, and everyone in between to enjoy the space and take advantage of a room full of tools.<sup>235</sup>

A growing number of universities have established makerspaces as interdisciplinary hubs where students can experiment with computer-assisted design (CAD) software and invent products. At the University of Nairobi's Science and Technology Park, a first-year electrical engineering student has invented and prototyped a 3D printed device that will help doctors place intravenous needles accurately on infant children. The student carried out this process in the university's fab lab, which is one of three in Kenya.<sup>236</sup> A Turkish design student created an award-winning 3D printed lightweight cast called The Osteoid that incorporates an ultrasound system to stimulate bone growth.<sup>237</sup>

Substantial discussions are taking place about how makerspaces can bolster not only science and engineering departments, but media and journalism schools as well. *PBS EducationShift* interviewed faculty members from higher education institutions that are creating makerspaces to support the production of digital media and other storytelling activities. Currently, West Virginia University is in the process of designing the Media and Innovation Center that will feature a makerspace, a digital storytelling lab, spaces for collaboration, and an augmented reality studio. Houston Community College is working on a similar project, the West Houston Institute, which is a dedicated building that will have active learning classrooms and support for media production. These makerspaces share the common goal of being a collaborative workspace where learners from every discipline can feel comfortable learning skills outside of the curriculum and engage in meaningful learning.<sup>238</sup>

## Makerspaces in Practice

The following links provide examples of makerspaces in use that have direct implications for higher education settings:

### Higher Education Maker Summit

[go.nmc.org/makesum](http://go.nmc.org/makesum)

Arizona State University held a Maker Summit to explore how to infuse elements of making into existing degree programs, develop local makerspaces, integrate making into the admission process, and expand university access to local makers. > *Leadership*

### Brennan by Design

[go.nmc.org/bren](http://go.nmc.org/bren)

A Harvard professor has evolved her classroom into an open, inviting environment that engages students in inquiry and creativity. The maker space/lab has replaced what was once a traditional lecture hall. > *Practice*

### Digital Media Commons Design Labs

[go.nmc.org/deslab](http://go.nmc.org/deslab)

The University of Michigan's Design Labs allow students to bridge disciplines as they collaborate on projects. Student content experts serve as consultants who can help guide research and learning activities as well as prototyping. > *Practice*

### The Garage

[go.nmc.org/gara](http://go.nmc.org/gara)

At the USC Jimmy Iovine and Andre Young Academy, a space called the Garage serves as a unique environment that promotes enhanced student creation via advanced design and prototyping technologies, in addition to industry mentors who help students realize their ideas for new products. > *Practice*

## For Further Reading

The following articles and resources are recommended for those who wish to learn more about makerspaces:

### Learning by Making: Agency by Design and the Rise of Maker-Centered Education

[go.nmc.org/agen](http://go.nmc.org/agen)

(Bari Walsh, Harvard Graduate School of Education, 7 October 2014.) Agency by Design, a multi-year research initiative at the Harvard Graduate School of Education's Project Zero, is investigating how a maker-centered approach to learning can help develop students' sense of competency or agency. > *Leadership*

### Remaking Higher Education: The Maker Lab at Abilene Christian University

[go.nmc.org/rema](http://go.nmc.org/rema)

(John B. Weaver, Ideas Lab, 13 January 2014.) Abilene Christian University built a Maker Lab to spur a constructionist and student-led teaching and learning approach. The main contribution of the Maker Lab is not necessarily the tools and technology, but the community of makers that is focused on sharing expertise and resources in the pursuit of building skills and making things. > *Leadership*

### The Maker Movement and the Humanities: Giving Students A Larger Toolbox

[go.nmc.org/humaker](http://go.nmc.org/humaker)

(Ashley Champagne, *The Huffington Post*, 18 December 2014.) This article underscores that makerspaces, though often tightly tied to STEM departments, are also an integral part of liberal arts education. > *Practice*

