



COLORADO

**Colorado Commission on
Higher Education**

Department of Higher Education

CCHE AGENDA

February 5, 2016 - 1:00pm

Legislative Services Building, Hearing Room A

200 E. 14th Avenue

Denver, CO 80203

CALL-IN NUMBER: 1-877-820-7831

PARTICIPANT CODE: 128479#

1560 Broadway, Suite 1600 • Denver, Colorado 80202 • (303) 862.3001

LT. GOV. JOSEPH A. GARCIA, EXECUTIVE DIRECTOR



Colorado Commission on Higher Education
February 5, 2016 – 1:00 pm
Legislative Services Building, Hearing Room A
200 E. 14th Avenue
Denver, CO 80203

- 1:00 – 2:15pm* **I. Opening Business – (75 minutes)**
- A. **Presentation** - Gallup-Purdue Survey/Poll (Brandon Busted)
 - B. Attendance
 - C. Approval of the Minutes for the December 3, 2015 Commission Meeting
 - D. Reports
 - i. Chair
 - ii. Vice Chair
 - iii. Commissioners
 - iv. Commission Standing Subcommittees
 - v. Advisor Reports
 - E. Executive Director Report
 - F. Public Comment
- 2:15– 2:20pm* **II. Consent Items (5 minutes)**
- A. Recommend Approval of New GT Pathways Courses – Maia Blom
 - B. Recommend Approval of Master of Arts in Strategic Communication Design at University of Colorado Boulder – Dr. Ian Macgillivray
 - C. Recommend Approval of Nine Proposed Bachelor Degrees at Metropolitan State University of Denver – Dr. Ian Macgillivray
 - D. Recommend Approval of Master of Arts in Teaching Diverse Learners at University of Northern Colorado – Dr. Ian Macgillivray
 - E. Recommend Approval of Master in Communication and Media Management at Colorado State University – Dr. Ian Macgillivray
 - F. Recommend Approval of Bachelor of Science in Human Dimensions of Natural Resources at Colorado State University – Dr. Ian Macgillivray
 - G. Recommend Approval of Bachelor of Arts in Inclusive Elementary Education at University of Colorado Colorado Springs – Dr. Ian Macgillivray & Dr. Robert Mitchell
 - H. Recommend Approval of Administrator Licensure Program at Western State Colorado University– Dr. Robert Mitchell



- 2:20 – 3:35pm
- I. Degree Authorization Act - Recommendation for Renewal of Authorization – Heather DeLange
 - J. FY 2016-17 Student Budget Parameters – Andrew Rauch
 - K. Recommend Approval of Master of Arts in Multilingual Education at University of Northern Colorado – Dr. Ian MacGillivray

III. Discussion Item (75 minutes)

- 3:35 – 4:05pm
- A. Legislative Update – Kachina Weaver
 - B. Tuition Policy – Diane Duffy & Todd Haggerty

IV. Action Items (30 minutes)

- A. Postsecondary And Workforce Readiness Definition – CDE Revision – Carl Einhaus
- B. Prior Learning Assessment: Recommendation for Phase 1, Goal 1 – Advance Placement & International Baccalaureate Cut Scores for General Education Credit – Dr. Russ Meyer and Dr. Ian Macgillivray

V. Written Reports

- A. FY15-16 Tuition and Fee Report – Todd Haggerty, Emma Beck and Emily Burns
- B. Skills for Jobs Report – Dr. Lauren Victor
- C. 2016 Educator Preparation Report – Dr. Robert Mitchell
- D. 2015 Annual Report – Advisory Council on Parental Involvement in Education - Kachina Weaver
- E. JBC Hearing Update Memo



Gallup-Purdue Index

Great Jobs and Great Lives

Brandon Busteed

Executive Director

Education and Workforce Development

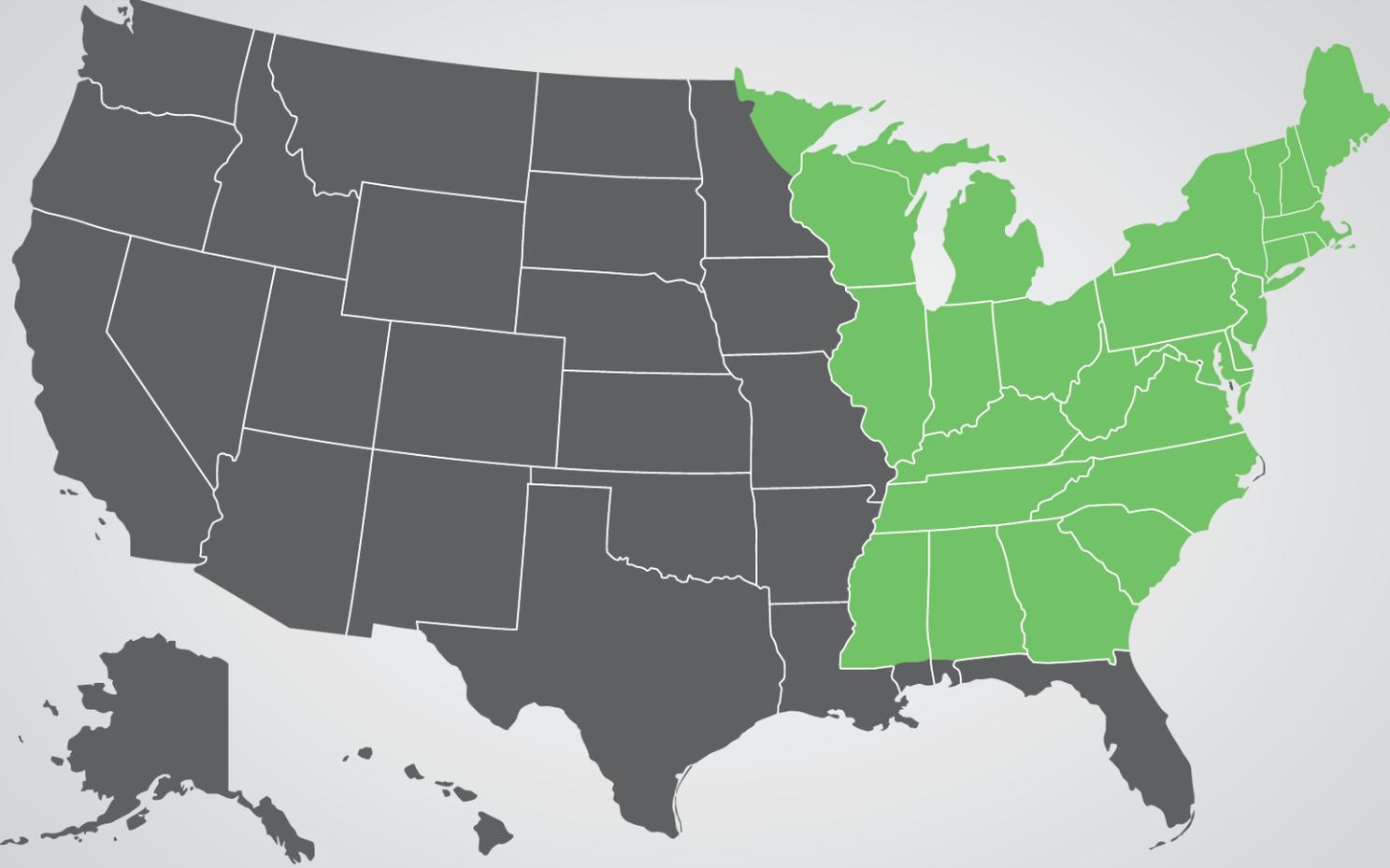
Gallup

The 70/30 Ratio

70%
Emotional

30%
Rational

Education Data's 'Manifest Destiny'



Health of a Nation Ledger

Classic Economics

GDP

Unemployment

Crime rates

Behavioral Economics

Well-being

Workplace engagement

“Feeling safe walking
alone at night”

Education Success Ledger

Grades

Test scores

Graduation rates

Engagement

Hope

Well-being

What Does a “Great Life” Look Like?

Purpose

How you occupy your time; liking what you do each day

Social

Relationships and love in your life

Financial

Managing your economic life to reduce stress and increase security

Community

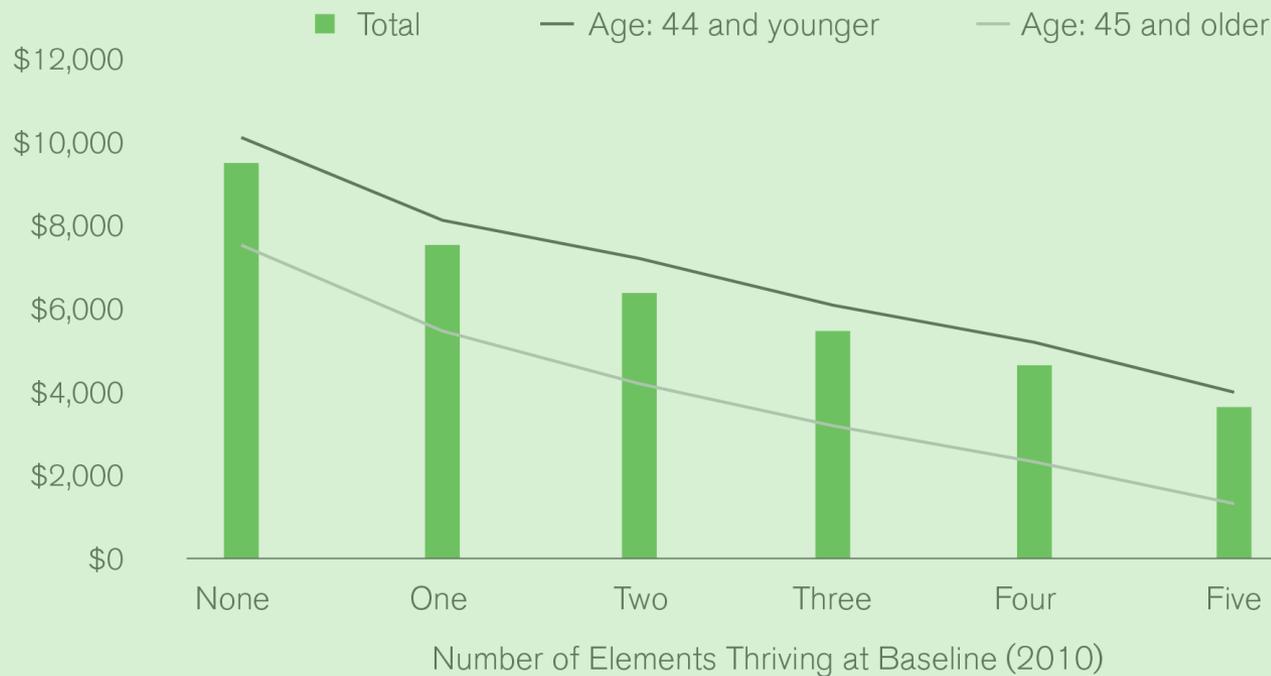
Engagement and involvement in the area where you live

Physical

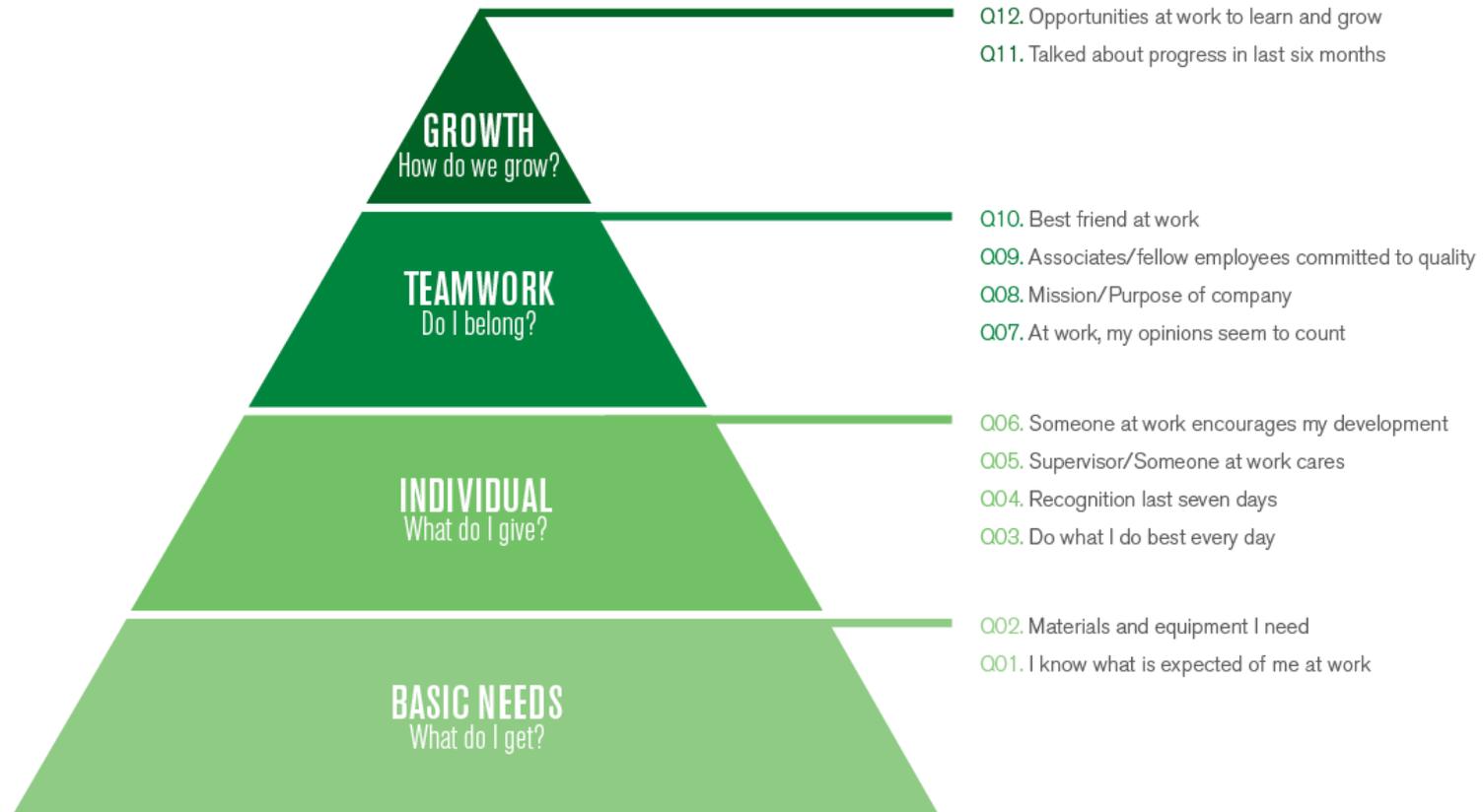
Good health and enough energy to get things done daily

Well-Being Matters to Organizations

Annual Health-Related Cost to Employer (Disease Burden and Unhealthy Days)



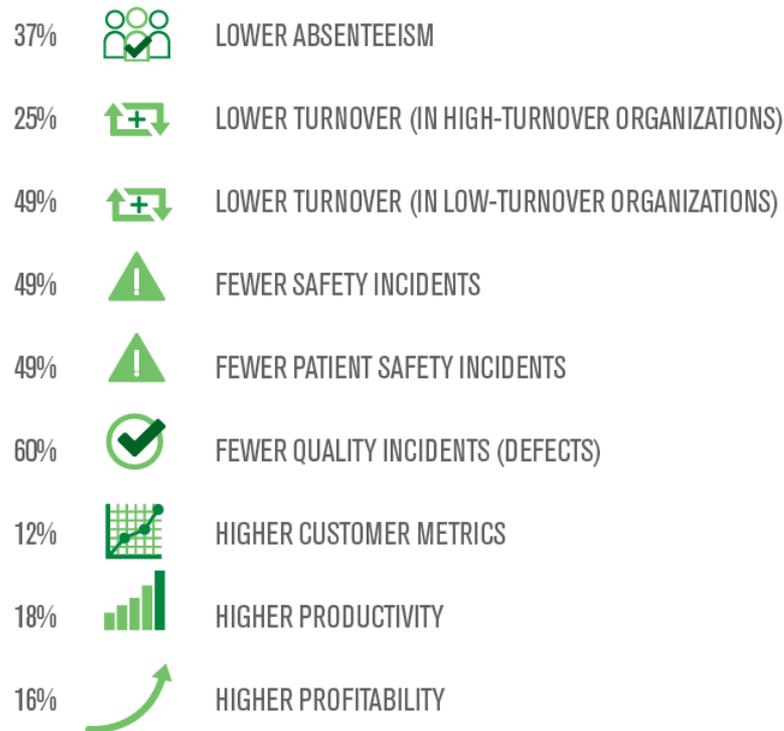
What Does a “Great Job” Look Like?



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Impact of Workplace Engagement

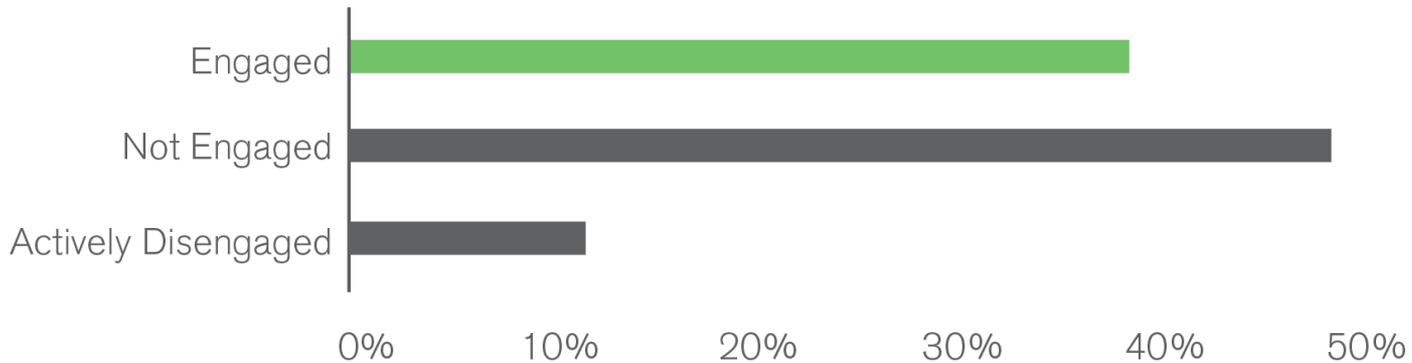
Top-quartile business units have ...



... when compared with bottom-quartile units

Graduate Workplace Engagement

Great Jobs



Male grads more likely to be employed full time for an employer than female grads

63% vs. **52%**
Male Female

Female grads more likely to be engaged in their jobs than male grads

38% vs. **42%**
Male Female

Graduate Well-Being

Purpose Well-Being	53%
Social Well-Being	50%
Financial Well-Being	43%
Community Well-Being	46%
Physical Well-Being	34%

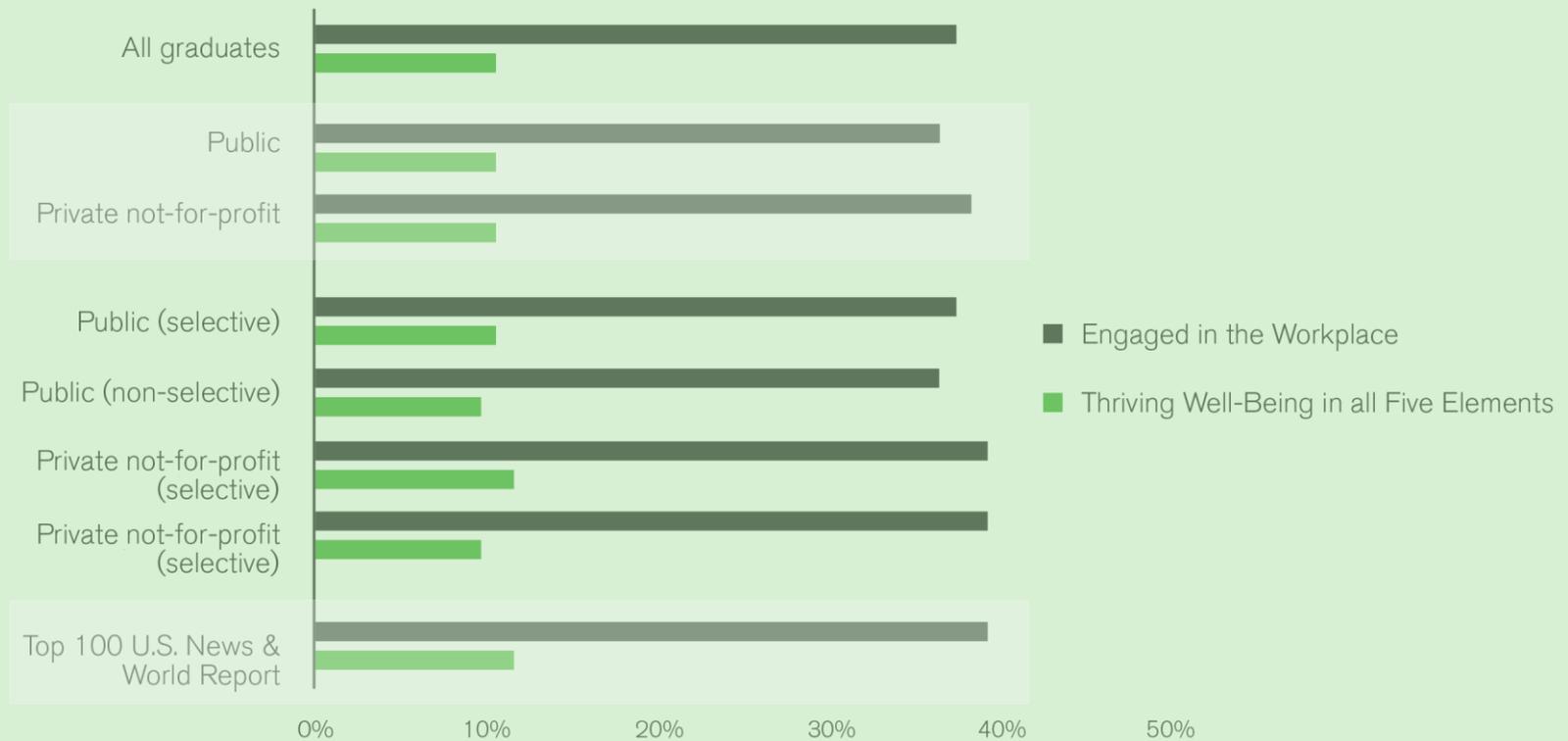
Only **10%** thriving in all five elements of well-being

More than one in five not thriving in any

It's Not Where You Go

No Difference in Workplace Engagement or Well-Being of Graduates Between Different University Types

Among graduates who are employed full time for an employer



If graduates strongly agree that they were “emotionally supported” during college, the odds that they are engaged in their work and thriving in their overall well-being double.

It's How You Do It

“At least one professor who made me excited about learning”	64%
“Professors cared about me as a person”	27%
“A mentor who encouraged my goals and dreams”	22%

14%

of all graduates experienced all three

Graduates who had “experiential and deep learning” have a higher likelihood of being engaged in their work (59% vs. 38%), and more are thriving (14% vs. 10%).

It's How You Do It

“Long-term project taking a semester or more to complete”

32%

“Internship or job where applied learning”

30%

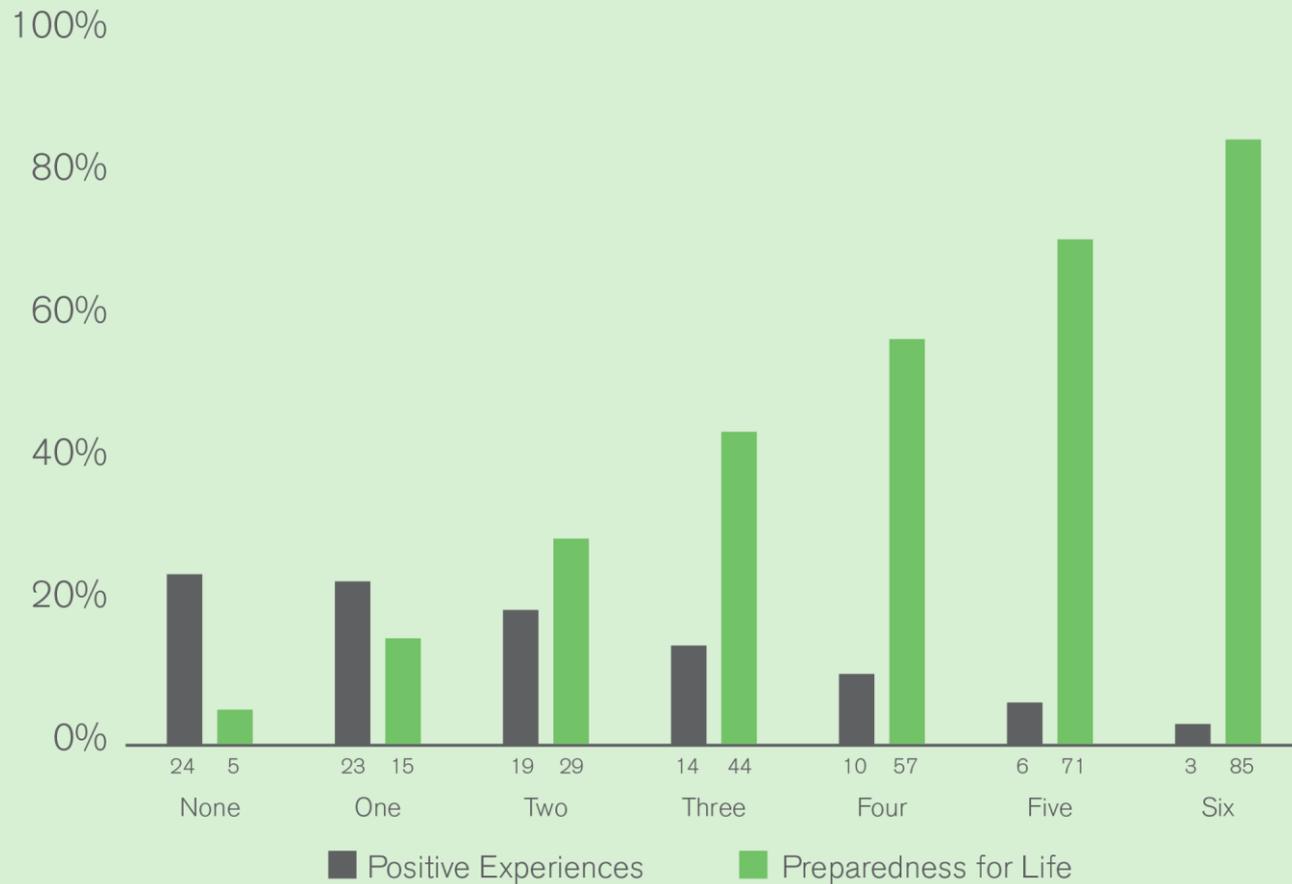
“Extremely involved in extracurricular activities and organizations”

20%

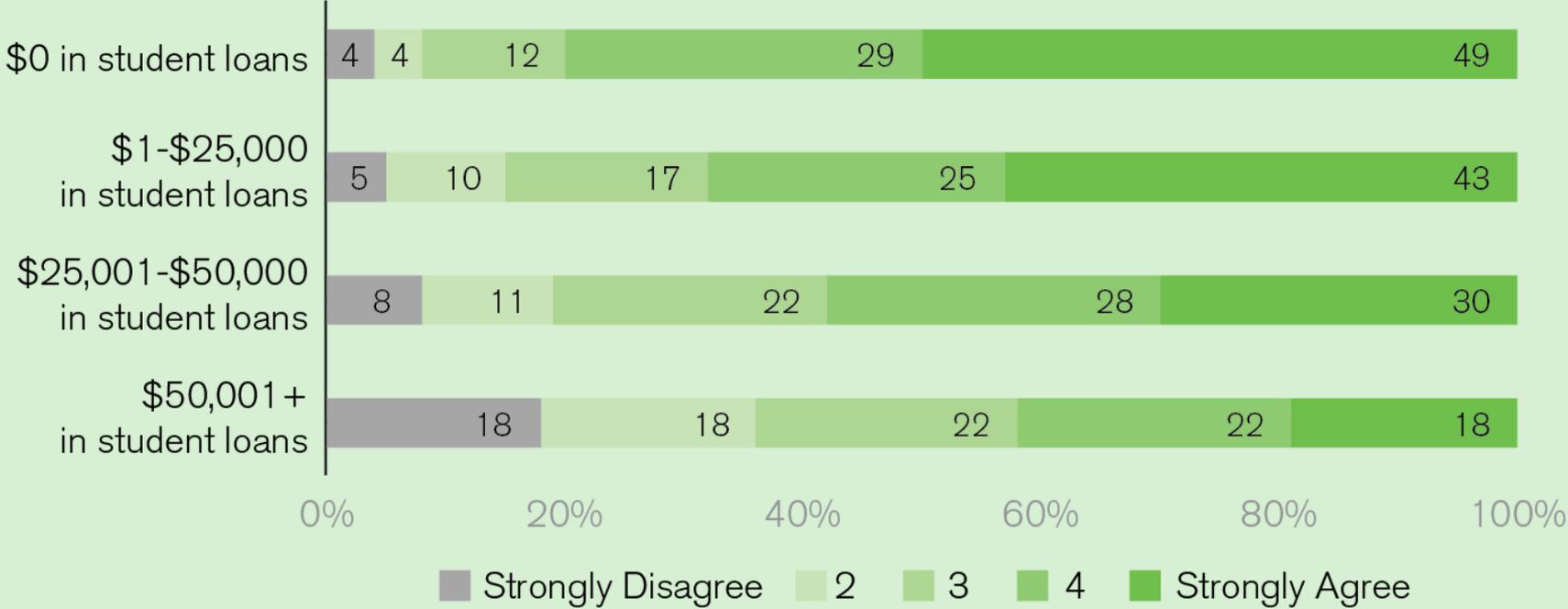
6%

of all graduates experienced all three

Positive Experiences and Preparedness



My education from [University Name] was worth the cost.



Graduates who interacted with people from different backgrounds on a regular basis in college are 2.2x as likely to say their education was worth the cost.



**Minutes of the Colorado Commission on Higher Education (CCHE) Meeting
Red Rocks Community College
December 3, 2015**

I. OPENING BUSINESS

Chairman Monte Moses called the meeting to order at 1:00pm.

Commissioner Scott read a resolution honoring University of Colorado-Colorado Springs Officer Garrett Swasey, slain during a shooting at a Colorado Springs Planned Parenthood office, on November 27, 2015.

Commissioner Kaufman moved to approve the resolution for Officer Swasey. The motion was seconded by Commissioner Anderson and passed unanimously.

A. Attendance

Chairman Moses, Vice Chair Colon, Commissioners John Anderson, Maia Babbs, Renny Fagan, Jeanette Garcia, Richard Kaufman, Vanecia Kerr, Tom McGimpsey, Paula Sandoval and BJ Scott attended the meeting. Also in attendance were CCHE Advisory Committee members Wayne Artis, Mark Cavanaugh, Tyrel Jacobsen, and Melissa Wagner.

B. Minutes

Commissioner Garcia moved to approve the minutes of the October 29, 2015 CCHE meeting. The motion was seconded by Vice Chair Colon and passed unanimously.