# Wearable Technology

## Time-to-Adoption Horizon: Two to Three Years

**W**earable technology refers to computer-based devices that can be worn by users, taking the form of an accessory such as jewelry, eyewear, or even actual items of clothing such as shoes or a jacket. The benefit of wearable technology is that it can conveniently integrate tools that track sleep, movement, location, and social media interactions or it can enable virtual reality. There are even new classes of devices that are seamlessly integrated with a user's everyday life and movements. Google Glass is one of the best known, enabling users to see information about their surroundings displayed in front of them. Smart watches from Samsung, Sony, and Pebble are already allowing users to check emails and perform other productive tasks through a tiny interface. A rapidly growing category of wearable technology takes advantage of the burgeoning interest in the "quantified self." Jawbone, Nike, and Fitbit bracelets are three product examples accounting for 97% of all smartphone-enabled tracker sales that monitor how people eat, sleep, and move.<sup>239</sup> Empowered by these insights, many individuals now rely on these technologies to improve their lifestyle and health. Today's wearables not only track where a person goes, what they do, and how much time they spend doing it, but now what their aspirations are and when those can be accomplished.

### Overview

Wearable technology is not a new category; one of the most popular early incarnations of the technology was HP's calculator watch, which was introduced in the 1980s.<sup>240</sup> Since then, the field has advanced significantly, but the overarching theme behind the technology remains the same — convenience. Portable, lightweight, and often taking the place of an accessory that the user already has, wearable tools are meant to go anywhere. Effective wearable devices become an extension of the person wearing them, allowing them to comfortably engage in everyday activities, such as checking and responding to emails and other tasks that help instructors and students to stay productive on-the-go.

Wearable technology is poised to see significant growth in the coming years, spurring experimentation in higher education because the demand for wearables is seen to

be coming in large part from college-aged students; a recent poll showed that 21% of US adult students use wearables. Further, another report by GlobalWebIndex revealed that 71% of students ages 16 to 24 want to use wearable technology such as smart watches, wristbands, or glasses.<sup>241</sup> The global wearable technology market as a whole is expected to grow at a compound annual rate of 35% over the next five years primarily dominated by Apple and Google, who already comprise 90% of the mobile platform market. While North America and Europe are the largest players in the global market, Asia is expected to show increased growth rates over the next several years.<sup>242</sup>

A notable recent advancement in wearable technology involves the release of the Oculus Rift and its capability of providing virtual reality through goggles. YouVisit has adapted over 1,000 virtual college tours so they can be viewed on Oculus Rift headsets. Stony Brook University in New York and University of New Haven in Connecticut, for example, plan to implement this wearable technology into their marketing efforts. Virtual tours will allow students to go into campus spaces not typically open to visitors.<sup>243</sup> The Oculus Rift headset is also enabling students to explore potentially dangerous situations from the safety of the classroom. One virtual education expert has created a virtual construction worksite where engineering students can identify unsafe areas without exposure to harm. Health care research and training continues to advance the potential of wearable technology, as well. The Medical Virtual Reality group at the University of Southern California has developed simulations for wearable technology use for clinical purposes.<sup>244</sup> One of their projects focuses on medical training under simulated battlefield conditions.<sup>245</sup>

### Relevance for Teaching, Learning, or Creative Inquiry

Google Glass' ability to display information in a hands-free format, enable communication via voice command, and broadcast and record student training activities is giving medical school leaders the confidence to begin integrating it into their degree programs. Students are gaining an unprecedented first-person perspective, learning medical procedures from a faculty member or becoming more empathetic by taking a patient's point of view. The University of California Irvine School of

Medicine is incorporating Google Glass into its degree program, from first- and second-year anatomy courses to third- and fourth-year hospital rotations.<sup>246</sup> Similarly, SUNY Cobleskill is piloting the use of Google Glass devices to show how instructors perform paramedic or animal hoof health procedures.<sup>247</sup> Beyond medical training, Google Glass is seeing applications in other fields. At University of Wisconsin-Madison, a finance professor is using it to record himself grading assignments. By verbalizing the grading process, students are able to get personalized feedback that would otherwise be lost.<sup>248</sup>