C. Welcome by Dr. Michele Haney, President of Red Rocks Community College.

D. Chair, Vice Chair, Commissioners and Advisor Reports

Chairman Moses reported his attendance at the Guided Pathways to Success Summit.

The Chairman extended the Commission's appreciation to Executive Director, Lt. Governor Joe Garcia, as he moves to a new role as CEO of the Western Interstate Commission for Higher Education (WICHE). He

thanked the Lt. Governor for the years of hard work on behalf of the Commission and wished him well in his role with WICHE.

Chairman Moses also announced Dr. Rhonda Epper, Chief Student Success and Academic Affairs Officer at the Department, had been named the Provost and Vice President of Academic Affairs of the University of Colorado Denver campus, effective January 1, 2016, and thanked her for her service.

- **Fiscal Affairs and Audit Subcommittee** – Commissioner Scott, Chair of the Fiscal Affairs and Audit Subcommittee, announced their next meeting on January 20, 2016. The committee has sent forth several recommendations that have been acted on, that include the state tuition policies, the funding allocation model and capital priorities projects. At the January meeting the committee will be addressing the cash funded list and the capital projects.
- **Student & Academic Affairs Subcommittee** - Commissioner Anderson, Chairman of the Student & Academic Affairs Subcommittee reported the Standing Committee on Student Success & Academic Affairs met today. Their key projects are: remediation; strategies for student success; Complete College America; and, Guided Pathways for 2016. He suggested that the Guided Pathways should be an ongoing effort for both math pathways and gtPathways.

CCHE Advisor Wayne Artis mentioned that the math pathways and stopping college algebra as the default course for students, will be on the General Education Council meeting agenda for action on December 7, 2014.

- Commissioner Garcia requested that the Department add a link for the College Scorecard to the Commissioner's dashboard.

E. Executive Director Report

Lt. Governor Joe Garcia, Executive Director, reported the following to the Commission:

- Today's CCHE meeting is an intentional pivot from the work in previous meetings, the implementation of HB 1319, to the work on the Completion Agenda:
 - Close the Attainment Gap
 - Get adults back into college
 - Affordability - time to degree and data to show progress
- The Attainment Gap Roundtable discussion will be December 8th.
- **Division Updates:**

Student Success and Academic Affairs:

- The Lt. Governor complimented outgoing Chief Student Success and Academic Affairs officer, Dr. Rhonda Epper, who led the State's efforts to focus attention on time to degree, such as Guided Pathways to Success and the Prior Learning Assessment (PLA) Policy, COSI, closing the attainment gap, concurrent enrollment, Gear Up, and the Colorado Challenge, among many other efforts. The position was posted on November 30 and the department is actively recruiting potential replacements.
- The review process for the two P-TECH applications received is ending and the Department should have recommendations for approval by the end of December. If approved, the P-TECH schools would begin operation in fall 2016. Both the Executive Director of Higher Education and the Commissioner of Education will need to approve the P-TECH schools.
- A LEAN process for Concurrent Enrollment is taking place the week of December 14-18. Ten Concurrent Enrollment experts from Colorado secondary and post-secondary organizations will be participating in the week long effort. Carl Einhaus, Director of Student Affairs, will be participating. This will produce effective changes in Concurrent Enrollment operations and reporting, as well as assist in offering constructive input and direction toward any proposed CE legislation during the upcoming session.

Finance:

- The Finance Team is working on CCHE policies that include guidance for the proposed Tuition Accountability Plans. They will provide proposed policies at the February CCHE meeting and anticipate Tuition Accountability plans (if there is increased General Fund) in the March/April meetings. Staff will report on the tuition rates set by the governing boards at the June meeting.
- The Joint Budget Committee analyst briefing is December 10. The JBC higher education hearings are scheduled for January 5. During the hearing process, the JBC hears from the Executive Director on behalf of the CCHE and Department and each of the institutions.
- On December 2, the Finance Team hosted a peer-to-peer learning exchange with staff from nine other states focused on State Higher Education Finance Policies. This effort was funded by the Lumina Foundation.

Advocacy and Outreach:

- The Commission received an email from Heather Delange on November 10th informing them that Westwood College had come to the DHE offices to let the Department know of the announcement that they would be closing all of their colleges nation-wide. The Department is confident that that they are handling this closure in a responsible and well-thought out manner. Westwood will continue to be monitored.

Data and Research:

- The Colorado Department of Higher Education will be partnering with AIR, Gallup Inc., and the US Chamber of Commerce to launch the next round of a Colorado public tool for postsecondary education. The initiative is called Transforming Higher Education Outcomes. This is the next phase of the prior College Measures partnership and last year's Ed Pays website and report. The new version will add a component on Return on Investment. The initiative is being funded through USA Funds and Colorado is one of two states that will be releasing a new tool in 2016. The first meeting was held yesterday with education leaders, local partners and business at the table. Commissioner Vanecia Kerr was in attendance.

Legislative Affairs:

- The Lt. Governor and Kachina Weaver, Chief Policy Officer, continue to meet with legislative leaders to share the changes made to the funding allocation formula and why; explain the new tuition policy and its direct link to general fund investment; and the many innovative initiatives we are engaged in to reduce time-to-degree, keep costs down, and increase student success. Ms. Weaver is meeting with caucus staff and members of the House and Senate education committees to have these same conversations.
- December 14th, the Department will be presenting the progress made, as required by the SMART Act, to a meeting of the joint Senate and House Education Committees.
- January 5th will be higher education's annual presentation to the Joint Budget Committee.

F. Public Comment

Frank Watrous, Senior Policy Analyst with The Bell Policy Center, restated the Center's continuing support for the Prior Learning Assessment/Credit agenda item, commended the Talent Pipeline Report and reinforced the vital role of financial aid in helping students and families

II. Consent Items

- A. Two Year Capital Cash Funded Program List – Andrew Rauch**
- B. Five Year Capital Cash Funded Program List – Andrew Rauch**
- C. Program Plan Approval for Arapahoe Community College – Andrew Rauch**
- D. Recommend Approval of Bachelor of Arts in Public Service at the University of Colorado Denver - Dr. Ian Macgillivray**
- E. Recommend Approval of Bachelor of Science in Sustainable Systems Engineering at Metropolitan State University of Denver– Dr. Ian Macgillivray**
- F. Degree Authorization Act – Recommendation of Approval for the Renewal of Authorization – Heather DeLange**

G. Recommend Approval of the Revised 2016 Commission Meeting Schedule – Suzanne Stark

Commissioner Scott moved to approve consent items A through G. The motion was seconded by Commissioner Sandoval and unanimously passed.

III. Presentation Item

- A. Mr. David Goff, Dean of the Colorado School of Public Health, gave a presentation on the collaboration in Colorado's Higher Education System between the University of Colorado, Colorado State University and the University of Northern Colorado. Colorado School of Public Health is the oldest collaborative school of public health in the country. Their mission is to improve the health of the public through their educational mission, their research mission and partner with community based organizations for the greater good.
- B. Shelley Banker, Deputy Director of the Colorado Opportunity Scholarship Initiative, provided an update.
- The Colorado Opportunity Scholarship Initiative has been making marked progress since its inception. Created with the goal of establishing a statewide network of student support and scholarship programs, approximately \$13.8 million in state funds will leverage \$7 million in private philanthropic funds.
 - To-date the Initiative has accomplished the following:
 - \$6.8 million in two-year awards granted to 28 organizations across the state that work with students to improve access, persistence, and completion of a postsecondary credential. Grantees will be submitting year-end reports by December 31. Evaluations and an executive summary of reports will be completed by an evaluator by mid-February 2016.
 - \$7 million of COSI funds are being matched 1:1 with local programs dollars to provide new scholarships. These matching funds will be used for scholarships to Colorado students who attend Colorado public institutions of higher education and whose family income is 250% or less of PELL eligibility.
 - Formalized State Administrative rules administering the Initiative, which establish the eligibility criteria for students and community partner programs to participate, and convened nearly 100 program administrators and counselors to discuss student success best practices and to identify opportunities for collaboration. (*Fall 2015*)
 - Hosted large grantee symposium (Summer 2015) and four regional meetings (Fall 2015) for program grantees to discuss student success best practices and collaborate.
 - The Scholarship Initiative will continue to help smaller communities access scholarship funds, and plans to publish a community toolkit to assist smaller communities.

IV. Discussion Items

- A. Prior Learning Assessment (PLA): Recommendations for Phase 1, Goal 1- Advanced Placement & International Baccalaureate Cut Scores for General Education Credit** – Dr. Rhonda Epper and Dr. Ian Macgillivray, Director of Academic Affairs, presented recommendations of the Constituent Review Team for Phase 1, Goal 1 of the Commission’s process for a statewide policy on prior learning assessment. They explained that staff held five webinars for faculty, divided by content area, in September 2015 to consider cut scores for the most common AP and IB exams. The Constituent Review Team met to consider the recommendations collected from the institutions and faculty. They explained the CRT’s recommendations to the Commission for Phase 1, Goal 1. They asked for the Commission’s guidance on what to do when one institution awards more credit than another and a student transfers and feels like they lost credit. Commissioners Anderson and Moses agreed that the institutions should try to work that out but staff shouldn’t let that issue get in the way of moving forward in the PLA process. These recommendations will come back to the Commission in February 2016 for approval. For other next steps, Dr. Macgillivray noted that the March 2016 deadline for CLEP and DSST scores, as well as challenge exams, could probably be met but requested that the goals for portfolio assessment and military/veteran student success be delayed until late 2016. No commissioners objected to that proposed revised timeline.

Michael Lightner, Vice President for Student Affairs at the University of Colorado, stated that the University of Colorado has supported the use of prior learning assessment for decades. He talked about two principles that are sometimes neglected in discussion of PLA. First is the collective diversity among higher education institutions. The University has concerns that a broad-brush decision of common PLA cut scores minimizes and devalues the different roles and missions of our institutions. The second principle is the fundamental responsibility of the faculty in setting the content, standards and requirement of courses and degrees. The University is concerned that there has been minimal faculty involvement in the current PLA process and that faculty responsibility for program requirements has not been sufficiently acknowledged.

- B. Completion Progress Report** Dr. Beth Bean, Chief Research Officer, Luke Banaszak, Data Management and Research Analyst, and Michael Vente, Research and Policy Analyst, presented the Colorado Completion Progress Report to the commissioners. Dr. Bean began the presentation by providing the commissioners with a description of the report’s components.

The report provided a progress update on how Colorado is performing on the goals outlined in the statewide Master plan, Colorado Competes: A Completion Agenda for Higher Education. The first section of the report focuses on credential completion and closing the attainment gap by institution. The second section of the report examines progress on the performance contract metrics by institutional governing board. Each public college or university profile shows trending graduation rates; completion rates, and enrollment, retention and completion by race and ethnicity; and whether the institutions at the governing board level are achieving or making progress towards achieving the goal metrics established in their performance contracts.

Dr. Bean described Colorado's 66% credential attainment goal and the work that number of degrees that Colorado institutions must produce on a yearly basis in order to meet that goal. Despite population growth, in order to reach 66% of the population with a credential, an additional 94,000 plus degrees are needed by 2025. While private colleges and institutions account for 25% of degree production, Colorado public colleges and universities will need to generate over 70,000 additional credentials. Based upon current average degree production of about 55,000 degrees per year, an additional 8.3 percent increase in credentials awarded is needed to meet our 66% attainment goal. An annual increase of 8.3 percent equates to about 4,000 additional degrees in 2016 and compounds to over 9,000 additional credentials by 2025. The Commissioners had a lengthy conversation regarding the additional degrees needed to meet the attainment goal by 2025. The number of credentials needed per year is different than originally reported in the Master Plan, which stated about a 1K degree production increase per year. Chair Moses asked for a one pager that further explains the number of degrees needed as the commissioners want to fully understand and be able to speak to where we currently are and where we need to be to meet the 66% attainment goal.

Dr. Bean also addressed closing the attainment gap from an equity perspective. An important component of closing the attainment gap is highlighting disparities in attainment between ethnic groups. Inspired by the work from the Center of Urban Education at the University of Southern California, CDHE staff developed statewide equity indices and scorecards for Colorado. Mr. Vente provided the commissioners with an overview of the methodology used to develop these indices.

Mr. Banaszak presented the dashboards developed for each Colorado public institution which show trending graduation rates; completion rates, enrollment, retention and completion by race and ethnicity. He also described the attainment gap momentum points outlined in each dashboard. He explained the process by which these points were developed and the presentation of the points as annual percent change. There was a little confusion over some of the charts and the information they presented so Chair Moses also asked for a one pager explaining the methodology of each chart.

Dr. Bean provided the Commissioners with a brief historical overview of SB 11-52 and the performance contracts that were developed with each governing board. She also outlined the overarching goals developed for the performance contracts including increasing attainment, improving student success, reducing gaps, and restoring fiscal balance. She shared the statewide progress that has been made on each of these goals and explained the dashboards that have been developed for each governing board's metrics.

C. Talent Pipeline Report - Dr. Lauren Victor, Research and Policy Analyst, provided an overview of the 2015 Colorado Talent Pipeline Report. This report highlights trends in Colorado's talent pipeline and how these may impact the current and future workforce pool. It also looks at labor data to better understand where in-demand credentials and skills exist. Collectively, this information helps inform the prioritization of education and training strategies.

Highlights of the report included:

- As a result of findings from the previous year’s report, the focus was on a closer examination of achievement gaps by race and ethnicity.
- If the educational outcomes of underserved students are generally lower than that of other students at the primary and secondary school levels, then these students are often not adequately prepared to tackle the demands of rigorous postsecondary programs, and therefore such substantial gaps in foundational skills can lead to distinct racial/ethnic underrepresentation in highly technical postsecondary programs and careers.
- Poverty impacts student performance across all races; however, even when controlling for income, performance gaps still exist for students of color for measures across the educational spectrum.
- Often the focus is on discussion on the Hispanic population, especially because it is a large and growing segment of our state that will change the composition of our future workforce.
- In light of trying to understand future implications of Colorado’s changing demographics, the state demographer’s office provided initial analysis for this report, projecting education levels for Colorado’s adult population 10 and 20 years out.
- Part of the analysis looks at labor market data to understand what Top Jobs look like in Colorado—jobs that have above average growth, high annual openings and typically offer a living wage. What we find is that jobs that meet these filters are highly concentrated in IT, skilled trades, business/finance, and in healthcare. Nearly all of the jobs that make this list typically require some level of formalized training or education—whether an apprenticeship, certificate or degree.

D. Postsecondary and Workforce Readiness Definition – Aims Community College Revision – Dr. Beth Bean informed the Commission that Senate Bill 11-52 directed the Commissioners to approve institutions of higher education’s performance contracts. Once approved, institutions were given a two year period in which they could make modifications to the metrics in the contracts. Aims Community College is recommending a modification to one of their metrics.

Dr. Geri Anderson, Provost of Aims Community College, requested their metric for developmental education be modified to reflect what is currently occurring on their campus. At Aims CC, 80 percent of their students are going through the developmental sequence within two semesters instead of four. They would like to change the original language of the metric that states students completing their final developmental education course will then moving to college level work. The modification is to remove the *final developmental education course* and be changed to *students will complete their developmental work when required and successfully complete their college level course work in English and math*. Dr. Bean said the Department approves this change.

Vice Chair Colon moved to approve the modification to Aims Community College's performance contract. The motion was seconded by Commissioner Anderson and passed unanimously.

There being no further business, the meeting was adjourned at 4:00pm.

TOPIC: RECOMMEND APPROVAL OF NEW GT PATHWAYS COURSES

PREPARED BY: MAIA BLOM, ACADEMIC POLICY OFFICER

I. SUMMARY

This item recommends approval of 14 courses for inclusion in the state general education curriculum, guaranteed transfer (GT) Pathways.