The number of new wearable devices in the consumer sector seems to be increasing daily, greatly outpacing the implementation of this technology in universities. The higher education sector is just beginning to experiment with wearable technologies, though potential applications for athletic and health-related uses are already being realized. Most fitness sensors that are currently available can only measure a person's pace or their heart rate, but recent innovations are adding the dimension of chemical information analysis. Researchers at University of California San Diego, for example, are creating disposable and embeddable sensors to analyze a person's perspiration and saliva to improve fitness, wellness, and performance.<sup>249</sup> The University of Michigan is also developing a vapor sensor that can help monitor the health of patients with diabetes and lung disease as well as detect airborne chemicals. This monitoring system can be extended to the laboratory by registering the presence of hazardous chemical leaks and alerting students of danger.<sup>250</sup>

While universities continue to experiment with wearable technologies and formally integrate them into educational settings, there is increased activity in university research departments where they are pushing the boundaries to provide a foundation for future wearables. In New Zealand, two University of Canterbury psychology and engineering researchers are joining forces to examine ways to make wearable technology systems easier to use. Their goal is to create an interface with sensors, data storage, and memory, to minimize distractions so a user is more in tune with their physical surroundings while composing and sending a text or email.<sup>251</sup> The University of Surrey and University of Oldenburg are leveraging wearable technology so that researchers can gather data on brain behavior in real-time during real world activities. By using new electroencephalography (EEG) systems worn by participants doing everyday activities outside of traditional laboratory settings, researchers hope to understand brain structures, functions, and processes.<sup>252</sup>

## Wearable Technology in Practice

The following links provide examples of wearable technology in use that have direct implications for higher education:

### E-Textile/Wearable Education Incubator

[go.nmc.org/etextile](http://go.nmc.org/etextile)

The E-Textile/Wearable Research Team at New Jersey City University is exploring educational applications of wearable technology and e-textiles. They are working to build technical capacity among non-technical educators to teach with e-textile kits. > [Leadership](#)

### Intel's Make It Wearable Challenge

[go.nmc.org/miw](http://go.nmc.org/miw)

Intel's Make It Wearable Challenge — part-competition, part-entrepreneurial mentorship program — challenged thousands of global participants to inspire the next big idea in wearable technology. > [Leadership](#)

### Google Glass at WSU Library System

[go.nmc.org/wayne](http://go.nmc.org/wayne)

Wayne State University Libraries recently created their first custom app for Google Glass called "Wayne State Campus Explorer," which provides users information on their surroundings as they wander through campus.

> [Practice](#)

## For Further Reading

The following articles and resources are recommended for those who wish to learn more about wearable technology:

### Imagining the Classroom of 2016, Empowered by Wearable Technology

[go.nmc.org/empower](http://go.nmc.org/empower)

(Rick Delgado, *Emerging EdTech*, 20 April 2014.) A technologist envisions applications of wearable devices in learning environments, such as creating instructional videos. He also advises that university leaders will need to begin factoring in wearable technology for BYOD policies. > [Policy](#)

### Google Glass Infographic

[go.nmc.org/glassmight](http://go.nmc.org/glassmight)

(Open Colleges Australia, accessed 12 January 2014.) This interactive infographic explores the potential of Google Glass in education for activities including documenting learning, more natural and easily integrated scheduling, and remote teaching and interaction. > [Practice](#)

### What Does Wearable Computing Mean for Education?

[go.nmc.org/wearab](http://go.nmc.org/wearab)

(Ben Stern, *EduMusings*, 7 January 2014.) Wearables can provide real-world contexts and enable learning to occur anywhere and anytime. Companies are developing apps for wearable devices that allow students to demonstrate their learning. > [Practice](#)