The 31-credit [GT Pathways curriculum](#) forms the core of most bachelor's degrees and is guaranteed to transfer between all public colleges and universities. GT Pathways makes possible the [statewide transfer articulation agreements](#) (also known as degrees with designation), which provide guided pathways to students and enhance timely degree completion.

II. BACKGROUND

The Commission approves courses nominated for inclusion in GT Pathways, per §23-1-125(3), C.R.S. The state guarantees transferability of GT Pathways general education courses among all public institutions in Colorado. Per 23-1-125(5), C.R.S., private institutions may choose to participate in GT Pathways and currently one private institution (Colorado Technical University) participates. Receiving institutions apply GT Pathways courses to transfer students' general education requirements. Courses approved for GT Pathways meet state content and competency criteria, which were developed by Colorado faculty.

Courses are peer-reviewed and recommended for approval by discipline-specific faculty subcommittees under the direction of the General Education (GE) Council. The [GE Council](#) is comprised of faculty and administrative staff from the state's public two- and four-year institutions. Since January 2003, the Commission has approved over 1,200 courses in six content areas. Most recently, the Commission approved 20 courses in June 2015.

III. STAFF ANALYSIS

Department staff facilitated the faculty peer review process in November 2015. Faculty subcommittees reviewed the 20 courses listed in Appendix A. Courses marked as "Recommended" meet the state content and competency criteria and are recommended for inclusion in GT Pathways. Courses marked as "Deferred" do not meet state content and competency criteria and may be revised and resubmitted by the institution for the next round of reviews in fall 2016.

IV. STAFF RECOMMENDATION

Staff recommends the Commission approve the new GT Pathways courses marked as "recommended" in the attached Appendix A.

V. STATUTORY AUTHORITY

C.R.S. §23-1-125. Commission directive – student bill of rights – degree requirements – implementation of core courses – on-line catalogue – competency test.

(3) Core courses. The department, in consultation with each Colorado public institution of higher education, is directed to outline a plan to implement a core course concept that defines the general education course guidelines for all public institutions of higher education. The core of courses shall be designed to ensure that students demonstrate competency in reading, critical thinking, written communication, mathematics, and technology. The core of courses shall consist of at least thirty credit hours but shall not exceed forty credit hours. Individual institutions of higher education shall conform their own core course requirements with the guidelines developed by the department and shall identify the specific courses that meet the general education course guidelines. Any such guidelines developed by the department shall be submitted to the commission for its approval. In creating and adopting the guidelines, the department and the commission, in collaboration with the public institutions of higher education, may make allowances for baccalaureate programs that have additional degree requirements recognized by the commission. If a statewide matrix of core courses is adopted by the commission, the courses identified by the individual institutions as meeting the general education course guidelines shall be included in the matrix. The commission shall adopt such policies to ensure that institutions develop the most effective way to implement the transferability of core course credits.

Appendix A: Fall 2015 GT Pathways Review – RESULTS

Appendix A: Fall 2015 GT Pathways Review – RESULTS

20 courses reviewed: 14 recommended; 6 deferred

Content Area	Course #	Course Title	Institution	Credit Hours	Action
GT-AH2 – Literature & Humanities					
	HONR 292	Honors Seminar: Knowing in the Arts & Humanities	CSU-FC	3	RECOMMENDED
	ENGL 231	British Literature to 1800	FLC	3	RECOMMENDED
	ENGL 232	British Literature Since 1800	FLC	3	RECOMMENDED
	ENGL 245	Survey of American Literature	FLC	3	RECOMMENDED
	ENGL 246	Survey of American Literature Since 1865	FLC	3	RECOMMENDED
GT-AH4 – Foreign Languages					
	LPSA 230	Spanish for Heritage Speakers	CSU-FC	3	<i>DEFERRED</i>
GT-CO1 – Introductory Writing Course					
	ENG 101	Composition I	CSU-G	3	RECOMMENDED
GT-CO2 – Intermediate Writing Course					
	ENG 102	Composition II	CSU-G	3	RECOMMENDED
GT-MA1 – Mathematics					
	MTH 109	Mathematical Explorations	CSU-G	3	RECOMMENDED
	MTH 122	College Algebra	CSU-G	3	RECOMMENDED
	MATH 132	Introduction to Statistics	FLC	3	RECOMMENDED
GT-SC1 – Course w/ Required Lab					
	GEO 101C	Earth Science with Lab	CSU-G	4	<i>DEFERRED</i>

GT-HI1 - History					
	AGED 210	History of Agriculture in the United States	CSU-FC	3	<i>DEFERRED</i>
	HIST 115	Islamic World: Late Antiquity to 1500	CSU-FC	3	<i>DEFERRED</i>
	HIST 116	Islamic World Since 1500	CSU-FC	3	<i>DEFERRED</i>
GT-SS1 – Economic or Political Systems					
	POL 101	Introduction to Political Science	CSU-G	3	RECOMMENDED
GT-SS3 – Human Behavior, Culture, or Social Frameworks					
	HONR 293	Honors Seminar: Knowing Across Cultures	CSU-FC	3	RECOMMENDED
	PSY 152	Science of Learning	CSU-FC	3	<i>DEFERRED</i>
	PSY 231	Positive Psychology	CCCS	3	RECOMMENDED
	PSY 105	Introduction to Human Development	CSU-G	3	RECOMMENDED

TOPIC: RECOMMEND APPROVAL OF MASTER OF ARTS IN STRATEGIC COMMUNICATION DESIGN AT UNIVERSITY OF COLORADO BOULDER

PREPARED BY: IAN MACGILLIVRAY, DIRECTOR OF ACADEMIC AFFAIRS

I. SUMMARY

This item recommends approval for University of Colorado Boulder (UCB) to offer a Master of Arts in Strategic Communication Design.

II. BACKGROUND

COMMISSION AUTHORITY

The Colorado Commission on Higher Education's role and responsibility in the review and approval of new academic programs at institutions operating under a performance contract is defined in §23-5-129(6)(b), which states that new and modified program proposals shall be reviewed and approved only on the basis of fit with the institution's statutory role and mission.

III. STAFF ANALYSIS

OVERVIEW OF PROPOSED PROGRAM

The following is summarized from UCB's proposal:

Strategic communication is an umbrella term used to refer to the ways in which organizations—corporations, nonprofits and governmental agencies—use advertising, public relations and, most recently, design to accomplish their communication goals. The MA in Strategic Communication Design adopts a design-thinking approach to solving strategic communication problems, with a particular emphasis on creative and analytical thinking.

Additional information on this proposed degree, unrelated to fit with statutory role and mission, is in Appendix A.

ROLE AND MISSION SUPPORT

This degree supports UCB's statutory role and mission, which states:

(a) The Boulder campus of the University of Colorado shall be a comprehensive graduate research university with selective admission standards. The Boulder campus of the University of Colorado shall offer a comprehensive array of undergraduate, master's,

and doctoral degree programs. The Boulder campus of the University of Colorado has exclusive authority to offer graduate programs in law. The Colorado commission on higher education, in consultation with the board of regents, shall designate those graduate level programs that are the primary responsibility of the Boulder campus of the University of Colorado. The university has the responsibility to provide on a statewide basis, utilizing when possible and appropriate the faculty and facilities of other educational institutions, those graduate level programs. The commission shall include in its funding recommendations a level of general fund support for these programs. (23-20-101, C.R.S.)

Pursuant to Colorado Revised Statutes 23-5-129(6)(b), department staff finds the proposed degree is consistent with the institution's statutory role and mission. University of Colorado Board of Regents approved the program at its September 11, 2014 meeting.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve the Master of Arts in Strategic Communication Design at University of Colorado Boulder.

V. STATUTORY AUTHORITY

C.R.S. §23-5-129 Governing boards - performance contract - authorization – operations

(6) While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education:

(b) Need not consult with nor obtain approval from the Colorado commission on higher education to create, modify, or eliminate academic and vocational programs offered by the institution, so long as such creations, modifications, and eliminations are consistent with the institution's statutory role and mission. Institutions shall submit information to the department demonstrating that the creation or modification of an academic or career and technical education program is consistent with the institution's statutory role and mission. The Colorado commission on higher education shall have the authority to override the creation or modification of an academic or vocational program if the change made by the governing board is inconsistent with the institution's statutory role and mission.

APPENDIX:

Appendix A: Supplemental Information

APPENDIX A: SUPPLEMENTAL INFORMATION

This supplemental information is unrelated to the proposed degree's fit with the institution's statutory role and mission. The following is summarized from the institution's proposal:

EVIDENCE OF NEED

There is a growing demand for specialized master's programs in the United States. In addition to recruiting candidates from the 250 students currently enrolled in our advertising program and the 375 students we project will be enrolled in the BS in the Strategic Communication by year 5, our MA program will attract in-state students from CU-Denver, Colorado State University and the University of Denver who currently leave the state to pursue advanced degrees in strategic communication. We also expect increased demand from international students.

DUPLICATION

No other public university in Colorado currently offers a graduate degree in strategic communication. The closest is a Master of Science in Public Communication and Technology offered by Colorado State University but the focus of that degree is much broader, including new communication technologies and journalism, among other areas.

Second, while the University of Denver offers a master's in strategic communication, our program is different: The emphasis of DU's MS is on nonprofit and international public relations (as described on the program's website). Our MA adopts a design-thinking approach to solving communication problems for both corporations and nonprofits, and adds an emphasis in media design. In addition, our program will be relatively inexpensive compared to DU's, providing increased access.

TOPIC: RECOMMEND APPROVAL OF NINE PROPOSED BACHELOR DEGREES AT METROPOLITAN STATE UNIVERSITY OF DENVER

PREPARED BY: IAN MACGILLIVRAY, DIRECTOR OF ACADEMIC AFFAIRS

I. SUMMARY

This item recommends approval for Metropolitan State University of Denver (MSU Denver) to offer the following nine degrees:

1. Applied Geology, B.S.
2. Art Education, B.F.A.
3. Brew Pub Operations, B.S.
4. Brewery Operations, B.S.
5. Event and Meeting Management, B.S.
6. Fire and Emergency Response Administration, B.S.
7. Geography, B.A.
8. Geospatial Sciences, B.S.
9. Health Care Information Systems, B.S.

II. BACKGROUND

COMMISSION AUTHORITY

The Colorado Commission on Higher Education's role and responsibility in the review and approval of new academic programs at institutions operating under a performance contract is defined in §23-5-129(6)(b), which states that new and modified program proposals shall be reviewed and approved only on the basis of fit with the institution's statutory role and mission.

III. STAFF ANALYSIS

OVERVIEW OF PROPOSED PROGRAMS

The following is summarized from MSU Denver's proposal:

1. Applied Geology, B.S.
This program is currently offered as a concentration within our B.A./B.S programs in Land Use. As a new degree program on its own, it has been restructured into an Applied Geology degree which will prepare students for employment in the public, private and non-profit sectors as well as provide opportunities for students to pursue a graduate degree in Geology. The mission of the Applied Geology program is to

prepare students for entry into geoscience careers or graduate programs by providing access to critical geoscience knowledge, skills and modes of thought. The program integrates a strong background in geology with hands-on training through laboratory, field work and interpretive data assessment. Geologists are trained to investigate mountains, volcanos, earthquakes, oceans, minerals, water, ancient life, oil, gas, precious metals and space.

2. Art Education, B.F.A.

This new degree program is a conversion of the current BFA in Art with a concentration in Art Education to a BFA in Art Education. There are no changes in the curriculum, but it will allow students to choose to do either a BFA in Art or a BFA in Art Education. Those who want to work in art education may be able to present themselves more competitively.

3. Brew Pub Operations, B.S.

In this program, students learn the brewing process, how to be product smart and have the managerial skills to deliver and serve quality food products in tandem with beer. The curriculum is informed by industry standards set out by the IBE, Cicerone, Serv-Safe Food and Serv-Safe Alcohol Exam. This is an interdisciplinary major drawing from courses in science, restaurant management and food production.

4. Brewery Operations, B.S.

This new degree program prepares students for owning and operating a commercial brewery without a food service component. Students will learn to deliver a successful product to the marketplace as well as the biological and chemical processes of brewing. Curriculum is informed by industry standards set out by the IBD and Cicerone. This is an interdisciplinary major drawing from courses in science, law, marketing, accounting and management.

5. Event and Meeting Management, B.S.

This Events and Meeting Management (EMM) program prepares students to address the unique challenges of the growing field of event and meeting management. It builds on the strengths of MSU Denver's Department of Hospitality, Tourism and Events, and reflects the specific skill set necessary to function in this competitive realm.

6. Fire and Emergency Response Administration, B.S.

This new degree program prepares students to work in a number of fields that fall under the umbrella of “Emergency Response.” In addition to the fire and emergency services administration courses that are part of the curriculum, other courses include:

- Political and Legal Foundations for Fire Protection
- Disaster Planning and Control
- Fire Related Human Behavior
- Managerial Issues in Hazardous Materials
- Analytical Approached to Public Fire Protection

7. Geography, B.A.

This program is currently offered as a concentration within our B.A./B.S programs in Land Use. As a new degree program on its own, it has been restructured into a Geography degree which will prepare students for employment in the public, private and non-profit geographic sectors as well as provide opportunities for students to pursue a graduate degree in Geography. Geography is unique in bridging the social sciences and the natural sciences, offering careers in education, business, government agencies and non-profit organizations.

8. Geospatial Sciences, B.S.

This program is currently offered as a concentration within our B.A./B.S programs in Land Use. As a new degree program on its own, it has been restructured into a Geospatial Sciences degree which will prepare students for employment in the public, private and non-profit sectors as well as provide opportunities for students to pursue a graduate degree in Geospatial Sciences. Students will acquire theoretical knowledge and technical training to develop proficiency in GIS, remote sensing, GPS, cartography and database systems in order to define and solve problems in the management, conservation and improvement of natural and human environments. This major prepares students for employment in technical, geospatial fields.

9. Health Care Information Systems, B.S.

This new degree program will be a separate degree option within the Health Care Management program in the Department of Health Professions. It will represent a blending of new health care management content with existing courses from the Computer Information Systems curriculum and would provide the skills required for successful entry in today’s health information systems market place.

Additional information on this proposed degree, unrelated to fit with statutory role and mission, is in Appendix A.

ROLE AND MISSION SUPPORT

This degree supports MSU Denver's statutory role and mission, which states:

There is hereby established a university at Denver, to be known as Metropolitan state university of Denver, which shall be a comprehensive institution with modified open admission standards at the baccalaureate level; except that nontraditional students at the baccalaureate level who are at least twenty years of age shall only have as an admission requirement a high school diploma, the successful completion of a high school equivalency examination, as defined in section 22-33-102 (8.5), C.R.S., or the equivalent thereof. Metropolitan state university of Denver shall offer a variety of liberal arts and science, technical, and educational programs. The university may offer a limited number of professional programs. In furtherance of its role and mission, Metropolitan state university of Denver may offer master's degree programs that address the needs of its urban service area. (23-54-101, C.R.S.)

Pursuant to Colorado Revised Statutes 23-5-129(6)(b), department staff finds the proposed degrees are consistent with the institution's statutory role and mission, meet GT Pathways requirements, and do not exceed the 120 credit cap for baccalaureate degrees. Metropolitan State University of Denver's governing board approved the programs at its September 18, 2015 meeting.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve the nine baccalaureate degrees outlined above to be offered at Metropolitan State University of Denver.