# Adaptive Learning Technologies

## Time-to-Adoption Horizon: Four to Five Years

**A** *adaptive learning technologies refer to software and online platforms that adjust to individual students' needs as they learn. According to a paper commissioned by the Bill & Melinda Gates Foundation and authored by Education Growth Advisors, adaptive learning is a "sophisticated, data-driven, and in some cases, nonlinear approach to instruction and remediation, adjusting to a learner's interactions and demonstrated performance level, and subsequently anticipating what types of content and resources learners need at a specific point in time to make progress."<sup>253</sup> In this sense, contemporary educational tools are now capable of learning the way people learn; enabled by machine learning technologies, they can adapt to each student's progress and adjust content in real-time or provide customized exercises when they need it. In higher education, many faculty envision these adaptive platforms as new, patient tutors that can provide personalized instruction on a large scale. There are two levels to adaptive learning technologies — the first platform reacts to individual user data and adapts instructional material accordingly, while the second leverages aggregated data across a large sample of users for insights into the design and adaptation of curricula.*

### Overview

The emergence of adaptive learning technologies reflects a movement in academia towards customizing learning experiences for each individual. Governments and campuses across the globe are increasingly recognizing that the one-size-fits-all approach to teaching alienates students who are struggling with specific concepts — along with students who are grasping the material more quickly than their peers.<sup>254</sup> In higher education settings, especially in large, introductory courses, instructors rarely have the capacity to design curricula and lectures that uniquely cater to every student enrolled. Integrating personalized learning was cited as a difficult challenge in this report, and adaptive learning technologies provide one pathway for tailoring educational opportunities. While adaptive learning technologies are still at least four years away from widespread use in higher education, a number of studies highlight their potential for transforming traditional learning paradigms, and an

important next step is developing standards and best practices.<sup>255</sup>

Adaptive learning is best suited to take place in hybrid and online learning environments, where student activities are conducted virtually and can be monitored by software and tracking applications. Historically categorized as intelligent tutoring, adaptive learning takes advantage of the latest developments in artificial intelligence to adjust to students' personal preferences.<sup>256</sup> At the most basic level, the adaptive component of the platforms involve algorithms that employ an "if this, then that" approach. More robust models entail algorithms that link specific concepts and skills from the course to how students are interacting with the material; a student, for example, may spend a disproportionate amount of time reading a single passage that summarizes String Theory, signaling the algorithm to serve up more resources for them to better comprehend the concept.

Upon collecting students' behavioral data, adaptive learning technologies often display data visualizations in the form of comprehensive dashboards that can be regularly monitored by instructors.<sup>257</sup> These dashboards are often viewable by students so they can gain a better understanding of their progress through the course as well as what habits and activities are helping them learn more effectively. Instructor dashboards present data on a granular level, identifying which students may be at risk of failing their courses with the goal of increasing student retention. On a broader level, adaptive learning dashboards can help faculty better evaluate the effectiveness of their course design by examining student data collectively and making comparisons across all courses.

### Relevance for Teaching, Learning, or Creative Inquiry

While adaptive learning technologies have the potential to be a game-changer and foster more personalized learning for students while providing institutions with key insights about the effectiveness of their instruction, current applications in higher education have been mostly limited to research, development, and pilot programs,<sup>258</sup> justifying the topic's position on the far-term horizon. There is a growing host of companies entirely

dedicated to developing adaptive learning platforms, including Knewton,<sup>259</sup> Smart Sparrow,<sup>260</sup> and Cerego.<sup>261</sup> Some education leaders, however, have expressed a need for adaptive learning platforms that integrate smoothly into campus' existing learning management systems and courseware;<sup>262</sup> standalone products may be a bigger investment for higher education institutions because they often require state-of-the-art technology infrastructures.

Some universities are staying ahead of the curve and have developed their own adaptive learning platforms. This is especially the case in the for-profit education sector; in 2013, a patent was issued to the University of Phoenix for its adaptive learning platform "Academic Activity Stream" — a billion dollar investment.<sup>263</sup> "Academic Activity Stream" is similar in appearance and functionality to social networks, ranking information for students based on their unique interests, performance history, and learning objectives. Similarly, the University of Michigan created "Gradecraft," an online platform that encourages risk-taking and multiple pathways towards mastery as students progress through course material.<sup>264</sup> The "Gradecraft" environment is gamified, enabling students to see how their choices directly impact how well they absorb and demonstrate their understanding of new material as they move from level to level.<sup>265</sup>

In one of the most large scale applications of adaptive learning technologies, major educational publisher Pearson teamed up with adaptive learning provider Knewton to provide thousands of science and business students at Arizona State University (ASU) with access to MyLab, adaptive services that detect patterns of students' successes and failures with the course material and provide them with guidance accordingly.<sup>266</sup> The data collected depicts the amount of time students spend on specific elements of an online resource, such as video and text, in correlation with their exam performances and assignments. After discerning patterns in student behavior, MyLab recommends to each student tailored content that will further their knowledge of the subject.<sup>267</sup> Though initial results from the pilot were mixed, ASU reported that in many cases, instructors who were using MyLab more prominently experienced better outcomes. Preliminary findings indicated an 18% increase in pass rates, and a 47% decrease in ASU's student dropout rate.<sup>268</sup>

## Adaptive Learning Technologies in Practice

The following links provide examples of adaptive learning technologies in use that have direct implications for higher education settings:

### Enhancing a MOOC With Adaptive Learning

[go.nmc.org/ulus](http://go.nmc.org/ulus)

A math professor and instructional designer from The Ohio State University created an add-on for MOOCs called "MOOCulus" that is designed to feed students progressively harder questions based on previous answers while at the same time collecting vast amounts of data on learning patterns. > [Practice](#)

### Flat World Education

[go.nmc.org/flatm](http://go.nmc.org/flatm)

Education content and software company Flat World Education partnered with Brandman University in California to offer an online, competency based business administration degree using deep adaptive learning technologies. > [Practice](#)

### INTUITEL

[go.nmc.org/intu](http://go.nmc.org/intu)

The INTUITEL system, funded by education partners from the European Union, responds to each learner, monitors their progress and behavior, combines these data with pedagogical and methodological knowledge, and then deduces optimal guidance and feedback. > [Practice](#)

### For Further Reading

The following articles and resources are recommended for those who wish to learn more about adaptive learning technologies:

#### Rethinking Higher Ed: A Case for Adaptive Learning

[go.nmc.org/zimmer](http://go.nmc.org/zimmer)

(Tim Zimmer, *Forbes*, 22 October 2014.) A recent Gallup and *Inside Higher Ed* survey revealed that two out of three college and university presidents believes adaptive learning would positively impact higher education.

> [Leadership](#)

#### The Great Adaptive Learning Experiment

[go.nmc.org/jwaters](http://go.nmc.org/jwaters)

(John K. Waters, *Campus Technology*, 16 April 2014.) Conclusions gathered from early adopters of adaptive learning technologies, including Arizona State University and Rio Salado College, have contributed to a growing body of research in support of adaptive learning.

> [Practice](#)

#### Learning to Adapt

[go.nmc.org/alpop](http://go.nmc.org/alpop)

(Paul Fain, *Inside Higher Ed*, 13 June 2014.) With many large institutions experimenting with adaptive learning, the author explores different conceptions of the term, from personalized learning to data-driven courseware.

> [Practice](#)

# The Internet of Things

## Time-to-Adoption Horizon: Four to Five Years

**T**he Internet of Things (IoT) is a network of connected objects that link the physical world with the world of information through the web. When TCP/IPv6 launched in 2006, the new network expanded the capabilities of the Internet and enabled objects, sensors, and devices to be addressable and communicate across the Internet.<sup>269</sup> This augmented address space became particularly useful for automating industrial and manufacturing processes, enabling tracking technologies that monitor sensitive equipment or materials, point-of-sale purchases, passport tracking, inventory management, and identification.<sup>270</sup> Embedded chips, sensors, or tiny processors attached to an object can transmit information about the object such as cost, age, temperature, color, pressure, or humidity to another smart device or piece of machinery. This networked connection allows remote management, status monitoring, tracking, and alerts if the objects they are attached to are in danger of being damaged or spoiled. On another level, IoT is being applied by municipal governments and education institutions that are using automation to streamline processes, leverage data, and promote sustainability.<sup>271</sup>