V. STATUTORY AUTHORITY

C.R.S. §23-5-129 Governing boards - performance contract - authorization – operations

(6) While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education:

(b) Need not consult with nor obtain approval from the Colorado commission on higher education to create, modify, or eliminate academic and vocational programs offered by the institution, so long as such creations, modifications, and eliminations are consistent with the institution's statutory role and mission. Institutions shall submit information to the department demonstrating that the creation or modification of an academic or career and technical education program is consistent with the institution's statutory role and mission. The Colorado commission on higher education shall have the authority to override the creation or modification of an academic or vocational program if the change made by the governing board is inconsistent with the institution's statutory role and mission.

APPENDIX:

Appendix A: Supplemental Information

APPENDIX A: SUPPLEMENTAL INFORMATION

This supplemental information is unrelated to the proposed degree's fit with the institution's statutory role and mission. The following is summarized from the institution's proposal:

EVIDENCE OF NEED

1. Applied Geology, B.S.

This degree will better prepare MSU Denver students who have been choosing the Geology concentration of the Land Use degree. Enrollment in this concentration is robust and has been growing. Having a degree in Geology rather than Land Use will serve students well, as the term "Land Use" is confusing and misleading for students and employers. Conversations with industry, other academia and students have indicated that a newly emerging industry in the geosciences is providing an increasing number of employment opportunities. This is supported by the 2010 occupational outlook statistics published by the Bureau of Labor Statistics (BLS), which indicate a faster than average growth rate for all geoscience occupations.

2. Art Education, B.F.A.

The conversion to a Bachelor of Fine Arts in Art Education directly supports students' goal of attaining initial licensure through the Colorado Department of Education or other teacher licensing agencies outside of Colorado. The conversion from a concentration to a degree will ensure that the focus of study would not be reduced to an emphasis or concentration, an important distinction for a student seeking a specific professional degree that leads to a career of teaching at the K-12 level. The National Association of Schools of Art and Design (N.A.S.A.D.), which is the accrediting agency for the programs offered by the art department, has separate and specific guidelines for baccalaureate degrees in art education, and recommends the Bachelor of Fine Arts Degree. N.A.S.A.D. believes that "primary and secondary school art teachers who exhibit a high level of skills as artists and designers are generally more effective. Therefore, NASAD member institutions should focus their undergraduate teacher education efforts on BFA-type programs that provide the structure and sequence for a primary emphasis in studio work." The Art Education concentration currently has a steady stream of 70-80 students, which can sustain a separate major from the other Art majors. The major will still be housed in the Art Department and will be closely related to other majors in that department.

3. Brew Pub Operations, B.S.

According to the Colorado Brewers Guild, Colorado is at the forefront of the national growth of the craft brewing industry, ranking among the top states for number of

breweries, per capita production, economic impacts and favorable excise taxes. According to a recent white paper commissioned by the Colorado Brewers Guild in cooperation with the University of Colorado Leeds School of Business, there were more than 230 crafter brewers in the state in 2013, marking 109% growth in the number of breweries since 2009. Given this growth, there is a growing workforce need.

4. Brewery Operations, B.S.

Craft breweries and brewpubs have become a significant aspect of Colorado's culture and economy. Converting mostly raw material inputs such as hops and water into the craft beers sold domestically and internationally, the industry tallied \$249 million in direct value added in 2013. In 2012 and 2013, an estimated 4,493 and 5,014 people worked in the brewery and restaurant side of the business. Despite the high state of growth, MSU Denver's brewing industry partners have reported a need for trained employees in brewing, brewery operations, sales and distribution, brew pub management and related support positions.

5. Event and Meeting Management, B.S.

This program has grown out of the experience with the existing hospitality and tourism programs (HTE) at MSU Denver, the nationally recognized expertise of MSU Denver faculty and the request of the department's advisory board. While related to the components of the hospitality industry (hotel, food and beverage) and associated with tourism, event and meeting management is recognized as a distinct job category—separate from hospitality—according to the U.D. Department of Labor. With the advent of a globally accepted body of knowledge and competency standards in 2010-11, the requirements for pre-professional education and training demand profession-specific content that the current HTE major cannot provide. The core courses and elective options in this new program provide the credible degree the profession is requesting. According to the U.S. Bureau of Labor Statistics (BLS) data, in 2012 there were 94,299 meeting, convention and event planners employed across the U.S., and this number is forecast to grow 33 percent by 2022, resulting in 31,300 new positions.

6. Fire and Emergency Response Administration, B.S.

Career possibilities and projected national employment trends for 2012-22 in the Fire and Emergency Response Administration fields include a minimum of a 3 to 7% increase, or 104,000 new jobs (Municipal Firefighters, Wildland Firefighters, etc.), up to a 22% increase, or 149,900 new jobs (Medical and Health Services Managers). The Bureau of Labor Statistics projects employment of firefighters to grow by 19 % during the decade from 2008 to 2018.

7. Geography, B.A.

This degree will better prepare MSU Denver students who have been choosing the Geography concentration of the Land Use degree. Enrollment in this concentration is robust and has been growing. Having a degree in Geography rather than Land Use will serve students well, as the term “Land Use” is confusing and misleading for students and employers. The U.S. Department of Labor projects “much faster than average” growth, in excess of 20% or more, in jobs for geographers, geoscientists, cartographers, urban and regional planners and other geographical professionals, with projected needs of upwards of 15,000 additional employees in each of these career fields between 2008-2018.

8. Geospatial Sciences, B.S.

This degree will better prepare MSU Denver students who have been choosing the Geospatial Sciences concentration of the Land Use degree. Enrollment in this concentration is robust and has been growing. Having a degree in Geospatial Sciences rather than Land Use will serve students well, as the term “Land Use” is confusing and misleading for students and employers. A strong demand exists for qualified geospatial scientists. In 2004, the U.S. Department of Labor released a statement highlighting geospatial technology as one of the most important emerging and evolving fields in the technology industry. Planning firms, engineering companies, utilities and transportation companies employ geospatial scientists. The U.S. Department of Labor Statistics indicates a 16% growth in jobs in this area between 2012 and 22.

9. Health Care Information Systems, B.S.

Health care is the fastest growing industry in the U.S. by 2020, it is estimated that health care will account for more than 20% of the GDT and will become the largest annual national expenditure at about \$4.6 trillion. Thus the field of health information technology is expanding rapidly, encompassing opportunities in improving how health data is acquired, stored, retrieved and used in delivering patient care, reducing growth in health care costs and enhancing the health of communities. The U.S. Department of Labor Statistics estimate a shortage of over 50,000 qualified health care information management workers in the next three years.

DUPLICATION

1. Applied Geology, B.S.

A number of Colorado public institutions of higher education also offer a major in Geography: University of Colorado Boulder, Adams State University, Colorado State University, Fort Lewis College and Western State University. That all of these programs are viable speaks for the increasing workforce needs.

2. Art Education, B.F.A.

This BFA degree is offered by other NASAD-accredited institutions in Colorado. Of the two other NASAD accredited institutions in the region, Rocky Mountain College of Art and Design also offers a Bachelor of Fine Arts in Art Education as does the University of Denver (Bachelor of Fine Arts: Art Education K-12). Both programs are considerably more expensive; MSU Denver's degrees are a more affordable option for Colorado students.

3. Brew Pub Operations, B.S.

There is no other such program in Colorado.

4. Brewery Operations, B.S.

There is no other such program in Colorado.

5. Event and Meeting Management, B.S.

This program is rare nationally and would position MSU Denver to provide for workforce needs in a growing industry. In Colorado, Johnson & Wales offers a Sports, Entertainment and Event Management program with some Events classes; the University of Denver has a Hospitality Management program but no events courses; the University of Northern Colorado has a Recreation, Tourism & Management program, but with only one events management course.

6. Fire and Emergency Response Administration, B.S.

Although there are community college programs in emergency response in Colorado, there is no four-year program in emergency response management.

7. Geography, B.A.

A number of Colorado public institutions of higher education also offer a major in Geography: three University of Colorado campuses (Boulder, Denver and Colorado Springs), Adams State University and the University of Northern Colorado. Also, the University of Denver offers a major in Geography. That all of these programs are viable speaks for the increasing workforce needs.

8. Geospatial Sciences, B.S.

Two higher education institutions in Colorado offer a minor in this area, Colorado Mesa University and the University of Denver, but only the U.S. Air Force Academy in Colorado Springs offers a major. Colorado State University offers master's degree in Geosciences.

9. Health Care Information Systems, B.S.

There are other academic programs in the health information systems field in the Denver and state of Colorado market that the MSU Denver offering can effectively compete against: MSU Denver provides a more affordable option for baccalaureate degrees in the field. Given the acute workforce need and the fact that all of these programs have viable enrollments says there is room for additional options for metro-Denver and Colorado residents.

TOPIC: RECOMMEND APPROVAL OF MASTER OF ARTS IN TEACHING DIVERSE LEARNERS AT UNIVERSITY OF NORTHERN COLORADO

PREPARED BY: IAN MACGILLIVRAY, DIRECTOR OF ACADEMIC AFFAIRS

I. SUMMARY

This item recommends approval, retroactive to August 1, 2015, for University of Northern Colorado (UNC) to offer a Master of Arts in Teaching Diverse Learners. The degree includes a dual educator endorsement in Culturally and Linguistically Diverse Education as well as Special Education. UNC was approved to offer the educator preparation dual endorsement of the program but formal approval for the master of arts degree was inadvertently overlooked.

II. BACKGROUND

COMMISSION AUTHORITY

The Colorado Commission on Higher Education's role and responsibility in the review and approval of new academic programs at institutions operating under a performance contract is defined in §23-5-129(6)(b), which states that new and modified program proposals shall be reviewed and approved only on the basis of fit with the institution's statutory role and mission.

III. STAFF ANALYSIS

OVERVIEW OF PROPOSED PROGRAM

The following is summarized from UNC's proposal:

This degree will provide training and qualification to licensed teachers interested in strengthening their ability to teach diverse learners. This program will include not only a master's degree but also dual endorsements in both Culturally and Linguistically Diverse Education and Special Education Generalist. This program will facilitate the development of educators who are able to implement professional standards and advocate for children and youth with exceptionalities.

Additional information on this proposed degree, unrelated to fit with statutory role and mission, is in Appendix A.

ROLE AND MISSION SUPPORT

This degree supports UNC's statutory role and mission, which states:

(1) There is hereby established a university at Greeley, to be known as the university of northern Colorado. The university shall be a comprehensive baccalaureate and

specialized graduate research university with selective admission standards.

(2) The university of northern Colorado shall be the primary institution for undergraduate and graduate degree programs for educational personnel preparation in the state of Colorado. The university shall offer master's and doctoral programs primarily in the field of education. The university has the responsibility to offer on a statewide basis, utilizing where possible and appropriate the faculty and facilities of other educational institutions, those graduate-level programs needed by professional educators and education administrators. The Colorado commission on higher education shall include in its funding recommendations an appropriate level of general fund support for those programs.

(3) As part of its mission as a graduate research university specializing in programs for educational personnel, the university of northern Colorado shall include the education innovation institute created in [section 23-40-106](#) for the purposes described in [section 23-40-106 \(2\)](#). (23-40-101, C.R.S.)

Pursuant to Colorado Revised Statutes 23-5-129(6)(b), department staff finds the proposed degree is consistent with the institution's statutory role and mission. University of Northern Colorado Board of Trustees approved the program at its January 23, 2015 meeting.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve, retroactive to August 1, 2015, the Master of Arts in Teaching Diverse Learners at University of Northern Colorado.

V. STATUTORY AUTHORITY

C.R.S. §23-5-129 Governing boards - performance contract - authorization – operations

(6) While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education:

(b) Need not consult with nor obtain approval from the Colorado commission on higher education to create, modify, or eliminate academic and vocational programs offered by the institution, so long as such creations, modifications, and eliminations are consistent with the institution's statutory role and mission. Institutions shall submit information to the department demonstrating that the creation or modification of an academic or career and technical education program is consistent with the institution's statutory role and mission. The Colorado commission on higher education shall have the authority to override the creation or modification of an academic or vocational program if the change made by the governing board is inconsistent with the institution's statutory role and mission.

APPENDIX:

Appendix A: Supplemental Information

APPENDIX A: SUPPLEMENTAL INFORMATION

This supplemental information is unrelated to the proposed degree's fit with the institution's statutory role and mission. The following is summarized from the institution's proposal:

EVIDENCE OF NEED

The need for this program became evident when HR directors and classroom teachers began asking for training in both Culturally and Linguistically Diverse Education and Special Education. With the reality of diverse learners in every classroom, teachers are seeking to enhance their skills and abilities to meet the needs of this vast community. Single endorsements are sought after, but by combining two of the most valued endorsements in one program, teachers will be enriched and trained in the larger community of exceptional learners.

- Over the past 10 years, the number of U.S. students enrolled in special education programs has risen 30 percent. Three out of every four students with disabilities spend part or all of their school day in a general education classroom. In turn, nearly every general education classroom across the country includes students with disabilities. <http://www.nea.org/specialed/>
- The most diverse group in the United States is our youngest children, and they will make the nation more diverse as they age. Almost 9 million young people ages 5 to 17 speak a language other than English in their home and 2.6 million of them have difficulty speaking English. (Harold Hodgkinson, in *Educating Everybody's Children: Diverse Teaching Strategies for Diverse Learners*, 2nd Edition)
- The Denver Post reported that in 2008, the latest figures available, Boulder reported that 77 percent of its students with disabilities are included in the general-education classroom at least 80 percent of the time. (http://www.denverpost.com/ci_15596395#ixzz2vDtPyrLO)
- There is an increased likelihood that teacher attitudes regarding English language learners (ELLs) in mainstream classrooms will significantly deteriorate over the next several years. The reasons for this are several: (1) the number of language-minority speakers in the US continues to grow, (2) teachers across the nation are significantly lacking in training for how to educate ELLs in the mainstream classroom, (3) immigrants and refugees are settling in less populated areas with little experience in linguistic and cultural diversity, overwhelming schools and teachers in these regions, and (4) recent changes in federal legislation are stringently holding schools and teachers accountable for the academic achievement of English language learners, which may result in a backlash against the very students the legislation is supposed to help. (Walker, A., Shafer, J., & Iiams, M. "Not In My Classroom": Teacher Attitudes Towards English Language Learners in the Mainstream Classroom. NABE Journal of Research and Practice, 2:1 Winter 2004)

- Based on the Colorado Association of School Personnel Administrators (CASPA) meeting in December, more ESL endorsed teachers and/or teachers with CLD training are wanted.

In communication with the College of Education and Behavioral Sciences Dean's office, the Colorado Department of Education (April 23, 2014) expressed written support for the development of this program as well as the need. The letter stated that the US Department of Education has identified special education as the largest area of need in Colorado with an expected teacher shortage for the state. Expected enrollment is 100 students five years post implementation.

DUPLICATION

The integration of two endorsements makes this degree unique within Colorado. The MA is an attractive graduate program but the combination with the dual endorsements sets it apart from all other available teaching programs.

TOPIC: RECOMMEND APPROVAL OF MASTER IN COMMUNICATION AND MEDIA MANAGEMENT AT COLORADO STATE UNIVERSITY

PREPARED BY: IAN MACGILLIVRAY, DIRECTOR OF ACADEMIC AFFAIRS

I. SUMMARY

This item recommends approval for Colorado State University (CSU) to offer a Master in Communication and Media Management (MCMM).

II. BACKGROUND

COMMISSION AUTHORITY

The Colorado Commission on Higher Education's role and responsibility in the review and approval of new academic programs at institutions operating under a performance contract is defined in §23-5-129(6)(b), which states that new and modified program proposals shall be reviewed and approved only on the basis of fit with the institution's statutory role and mission.

III. STAFF ANALYSIS

OVERVIEW OF PROPOSED PROGRAM

The following is summarized from CSU's proposal:

This new Master's in Communications and Media Management is designed for students with a bachelor's degree seeking to transition to a communication-related career or for those seeking to move into a management role in their present media profession. The rapid rate of technological change in media technology has created a need for constant retraining and the acquisition of new multimedia knowledge and management skills. The curriculum is designed to provide students with a comprehensive overview of "new media" developments. Upon completion of the program, students will be prepared to strategize and manage specific communications projects, as well as manage and direct staff members or contract workers in a communications unit within a corporate, educational, or non-profit organization. These management and strategic planning skills will apply to communication efforts through media channels such as online, print, video, audio, and satellite systems; strategic placement and utilization of media products in a corporate, government, or non-profit environment; communication techniques and aesthetics associated with these media products and channels; management, evaluation strategies, and budgeting for staff, projects, and consulting related to the use of media for public relations, advertising, promotions, and other external and internal communications.

Additional information on this proposed degree, unrelated to fit with statutory role and mission, is in Appendix A.

ROLE AND MISSION SUPPORT

This degree supports CSU's statutory role and mission, which states:

There is hereby established a university at Fort Collins to be known as Colorado state university. Colorado state university shall be a comprehensive graduate research university with selective admission standards offering a comprehensive array of baccalaureate, master's, and doctoral degree programs. Consistent with the tradition of land grant universities, Colorado state university has exclusive authority to offer graduate and undergraduate programs in agriculture, forestry, natural resources, and veterinary medicine. The Colorado commission on higher education, in consultation with the board of governors of the Colorado state university system, shall designate those graduate level programs that are the primary responsibility of Colorado state university. Colorado state university has the responsibility to provide on a statewide basis, utilizing when possible and appropriate the faculty and facilities of other educational institutions, those graduate level programs. The commission shall include in its funding recommendations a level of general fund support for these programs. (23-31-101, C.R.S.)

Pursuant to Colorado Revised Statutes 23-5-129(6)(b), department staff finds the proposed degree is consistent with the institution's statutory role and mission. Colorado State University's governing board approved the program at its December 11, 2015 meeting.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve the Master in Communication and Media Management (MCMM) at Colorado State University.

V. STATUTORY AUTHORITY

C.R.S. §23-5-129 Governing boards - performance contract - authorization – operations

(6) While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education:

(b) Need not consult with nor obtain approval from the Colorado commission on higher education to create, modify, or eliminate academic and vocational programs offered by the institution, so long as such creations, modifications, and eliminations are consistent with the institution's statutory role and mission. Institutions shall submit information to the department demonstrating that the creation or modification of an academic or career and technical education program is consistent with the institution's statutory role and mission. The Colorado commission on higher education shall have the authority to override the

creation or modification of an academic or vocational program if the change made by the governing board is inconsistent with the institution's statutory role and mission.

APPENDIX:

Appendix A: Supplemental Information

APPENDIX A: SUPPLEMENTAL INFORMATION

This supplemental information is unrelated to the proposed degree's fit with the institution's statutory role and mission. The following is summarized from the institution's proposal:

EVIDENCE OF NEED

CSU will be one of the few public institutions west of the Mississippi that will offer a master's degree in Communications and Media Management. The program will provide unique education and training options with built-in corporate and organizational relationships. It is clear that the state of the art of communication management has changed in the 21st century, and students need to be armed with contemporary knowledge and skills that make each of them more competitive in a selective job market.

In order to quantify some potential enrollment potential to accompany the very strong anecdotal information about the program demand, the Department conducted an online survey of alumni living in Denver. One hundred seventy-nine (179) alumni responded in five days. Of those who responded, 52 (29%) indicated they were interested in the program and 66 (37%) said they may be interested in the program. Additionally, 127 (71%) said they knew someone who would, or may be interested in the program. These numbers and percentages indicate a very strong potential audience among professional communicators, especially considering that our alumni represent a small fraction of a very large base of communicators who need updated and specialized skills.

DUPLICATION

The already existing Colorado programs have fee structures in addition to tuition that push the expense considerably past the proposed cost of our program. The University of Colorado's programs are closest in terms of cost, but they are significantly different in approach. They offer both an M.A. in Journalism and an M.A. in Communication.

TOPIC: RECOMMEND APPROVAL OF BACHELOR OF SCIENCE IN HUMAN DIMENSIONS OF NATURAL RESOURCES AT COLORADO STATE UNIVERSITY

PREPARED BY: IAN MACGILLIVRAY, DIRECTOR OF ACADEMIC AFFAIRS

I. SUMMARY

This item recommends approval for Colorado State University (CSU) to offer a Bachelor of Science in Human Dimensions of Natural Resources.

II. BACKGROUND

COMMISSION AUTHORITY

The Colorado Commission on Higher Education's role and responsibility in the review and approval of new academic programs at institutions operating under a performance contract is defined in §23-5-129(6)(b), which states that new and modified program proposals shall be reviewed and approved only on the basis of fit with the institution's statutory role and mission.

III. STAFF ANALYSIS

OVERVIEW OF PROPOSED PROGRAM

The following is summarized from CSU's proposal:

To strengthen our ability to train the next generation of professionals working in the areas of conservation leadership and environmental communication, we are proposing to combine and convert the current curriculum concentrations in Environmental Communication (EC) and Parks and Protected Area Management (PPAM) into a new major: Human Dimensions of Natural Resources. Currently students in our Parks and Protected Area Management (PPAM) and Environmental Communication (EC) concentrations graduate with a B.S. degree in "Natural Resource Recreation and Tourism" (NRRT). We are combining and converting these concentrations into a new major to:

- (1) Accurately capture, through a more contemporary title, the range of expertise EC/PPAM students now receive;
- (2) Strengthen our ability to prepare students as future conservation and natural resource professionals; and
- (3) Keep stride with the desired future direction of our Human Dimensions of Natural Resources Department which, in recent years, has experienced a name change (formerly Natural Resource Recreation and Tourism, same as the major) reflecting our emphasis on social science applications to support conservation.

The new major would include remnants of the two existing concentrations' curricula as well as several new recently approved courses to complement existing offerings and augment the desired skill set. A survey of natural resource agency/organization partners was conducted in 2012 to inform development of this new major. Informed by this survey, the rationale for combining the two concentrations is that EC and PPAM are two important areas of emphasis that are necessary components of the new major, which has been broadened in scope to provide for a more comprehensive skill set for conservation professionals. The new major will also build upon content and lessons learned from the Conservation Leadership Through Learning graduate program.

Additional information on this proposed degree, unrelated to fit with statutory role and mission, is in Appendix A.

ROLE AND MISSION SUPPORT

This degree supports CSU's statutory role and mission, which states:

There is hereby established a university at Fort Collins to be known as Colorado state university. Colorado state university shall be a comprehensive graduate research university with selective admission standards offering a comprehensive array of baccalaureate, master's, and doctoral degree programs. Consistent with the tradition of land grant universities, Colorado state university has exclusive authority to offer graduate and undergraduate programs in agriculture, forestry, natural resources, and veterinary medicine. The Colorado commission on higher education, in consultation with the board of governors of the Colorado state university system, shall designate those graduate level programs that are the primary responsibility of Colorado state university. Colorado state university has the responsibility to provide on a statewide basis, utilizing when possible and appropriate the faculty and facilities of other educational institutions, those graduate level programs. The commission shall include in its funding recommendations a level of general fund support for these programs. (23-31-101, C.R.S.)

Pursuant to Colorado Revised Statutes 23-5-129(6)(b), department staff finds the proposed degree is consistent with the institution's statutory role and mission. Colorado State University's governing board approved the program at its December 11, 2015 meeting. The proposed degree meets GT Pathways and 120 credit cap requirements.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve the Bachelor in Science in Human Dimensions of Natural Resources at Colorado State University.

V. STATUTORY AUTHORITY

C.R.S. §23-5-129 Governing boards - performance contract - authorization – operations

(6) While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education:

(b) Need not consult with nor obtain approval from the Colorado commission on higher education to create, modify, or eliminate academic and vocational programs offered by the institution, so long as such creations, modifications, and eliminations are consistent with the institution's statutory role and mission. Institutions shall submit information to the department demonstrating that the creation or modification of an academic or career and technical education program is consistent with the institution's statutory role and mission. The Colorado commission on higher education shall have the authority to override the creation or modification of an academic or vocational program if the change made by the governing board is inconsistent with the institution's statutory role and mission.

APPENDIX:

Appendix A: Supplemental Information

APPENDIX A: SUPPLEMENTAL INFORMATION

This supplemental information is unrelated to the proposed degree's fit with the institution's statutory role and mission. The following is summarized from the institution's proposal:

EVIDENCE OF NEED

Students in the existing concentrations of Environmental Communication and Parks and Protected Area Management graduate with a B.S. degree in Natural Resource Recreation and Tourism, a label that no longer adequately describes the full range of training these students receive and that arguably can mislead potential employers regarding their knowledge and skillset. By combining and adding to the two concentrations via the new Human Dimensions of Natural Resources major, we would: (1) more accurately capture, through a more contemporary title, the range of expertise of EC/PPAM graduates; (2) strengthen our ability to prepare these students as future human dimensions of natural resources and conservation professionals; and (3) keep stride with the desired future direction of the HDNR department which is centered around the broad goal of supporting conservation through social science applications.

Due to the trends in the field, we anticipate ample employment opportunities for graduates in the new Human Dimensions of Natural Resources major. In fact, through the deliberate combination of field experiences, real-world and problem-based learning, and a learning community approach to education that closely involves students, faculty, and field practitioners, graduates of this program will be better prepared than graduates in traditional natural resource programs.

DUPLICATION

To the best of our knowledge, there are no programs in the state of Colorado that duplicate or are similar to this program. However, there are a few other programs that resemble the interdisciplinary philosophy and systems perspective of this new major:

- Environmental Studies Program, University of Colorado Boulder. Our program places greater emphasis on the social aspects of natural resource management and is more focused on environmental communication, conservation leadership, and protected areas.
- Environment and Sustainability, Western State Colorado University. Our program is not focused on water issues, and the individual contract emphasis is treated on a case-by-case basis by advisors. In a review of their course offerings, we found no coursework in conservation leadership, environmental communication strategies, or protected areas.

TOPIC: RECOMMEND APPROVAL OF BACHELOR OF ARTS IN INCLUSIVE ELEMENTARY EDUCATION AT THE UNIVERSITY OF COLORADO COLORADO SPRINGS

PREPARED BY: DR. IAN MACGILLIVRY, DIRECTOR OF ACADEMIC AFFAIRS;
DR. ROBERT MITCHELL, ACADEMIC POLICY OFFICER FOR EDUCATOR PREPARATION

I. SUMMARY

This item recommends approval of a Bachelor of Arts in Inclusive Elementary Education at the University of Colorado Colorado Springs. Students completing this program will be eligible for licensure in Elementary Education (8.01), an endorsement in Culturally and Linguistically Diverse (CLD) Education (8.22) and an endorsement in Special Education (9.08).

II. BACKGROUND

Pursuant to C.R.S. §23-1-121 the Colorado Commission on Higher Education considers approval of all educator preparation programs at public and private institutions of higher education, after receiving an affirmative recommendation from the State Board of Education. The process for initial approval of new educator preparation programs is as follows: Colorado Department of Education (CDE) conducts a review of the endorsement program to ensure that its content is designed and implemented in a manner that will enable a candidate to meet the requirements for licensure in Colorado (C.R.S. §22-60.5). CDE then makes a recommendation to the State Board of Education, which then makes a recommendation to the department. Upon receiving an affirmative recommendation, the department reviews the proposed program for the following statutory performance criteria: a comprehensive admission system; ongoing advising and screening of candidates; integration of theory and practice in coursework and field-based training; supervised field-based experience; and assessment of candidates' subject matter and professional knowledge and ability to apply the professional knowledge base [C.R.S. §23-1-121(2)].

III. STAFF ANALYSIS

The Colorado State Board of Education approved the content of the Bachelor of Arts in Inclusive Elementary Education at its meeting on January 13, 2016. CDE staff transmitted its affirmative recommendation to the department.

This program provides prospective educators an opportunity to complete a course of study that supports the requirements of diverse and exceptional-needs students throughout the state of Colorado. The addition of endorsements in Culturally and Linguistically Diverse education and Special Education within the program leading to initial licensure in Elementary Education connects to the enhanced teacher workforce demands within Colorado's public school districts. Pursuant to C.R.S. §23-1-121(2), department staff reviewed the proposal and confirmed it meets the statutory performance criteria. The following is summarized from the institution's proposal:

1. **Comprehensive admission system:** The program follows institutional guidelines for admissions which includes: completion of the undergraduate application, submission of high school transcript, receipt of ACT or SAT scores within the developed acceptable range for the institution, interview with a College of Education faculty advisor, submission of the application to the College of Education for the Bachelor of Arts in Inclusive Elementary Education. These components ensure that students entering this program are well-suited for success in this program.
2. **Ongoing screening and advising:** Advising of students is coordinated through the Student Success Center – an entity developed to centralize advising services for undergraduate student population at UCCS. Additional review and supervision of this advising system will be provided by College of Education leadership to ensure alignment of messaging between the Student Success Center and the College.
3. **Course work and field-based training:** The structure of the program provides linkage between pedagogical development and field-based experiences. In the second semester of the program, students are required to complete a practicum component, and this exposure to fieldwork continues through the conclusion of the program in their ninth semester. Three formal field placement courses are imbedded in the program, culminating with 16 weeks of student teaching in their final semester.
4. **Candidate skills and content knowledge:** Students in this program complete the edTPA process- which requires students to complete a comprehensive portfolio that documents their development as an educator (including video commentary on their own teaching). These portfolios are then assessed by external reviewers and scores transmitted to the student. Students are also assessed through key indicators throughout the program by program faculty on a regular basis.
5. **Continual improvement:** Faculty and leadership at UCCS continue to engage in the process of continual improvement. The institution completed its CDE/DHE reauthorization review in 2014 and continues to be involved in continual improvement processes based on this recent evaluation.

Additional information on this proposed degree, unrelated to fit with statutory role and mission or educator preparation requirements, is in Appendix A.

ROLE AND MISSION SUPPORT

This degree supports UCCS's statutory role and mission, which states:

(c) The Colorado Springs campus of the university of Colorado shall be a comprehensive baccalaureate and specialized graduate research university with selective admission standards. The Colorado Springs campus shall offer liberal arts and sciences, business, engineering, health sciences, and teacher preparation undergraduate degree programs, and a selected number of master's and doctoral degree programs. (23-20-101, C.R.S.)

Pursuant to Colorado Revised Statutes 23-5-129(6)(b), department staff finds the proposed degree is consistent with the institution's statutory role and mission. University of Colorado's

governing board approved the program at its September 11, 2015 meeting. The proposed degree meets GT Pathways and the April 1, 2004 Commission-approved credit cap waiver for educator preparation programs to go up to 126 credits.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve the Bachelor of Arts in Inclusive Elementary Education at the University of Colorado Colorado Springs.

III. STATUTORY AUTHORITY

C.R.S. §23-1-121-Commission directive - approval of educator preparation programs – review
(2) The commission shall adopt policies establishing the requirements for educator preparation programs offered by institutions of higher education. The department shall work in cooperation with the state board of education in developing the requirements for educator preparation programs. At a minimum, the requirements shall ensure that each educator preparation program complies with section 23-1-125, is designed on a performance-based model, and includes:

(a) A comprehensive admission system that includes screening of a candidate's dispositions for the field in which he or she is seeking licensure, consideration of a candidate's academic preparation for entry into his or her desired endorsement area or areas, and preadmission advising for students who are considering becoming candidates. The department shall work in collaboration with the programs to define any dispositions considered to be appropriate for educators.