### Overview

It is no longer far-fetched to envision a world where all people, objects, and devices are connected to act in concert, regardless of brand or vendor. This idea is also known as The Internet of Everything (IoE), which is comprised of machine-to-machine (M2M), machine-to-person, and person-to-person networked technologies. In this environment, sensors embedded on machines, people, and objects can capture events, which are sent through the IPv6 network to applications that create actionable information. Many consumers are already familiar with IoT through their experience with Nest, a next-generation thermostat that programs itself based on its surroundings and can be controlled via a smartphone.<sup>272</sup> On the industry side, M2M IoT technologies are being used to modernize railways, agricultural equipment, and construction machinery with real-time monitoring capabilities.<sup>273</sup> In the world where the Internet of Everything is realized, many choices and decisions will be automated, making life, and potentially learning, an efficient, streamlined experience.

Enabling technologies such as smart sensors and chips are all well understood, easily mass-produced, and inexpensive, and a number of universities are already incorporating IoT technologies on their campuses. At the College of the Holy Cross, sensors within the biology lab freezers send warning emails when temperatures need to be adjusted, and students doing laundry in their dormitories can check availability of washing machines via their smartphones.<sup>274</sup> Seeing potential for massive growth in this area and beyond, technology companies are setting their sights on realizing the potential for connected device technologies. After only a year of operation, Intel's Internet of Things business unit is expected to reach \$2 billion a year in revenue with nearly 20 percent annual growth.<sup>275</sup> Currently, Intel provides energy management systems for clients in the commercial and industrial sector and equips cars with connected technology, although investments into wearables are on the horizon.<sup>276</sup>

On a more comprehensive scale, urban planners are designing cityscapes with connectivity in mind, embedding networks into major infrastructures including roads, intersections, and parking lots. In 2013, the mayor of Barcelona announced a 10-year plan that leverages IoE and a citywide wireless network to communicate with citizens, streamline operations, and conserve resources.<sup>277</sup> Investments in devices that remotely monitor water pressure and pipe leakage are saving an estimated \$58 million, and networked streetlights are reducing annual maintenance costs by one-third.<sup>278</sup> The World Economic Forum (WEF) is keeping tabs on where the next smart city will pop up with the Networked Readiness Index (NRI), an assessment of 148 countries; in their *2014 Global Information Technology Report*, Singapore, Finland, and Sweden were ranked as the top three countries with a level of information and communication technologies that are developed enough to support IoE design.<sup>279</sup>

### Relevance for Teaching, Learning, or Creative Inquiry

Use of IoT in educational environments is finally coming into focus as terms such as "hypersituation" are being coined to explain the potential of IoT in learning situations. Hypersituating is the ability to amplify knowledge based on the user's location. In other words,

learners that carry connected devices with them can benefit from a host of interdisciplinary information that is pushed to them from their surroundings. For instance, a learner exploring a city with a rich historical past can explore their environment through an architectural, political, or biological lens, depending on how the surroundings are equipped. IoT can also create an environment where learners are informed by crowdsourced contributions and observations from the community via networked objects.<sup>280</sup>

At the institutional level, Cisco Systems has laid out a four pillar vision for networked technologies that interweave people, processes, and data. For instruction, IoT in higher education takes the form of blended learning models that integrate personalized materials and formative assessment technologies that deliver instant feedback. In this landscape, students will have the ability to monitor their own environment and collect real-time data for further study. Similar to hypersituating, Cisco Systems also envisions a context-aware environment, where objects can communicate with students and vice versa to create relevant, interactive learning experiences.<sup>281</sup> Data gleaned from networked environments has been positioned as the great enabler of this scenario.<sup>282</sup> While IoT for higher education is a relatively new area for Cisco Systems, the company's CEO recently announced that their long-term strategy will focus efforts almost entirely on developing and creating networked environments for every sector.<sup>283</sup>