(b) Ongoing advising and screening of candidates by practicing educators or faculty members;

(c) Course work and field-based training that integrates theory and practice and educates candidates in the methodologies, practices, and procedures of standards-based education, as described in parts 4 and 10 of article 7 of title 22, C.R.S., and specifically in teaching to the state academic standards adopted pursuant to section 22-7-406, C.R.S., or, beginning December 15, 2012, teaching to the state preschool through elementary and secondary education standards adopted pursuant to section 22-7-1005, C.R.S.;

(d) A requirement that, during the course of the preparation program, each teacher candidate in an initial licensure program complete a minimum of eight hundred hours, each principal and administrator candidate complete a minimum of three hundred hours, and each other advanced degree or add-on endorsement candidate complete appropriate supervised field-based experience that relates to predetermined learning standards and includes best practices and national norms related to the candidate's endorsement;

(e) A requirement that each candidate, prior to graduation, must demonstrate the skills required for licensure, as specified by rule of the state board of education pursuant to section 22-2-109 (3), C.R.S., in the manner specified by rule of the state board;

(f) Comprehensive, ongoing assessment including evaluation of each candidate's subject matter and professional knowledge and ability to demonstrate skill in applying the professional knowledge base.

APPENDIX:

Appendix A: Supplemental Information

APPENDIX A: SUPPLEMENTAL INFORMATION

This supplemental information is unrelated to the proposed degree's fit with the institution's statutory role and mission. The following is summarized from the institution's proposal:

EVIDENCE OF NEED

The 2008 recession created a dip in the demand for freshly-minted Elementary Education teachers, as experienced educators postponed retirement. The market has experienced new growth and the Bureau of Labor Statistics (BLS) projects a steady job growth of 12% for the profession between 2012 and 2022. During that time period, over 181,000 jobs will be added. <http://www.bls.gov/ooh/education-training-and-library/kindergarten-and-elementary-school-teachers.htm>

The demand for special educators at the elementary level is expected to be more than 206, 000 teachers between 2012-2022, a growth rate of 6%. <http://www.bls.gov/ooh/Education-Training-and-Library/print/special-education-teachers.htm>. Overall demand, however, is state and district specific. Suburban schools often have their pick of teachers, but urban and rural districts frequently have difficulty filling positions.

The graduates of this program, with its emphasis on inclusive elementary education with preparation to also teach English language learners will be in high demand. Special Education has been listed as a high needs area for teachers since at least 1990 (<http://www2.ed.gov/about/offices/list/ope/pol/tsa.doc>). Further, it is the faculty's belief that all teachers need to be prepared to teach all learners, and the era of preparing educators to teach 'just "normal" kids' vs. teaching children with special needs is over. Every classroom has children who learn differently, need differentiated learning strategies, or have diverse educational needs. Why wouldn't we prepare teachers to address the needs of the broad spectrum of learners?

Previously in Colorado, students interested in a career in education were required to complete a Bachelor degree in a content field through the College of Letters, Arts and Sciences. Licensure was obtained through additional coursework during their undergraduate degree or by a post-baccalaureate program in education. This option will continue.

DUPLICATION

The BA in Inclusive Elementary Education is one of a small, but growing number of programs nationally that has an 'inclusive' focus. There is increasing evidence that educator preparation programs that prepare all teachers to teach all children are more effective than those that include just a few special education or English as a Second Language courses to supplement "the main preparation." In Colorado, the University of Northern Colorado offers a baccalaureate program at the Lowry Campus that is a residency teacher licensure program for students employed in area schools as paraprofessionals in the morning and attending academic classes in the afternoon. The BA differs from the UNC-L program by not requiring students to be employed as paraprofessionals, having a strong inclusive focus, and preparing teachers for multiple

licensure/endorsements. The University of Colorado Denver has a new BA in Teaching, Learning, and Development, which UCCS has endorsed. That program provides three tracks (early childhood, elementary, and special education) that students may choose. This program differs from the BAIEE in that students have the option of choosing one of the three tracks and the program does not provide recommendation for multiple teaching licenses as a result of successful completion. There are no other programs on campus or across the Pikes Peak region that contain the specific elements and address the same needs as the proposed BA in Inclusive Elementary Education. The focus on inclusive education reflects a 50-year shift in how we prepare teachers to meet the needs of all children.

tracks and the program does not provide recommendation for multiple teaching licenses as a result of successful completion.

There are no other programs on campus or across the Pikes Peak region that contain the specific elements and address the same needs as the proposed BA in Inclusive Elementary Education.

The focus on inclusive education reflects a 50-year shift in how we prepare teachers to meet the needs of all children.

TOPIC: RECOMMEND APPROVAL OF ADMINISTRATOR LICENSURE PROGRAM AT WESTERN STATE COLORADO UNIVERSITY

PREPARED BY: DR. ROBERT MITCHELL, ACADEMIC POLICY OFFICER FOR EDUCATOR PREPARATION

I. SUMMARY

This consent item recommends approval to offer the Administrator (3.04) licensure program at Western State Colorado University (WSCU).

II. BACKGROUND

Pursuant to C.R.S. §23-1-121, the Colorado Commission on Higher Education considers approval of all educator preparation programs at public and private institutions of higher education after receiving an affirmative recommendation from the State Board of Education.

The process for initial approval of new educator preparation programs is as follows: Colorado Department of Education (CDE) conducts a review of the endorsement program to ensure that its content is designed and implemented in a manner that will enable a candidate to meet the requirements for licensure in Colorado (C.R.S. §22-60.5). CDE then makes a recommendation to the State Board of Education, which then makes a recommendation to the Department.

Upon receiving an affirmative recommendation, the Department reviews the proposed program for the following statutory performance criteria: a comprehensive admission system; ongoing advising and screening of candidates; integration of theory and practice in coursework and field-based training; supervised field-based experience; and, assessment of candidates' subject matter and professional knowledge and ability to apply the professional knowledge base [C.R.S. §23-1-121(2)].

III. STAFF ANALYSIS

The Colorado State Board of Education approved the content of Western State Colorado University's Administrator (3.04) licensure program at its meeting of January 13, 2016. CDE staff transmitted its affirmative recommendation to the Department.

This program provides educators the opportunity to obtain an Administrator license from the Colorado Department of Education. The program is a pathway within the institution's already approved M.A. in Education that simultaneously leads to licensure in Colorado for both the "Principal" and "Administrator" endorsements. Coursework is aligned to provide theoretical and practical training for administrators serving in a variety of educational environments. Pursuant to C.R.S. §23-1-121(2), Department staff reviewed the proposal and confirmed it meets the statutory performance criteria. The following is summarized from the institution's proposal:

1. **Comprehensive admission system:** Admission to the licensure program is dependent on the individual student securing admission to the institution's Masters of Arts in Education. To obtain admission, students must complete the following: (a) successfully pass a CBI/FBI background check; (b) submit letters of recommendation; (c) provide narrative responses regarding interest in becoming a school/district leader; (d) submit transcripts (3.0 undergraduate GPA is recommended; provisions are available for students not meeting this threshold). Applications are reviewed by qualified faculty and admissions decisions are communicated back to applicants.
2. **Ongoing screening and advising:** Program faculty advises students regarding academic progress, post-program options for employment and fieldwork components of the program. Students are made aware of advising opportunities at the start of their program of study.
3. **Course work and field-based training:** Coursework aligns with fieldwork through intentional scaffolding and introduction of key topics such as: using data to inform decision making, developing and sustaining an effective school environment, supporting teacher and educator development and community/school relations. Students are expected and required to link their experiences in the school/district to relevant coursework.
4. **Candidate skills and content knowledge:** Candidates are required to successfully complete both formative and summative assessments in order to complete the program. These include various writing and presentation projects that require students to demonstrate their professional knowledge of school/district administration and their ability to work in a variety of locations and educational institutions. Students not meeting minimum expectations on these assessments are required to either repeat necessary coursework or are removed from the program.
5. **Continual improvement:** The program is involved in continual review to ensure successful student outcomes. This process includes both internal and external review as a component of continual improvement at both the institutional level and in collaboration with the Colorado Department of Education and the Colorado Department of Higher Education.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approve the Administrator license (3.04) educator preparation program at Western State Colorado University.

III. STATUTORY AUTHORITY

C.R.S. §23-1-121- Commission directive - approval of educator preparation programs – review
(2) The commission shall adopt policies establishing the requirements for educator preparation programs offered by institutions of higher education. The Department shall work in cooperation with the state board of education in developing the requirements for educator preparation programs. At a minimum, the requirements shall ensure that each educator preparation program

complies with section 23-1-125, is designed on a performance-based model, and includes:

(a) A comprehensive admission system that includes screening of a candidate's dispositions for the field in which he or she is seeking licensure, consideration of a candidate's academic preparation for entry into his or her desired endorsement area or areas, and preadmission advising for students who are considering becoming candidates. The Department shall work in collaboration with the programs to define any dispositions considered to be appropriate for educators.

(b) Ongoing advising and screening of candidates by practicing educators or faculty members;

(c) Course work and field-based training that integrates theory and practice and educates candidates in the methodologies, practices, and procedures of standards-based education, as described in parts 4 and 10 of article 7 of title 22, C.R.S., and specifically in teaching to the state academic standards adopted pursuant to section 22-7-406, C.R.S., or, beginning December 15, 2012, teaching to the state preschool through elementary and secondary education standards adopted pursuant to section 22-7-1005, C.R.S.;

(d) A requirement that, during the course of the preparation program, each teacher candidate in an initial licensure program complete a minimum of eight hundred hours, each principal and administrator candidate complete a minimum of three hundred hours, and each other advanced degree or add-on endorsement candidate complete appropriate supervised field-based experience that relates to predetermined learning standards and includes best practices and national norms related to the candidate's endorsement;

(e) A requirement that each candidate, prior to graduation, must demonstrate the skills required for licensure, as specified by rule of the state board of education pursuant to section 22-2-109 (3), C.R.S., in the manner specified by rule of the state board;

(f) Comprehensive, ongoing assessment including evaluation of each candidate's subject matter and professional knowledge and ability to demonstrate skill in applying the professional knowledge base.

TOPIC: DEGREE AUTHORIZATION ACT – RECOMMENDATION OF APPROVAL FOR RENEWAL OF AUTHORIZATION

PREPARED BY: HEATHER DELANGE, ACADEMIC POLICY OFFICER

I. SUMMARY

This consent item recommends renewal of authorization for Patriot Bible University under the Degree Authorization Act.

II. BACKGROUND

The Colorado Commission on Higher Education (CCHE) has statutory responsibility for administration of Title 23, Article 2 of the Colorado Revised Statutes, commonly referred to as the Degree Authorization Act (DAA). The Act sets out the terms by which the Commission may authorize accredited private colleges and universities, out-of-state public colleges and universities, and seminaries and bible colleges to operate in Colorado.

The DAA outlines the Department's jurisdiction over private education programs available to the residents of the state of Colorado. The DAA establishes standards to (1) prevent misrepresentation, fraud, and collusion in offering educational programs to the public and (2) protect, preserve, foster, and encourage the educational programs offered by private educational institutions, which meet generally recognized criteria of quality and effectiveness as determined through voluntary accreditation.

A private college or university that has its accreditation reaffirmed without sanction and continues to meet the minimum standards, or a seminary or religious training institution that continues to meet the minimum operating standards of the DAA, is presumed qualified for renewal of authorization and department staff shall recommend that the CCHE renew the institution's authorization for three additional years.

III. STAFF ANALYSIS

Pursuant to statute and policy, all authorized institutions under the DAA must renew authorization periodically. The renewal period varies by the type of authorization that the institution holds from the CCHE.

Seminaries and Religious Training Institutions

Seminaries and religious training institutions are required to apply for renewal of authorization every three years. Renewal of authorization demonstrates that the seminary or religious training institution continues to meet the minimum operating standards specified in statute and CCHE policy, Section I, Part J. Institutions must submit the following documentation for renewal:

- An updated list of program offerings;
- Confirmation of non-profit status;
- Confirmation of tax-exempt status pursuant to Colorado State Law; and
- Updated contact information.

Patriot Bible College complied with the requirements for the renewal of authorization.

IV. STAFF RECOMMENDATION

Staff recommends approval for the renewal of authorization for Patriot Bible College under the Degree Authorization Act.

V. STATUTORY AUTHORITY

§23-2-103.3 C.R.S.

(5) A private college or university that has authorization from the commission pursuant to this section and maintains its accreditation shall apply to the department for reauthorization in accordance with the schedule for reaccreditation by its accrediting body or every three years, whichever is longer. A seminary or religious training institution shall apply for reauthorization every three years. A private college or university or seminary or religious training institution that seeks reauthorization shall submit an application in accordance with the procedures and policies adopted by the commission and shall pay the reauthorization fee established by the commission pursuant to section 23-2-104.5.

(b) (I) A private college or university that has had its accreditation reaffirmed without sanction, is in compliance with section 23-2-103.8, and is not subject to investigation pursuant to section 23-2-103.4 is presumed qualified for renewal of authorization, and the department shall recommend renewal for a period of three years or the length of the institution's accreditation, if applicable, whichever is longer.

(II) A seminary or religious training institution that continues to meet the minimum operating standards specified in this section is presumed qualified for renewal of authorization, and the department shall recommend that the commission renew the institution's authorization for three additional years.

TOPIC: FY 2016 – 2017 STUDENT BUDGET PARAMETERS

PREPARED BY: ANDREW RAUCH, LEAD FINANCE ANALYST

I. SUMMARY

This consent item presents the Fiscal Year 2016-2017 Student Budget Parameters.

In compliance with federal regulations, postsecondary education institutions that participate in federal financial aid programs are required to determine average costs that they then use to determine federal financial aid (grants, work study, and loans) to students. The cost of attendance for a student is an estimate of a student's educational expenses for the period of enrollment. The allowable costs include tuition and fees, books, supplies, transportation, personal expenses, and room and board with additional supplemental budgets specific to certain circumstances.

Annually, the Colorado Commission on Higher Education (CCHE) recommends guidelines for student budget parameters to be used by financial aid administrators, in determining cost of attendance at their respective institutions.

II. BACKGROUND

Institutional financial aid administrators conduct a student need analysis estimating the amount of assistance a student will require after accounting for the expected resources available from that student and his or her family. The need analysis has two basic components: (1) the student's cost of attendance (COA), which is a reasonable estimate of what it will cost the student to attend a given institution for a given period of time; and (2) an estimate of the expected family contribution (EFC), which is calculated by a federally-approved formula that accounts for income, assets, number of family members attending college, and other information. The difference between the COA and the EFC determines the eligible amount of need-based financial aid an eligible student will be awarded.

The Commission provides recommended statewide cost guidelines for institutions to use in defining the COA. The Department's recommended guidelines use published data from the Colorado Department of Local Affairs, the U.S. Bureau of Labor Statistics, and www.craigslist.com to determine housing costs. Child care costs are based on Colorado data as reported from the National Association of Child Care Resource and Referral Agencies and local inquiries. Food costs are based on U.S. Bureau of Labor Statistics data, specifically the consumer price index for food costs. Book costs are derived using the guidelines from the Trends in College Pricing report from the College Board and information collected from colleges.

While the state guidelines establish a reference point, the U.S. Department of Education allows institution's discretion to determine reasonable cost elements from empirical data,

such as data based on valid student surveys and housing cost norms from a local realty board. Institutions that wish to modify costs must use actual data to support their adjusted budget and file adjusted student budgets with the Department.

III. STAFF ANALYSIS

Each year, Department staff conducts research in each student budget area to ensure that student budgets remain reasonable. The following tables summarize the recommended guidelines for FY 2016-2017, with further information provided below.

Table 1 shows the Student Budget Base for FY2016-2017 for Student Living with Parents, Students Living on Campus, and Students Living off Campus. The student monthly budget base includes monthly costs typically incurred by all students.