As understanding around this emerging technology develops, universities are taking advantage of opportunities to give learners greater insight into the power of IoT. In summer 2014, Internet2 and micro-car maker Innova UEV partnered to give Innova Dash electric smart cars to Colorado State University, University of Pittsburg, University of Washington, and the University of Wisconsin-Madison. Each of these institutions will be embarking on a sustainable research project, using vehicle sensor data to investigate a host of questions related to the effectiveness of public transportation, physiological effects on drivers, and gamification, among others. Ultimately, the institutions that were selected intend to use their research to promote sustainable practice and support initiatives to reduce energy consumption.<sup>284</sup>

## The Internet of Things in Practice

The following links provide examples of the Internet of Things in use that have direct implications for higher education settings:

### Internet of Things Hackathon in Brazil

[go.nmc.org/javahack](http://go.nmc.org/javahack)

SouJava and Oracle Technology Network organized a week-long hackathon for developers, students, and gamers in Brazil to create IoT projects using Raspberry Pi and Java. > [Leadership](#)

### University of Wisconsin Internet of Things Lab

[go.nmc.org/uwiot](http://go.nmc.org/uwiot)

The University of Wisconsin Internet of Things Lab is a campus hub for learning, research, and hands-on experimentation to discover and demonstrate applications of the Internet of Things. > [Practice](#)

### No-Power Wi-Fi Connectivity Could Fuel Internet of Things Reality

[go.nmc.org/radio](http://go.nmc.org/radio)

University of Washington engineers have designed a new communication system called Wi-Fi backscatter that uses radio frequency signals as a power source and reuses existing Wi-Fi infrastructure to provide Internet connectivity. > [Practice](#)

### Cisco and Swinburne Team Up for 'Internet of Everything'

[go.nmc.org/everything](http://go.nmc.org/everything)

Melbourne's Swinburne University of Technology and multinational networking giant Cisco have signed an agreement to collaborate on new research initiatives on the Internet of Things. > [Practice](#)

## For Further Reading

The following articles and resources are recommended for those who wish to learn more about the Internet of Things:

### How Universities Are Adapting To The Internet Of Things Revolution

[go.nmc.org/iotrevolution](http://go.nmc.org/iotrevolution)

(*Forbes*, 14 April 2014.) This article explores how the academic world is leading the way in IoT innovation both in the classroom and through research. > [Leadership](#)

### The Internet of Things Will Thrive by 2025

[go.nmc.org/thrive](http://go.nmc.org/thrive)

(Pew Research Center, 14 May 2014.) This report is an analysis of opinions about the likely expansion of the Internet of Things, covering over 1,600 responses that were offered when asked where the Internet of Things would stand by the year 2025. > [Practice](#)

### Student Projects Apply 'Internet of Things' Principles in Sustainability and Product Design

[go.nmc.org/iotdesign](http://go.nmc.org/iotdesign)

(David Ongchoco, *The Huffington Post*, 31 December 2014.) University of Pennsylvania students are creating new products that integrate the power of data and Internet connectivity into everyday objects. > [Practice](#)

## The 2015 Higher Education Expert Panel

### Larry Johnson

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# Endnotes

- 1 <http://go.nmc.org/ios>
- 2 <http://go.nmc.org/android>
- 3 <http://go.nmc.org/itunes-u>
- 4 <http://www.openeducationeuropa.eu/en/initiative>
- 5 <http://www.open.ac.uk/students/charter/essential-documents/ethical-use-student-data-learning-analytics-policy>
- 6 <http://aslomar-highered.info>
- 7 <https://sites.google.com/site/lexspacedev>
- 8 <http://www.theuia.org>
- 9 <http://channel9.msdn.com/coding4fun>
- 10 <http://innovationacademy.ufl.edu>
- 11 <https://www.aau.edu/research/article.aspx?ID=9266>
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For the *NMC Horizon Report: 2015 Higher Education Edition*, an expert panel identified 18 topics very likely to impact technology planning and decision-making: six key trends, six significant challenges, and six important developments in educational technology.







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