Table 1: Student Monthly Budget Base for FY 2016-2017

	Students Living with Parents	Students Living on Campus	Students Living off Campus
Housing	\$215	Actual	\$682
Food	\$274	Actual	\$395
Local Transportation	\$156	\$156	\$156
Personal Expenses	\$134	\$151	\$151
Total	\$779	\$307	\$1,384

Note: the total for students living on campus does not include housing and food costs.
Totals rounded to nearest dollar.

Table 2 lists the guidelines for the annual cost of books and supplies and discretionary costs that apply to certain students:

Table 2: Supplemental Student Budget Expenses for FY2016-2017

	Lower Range		Upper Range
Book & Supplies Per Year	No lower limit		\$1,800*
Child Care if appropriate per month	\$419		\$1,096
Non-local Transportation	Amount determined by Institution		
Computer Allowance	\$500		\$1,800
Medical	\$175	Actual cost at campus health center	\$270

*To be determined at institution and may vary by course of study

The recommended FY 2016-2017 student budget guidelines are described in more detail below.

Housing Costs

Housing budget guidelines vary for three groups of students:

- *On Campus:* For students living in dormitories, the housing budget is the actual room expense that the campus charges students.
- *Off Campus:* The Department's student budget parameters define the housing budget for students living off campus as 50 percent of the average rent and utility costs for a two-bedroom apartment. The FY2015-2016 student budget guideline for housing was \$682. According to the 2015 Apartment and Rental Properties: Vacancy and Rent Surveys rents increased in the Denver Metro area during 2014 and into 2015, but the average rent for a two-bedroom, one-bathroom apartment was \$1,192 in the metro area.

Regionally, outside of metro Denver and Boulder, housing costs remain lower. Utility costs decreased substantially according to the Consumer Price Index (CPI). This is largely tied to the decrease in oil prices, but due to the volatility associated with fuel prices and utilities, the Department does not recommend a decrease in the housing price as a result of a decline in utility prices.

Staff recommends not adjusting the monthly budget of \$682. This amount covers half of the rent for a two-bedroom, one-bathroom apartment (\$596), and leaves \$86 per month to cover utilities. Department staff used internet research and reports from the Colorado Department of Local Affairs to determine that the fair market rate for a two bedroom apartment in metropolitan areas fell within the FY2015-2016 budget guideline.

- *With Parents:* For students living with parents, the FY2015-2016 housing budget guideline was \$215. Due to low inflation and stagnant utility costs, staff maintains the FY 2015-16 budget line for FY2016-2017.

Food Expenses:

Food budgets vary for three groups of students:

- *On Campus:* For students living in dormitories, the food budget guideline is the actual cost of board.
- *Off Campus:* For students living off campus the annualized November 2015 CPI measure from the Bureau of Labor Statistics, food costs away home have increased by 2.7% for the year in 2015. Department staff recommends the FY 2015-2016 budget guideline reflect this increase, or \$395 per month (a \$10 monthly increase).

- *With Parents:* For students who live with their parents, the Department's student budget parameters assume that food is a shared cost. The FY 2015-2016 student budget guideline was set at \$273 per month. According to the November 2015 CPI measure from the Bureau of Labor Statistics, annualized food costs at home have increased by .3% in 2015. As a result of this small, albeit impactful price increase, the FY 2016-17 recommendation is to increase this guideline to \$274.

Local Transportation Expenses Excluding Non-local Transportation:

The student budget parameters define local transportation expenses as the cost of using public transportation or sharing the operation of an automobile. For FY 2015-16, the Department set the monthly local transportation guideline at \$144. Staff recommends increasing the rate for FY 2016-2017 to \$156. The rate allows for daily roundtrip transportation by bus or light rail (RTD rates), which increased substantially in the past year, plus an additional budget for recreation, or the approximate cost of commuting and parking a car at \$6.00 per day.

Personal Expenses:

The student budget parameters define personal expenses to include the costs of laundry, dry cleaning, toiletries, clothing, recreation, and recreational transportation. The annualized Consumer Price Index for commodities minus food and energy commodities (which are accounted for elsewhere in the parameters) decreased slightly as reported in November 2015. Department staff recommends holding the parameters for personal expenses constant as the decrease was small and not proportional across all commodities. The monthly budget is \$134 for students living at home and \$151 for all other students; the main difference between the two groups is that students living at home do not typically incur laundry expenses.

Books and Supplies:

For books and supplies, Department staff recommends the upper budget limit for FY 2016-2017, (Academic Year 2016-17) be set at \$1,800, the same rate as the FY2015-2016 limit. This amount is based on information from the institutions. The average amount spent on text books nationally in FY 2014-2015 varied by sector, but it remains under the \$1,800 proposed parameter. The book allowance at each institution may vary, depending on course of study. The Department will continue not recommending a minimum amount for books in FY 2016-17. There are more affordable options for textbooks than purchasing all books. Students may choose to rent textbooks, borrow, or share.

Child Care:

Child care in Colorado continues to be expensive. The child care budget guideline is based on the range of the actual cost of care per child, per month, from \$419 up to a maximum of \$1,096 per child. A report from the National Association of Child Care Resource and Referral Agencies published the average cost for child care in the United States. The annual average cost in Colorado is \$13,154 for an infant and \$5,022 for a school aged-child. The

recommended range is the monthly average associated with the costs for an infant and for a school-aged child.

Medical Expenses:

For institutions that do not have health insurance or medical care funded through student fees, the Department recommends a maximum health expense guideline of \$270 per month or use the actual costs at campuses that offer campus based insurance plans. The upper limit is based on health insurance data from major health care providers with a data on the web for an older, higher-risk population, and then adding medical care inflation to the cost to capture growth throughout the year. The amount accounts for differences in population traits. The lower limit of \$175 per month is based on the published amount for individual plan for a 20 year old student.

Non-local Transportation:

The Department does not establish this guideline. Institutions may include the cost of plane fare for two round trips home per year for students who live outside a normal travel range.

Computer Allowance:

The cost of attendance regulations in the Federal Higher Education Amendment of 1998 provide for a reasonable allowance for the documented rental or purchase of a personal computer. Institutions may include this cost in their student budget for determining eligibility for state financial aid. With the decrease in hardware prices, few students rent computers. For FY 2016-17 the proposed parameter is price range for computers is \$500 to \$1,800, remaining constant from the previous fiscal year as prices for technology remain constant or decline.

IV. STAFF RECOMMENDATION

Staff recommends that the Commission approves the FY 2016-2017 Student Budget Parameters.

V. STATUTORY AUTHORITY

C.R.S. §23-5-129 Governing boards - performance contract - authorization – operations

(1.5) "Cost of attendance at a nonpublic institution of higher education" means:

(a) Allowances specified by the commission for room and board and miscellaneous expenses, which shall be the same for nonpublic institutions of higher education as for a representative group of comparable state institutions, as determined by the commission

TOPIC: RECOMMEND APPROVAL OF MASTER OF ARTS IN
MULTILINGUAL EDUCATION AT UNIVERSITY OF NORTHERN
COLORADO

PREPARED BY: DR. IAN MACGILLIVRAY, DIRECTOR OF ACADEMIC AFFAIRS

I. SUMMARY

This consent item recommends approval for University of Northern Colorado (UNC) to offer a Master of Arts in Multilingual Education.

II. BACKGROUND

The Colorado Commission on Higher Education's role and responsibility in the review and approval of new academic programs at institutions operating under a performance contract is defined in §23-5-129(6)(b), which states that new and modified program proposals shall be reviewed and approved only on the basis of fit with the institution's statutory role and mission.

III. STAFF ANALYSIS

The following is summarized from UNC's proposal:

The Masters of Art in Multilingual Education (MA in ML Education) program prepares students with advanced knowledge, skills, and cross-cultural competencies to work in the field of second or world/foreign language education. It provides theoretical foundations and explores practical implications in a variety of bilingual or multilingual settings where language plays a crucial role. The program is designed to offer an in-depth understanding of educational linguistics, second language acquisition theories, and research-based instructional practices that enhance second language or world/foreign language education in the classroom. Candidates in the program explore and analyze current theories and research findings related to bilingual or multilingual education as well as apply instructional strategies in the field for effective second or world/foreign language instruction. The program consists of 31 to 33 credits hours providing two emphasis areas to address different local and global needs: 1) TESOL (Teaching English to Speakers of Other Languages) emphasis and a newly proposed World Language Licensure emphasis:

- TESOL Emphasis Area (approved by the College Curriculum Committee): Course of study provides training and qualification for those interested in teaching English as a Foreign Language (EFL) in international settings, or teaching English as a Second Language (ESL) in non K-12 (adult education) domestic settings. The program will offer a master's degree with no license, and a Graduate TESOL Certificate.

- WL Licensure Emphasis Area (in development): Course of study provides licensure in world language education for those interested in teaching a language as a foreign/additional language in both domestic and international settings. The program will offer a master's degree as well as a Colorado "World /Foreign Languages Education K-12 Endorsement" in Chinese, German, French, Japanese, and possibly Russian.

It should be noted that the World Language Licensure emphasis will lead to a Colorado teacher endorsement, which State Board of Education/Colorado Department of Education refer to as Foreign Language (8.10). The teacher endorsement emphasis will require State Board of Education and Colorado Commission on Higher Education approval before UNC can endorse completers for it. This does not affect the Commission's authority to approve the degree itself at this time, which will allow Chinese students who are currently applying for student visas to prove they are applying to a state-approved degree program at UNC. Additional information on this proposed degree, unrelated to fit with statutory role and mission, is in Appendix A.

This degree supports UNC's statutory role and mission, which states:

- (1) There is hereby established a university at Greeley, to be known as the university of northern Colorado. The university shall be a comprehensive baccalaureate and specialized graduate research university with selective admission standards.*
- (2) The university of northern Colorado shall be the primary institution for undergraduate and graduate degree programs for educational personnel preparation in the state of Colorado. The university shall offer master's and doctoral programs primarily in the field of education. The university has the responsibility to offer on a statewide basis, utilizing where possible and appropriate the faculty and facilities of other educational institutions, those graduate-level programs needed by professional educators and education administrators. The Colorado commission on higher education shall include in its funding recommendations an appropriate level of general fund support for those programs.*

Pursuant to Colorado Revised Statutes 23-5-129(6)(b), department staff finds the proposed degree is consistent with the institution's statutory role and mission. University of Northern Colorado Board of Trustees approved the degree at its January 22, 2016 meeting.

IV. STAFF RECOMMENDATIONS

Staff recommends that the Commission approve the Master of Arts in Multilingual Education at University of Northern Colorado.

V. STATUTORY AUTHORITY

C.R.S. §23-5-129 Governing boards - performance contract - authorization – operations

(6) While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education:

(b) Need not consult with nor obtain approval from the Colorado commission on higher education to create, modify, or eliminate academic and vocational programs offered by the institution, so long as such creations, modifications, and eliminations are consistent with the institution's statutory role and mission. Institutions shall submit information to the department demonstrating that the creation or modification of an academic or career and technical education program is consistent with the institution's statutory role and mission. The Colorado commission on higher education shall have the authority to override the creation or modification of an academic or vocational program if the change made by the governing board is inconsistent with the institution's statutory role and mission.

APPENDIX:

Appendix A: Supplemental Information

APPENDIX A: SUPPLEMENTAL INFORMATION

This supplemental information is unrelated to the proposed degree's fit with the institution's statutory role and mission. The following is summarized from the institution's proposal:

EVIDENCE OF NEED

There is an increasing interest from within the country and abroad in programs that prepare university graduates to teach English as a Second or Foreign Language in the non-American K-12 system. In the past several years, American university students/graduates have inquired whether UNC had a Teaching English to Speakers of Other Languages (TESOL) program for those who are not seeking a K-12 teaching license. Students from international settings have shown great interest in getting trained in the area of second/foreign language education or multilingual education. While the newly established Graduate TESOL Certificate program may address the needs to a certain degree, many inquirers from international students as well as UNC ask about the possibility of earning a master's degree. Evidence:

- Every year, the School of Teacher Education receives about 20 to 25 requests for a TESOL program from domestic students: they are interested in joining Peace Corp or teaching English as a Foreign Language (EFL) abroad. Special training is required by more and more countries for those interested in teaching abroad. This link provides some information: <http://traveltips.usatoday.com/requirements-teach-english-abroad-21086.html>
- During visits to Chinese universities by faculty and staff from UNC and the College of Education and Behavioral Sciences (CEBS) in the past two years, one of the questions that was always raised by the Chinese universities is if UNC has a TESOL or second language education-related program as proposed here.
- We have received specific requests from Beijing National University, Capital Normal University, Sun Yat-Sen University, Shandong Normal University, and Qufu Normal University in China for American graduates with ESL/EFL training to teach EFL to their college students. Qufu Normal University, while visiting UNC on May 8th specifically asked about such a master's degree.
- Internationally, many graduates from universities in China, Thailand, Brazil and other countries are interested in getting second/foreign training so that they can teach English as a Foreign Language at the college level in their home countries. A master's degree is typically required. Courses in our newly established TESOL Certificate program could count towards the M.A.

Four universities in China have expressed strong interest for such a program for their graduates:

- Sun Yat-Sen University
- Qufu Normal University
- Capital Normal University
- Ocean University

Students in Thailand have expressed an interest as well:

- Rajabhat University
- Thai students on UNC campus

Students in Brazil are being encouraged to study abroad in order to teach English in their country. Partners for the Americas told UNC faculty that the Brazilian government is funding many students to study abroad and to obtain degrees for teaching English in Brazil. This is a market that UNC has not yet tapped into. Partners for the Americas is prepared to assist UNC in recruiting students. Based on discussions with each partner university, we project enrollment for each cohort in the Fall to be between 20-25 students.

DUPLICATION

In Colorado, though there are various degree or certificate programs that would cover the content of multilingual education, no institution offers a MA in Multilingual Education that focuses on educators who are to work with adult ESL learners in the US or in international settings where English is taught as a foreign language.



BILLS OF INTEREST TO HIGHER EDUCATION

- As of February 5, 2016 -

Bill #	Title	House Sponsors	Senate Sponsors	Summary	Status
HB16-1003	Middle Class College Savings Act	D. Young (D) B. Pettersen (D)	M. Merrifield (D) N. Todd (D)	Would modify the tax deductibility of contributions to a qualified college savings program established by CollegeInvest. The deduction percentage would be based on income tiers, reducing as income increases and eliminated entirely at a federally adjusted gross income of \$500,000.	Introduced In House - Assigned to Education (01/13/2016)
HB16-1014	SOS Business Intelligence Center	A. Williams (D)	J. Tate (R)	Would create the Business Intelligence Center within the Secretary of State's office to streamline public access to data, that is not required to be confidential by law, collected by state agencies. In addition, would establish an advisory board to assist in administering the program. The advisory board would sunset after 10 years.	House Committee on Business Affairs and Labor Refer Amended to Appropriations (01/28/2016)
HB16-1036	History And Culture In Civil Government	J. Salazar (D)	J. Ulibarri (D)	Among other things, would require local school districts to include in their history and civil government instruction on the history, culture, and contributions of the American Indians, Hispanic Americans, African Americans, and Asian Americans. In addition, would establish a gubernatorial appointed commission to make recommendations to the state board of education to ensure Colorado's academic standards accurately reflect this requirement. The Executive Director of DHE, or designee, is among the appointments to this commission.	House Committee on Education Refer Amended to Appropriations (02/01/2016)

HB16-1042	Liquor License Exemption Higher Ed Brewing Program	J. Arndt (D)	J. Sonnenberg (R)	To address new programmatic offerings around brewing and distilling, would provide an exemption from certain rules related to alcoholic beverages for institutions of higher education. The exemption only applies if the institution does not offer its manufactured beer for sale and restricts tasters to those of an age of at least 21 years old.	Introduced In Senate - Assigned to Education (02/03/2016)
HB16-1043	JTC Authority To Approve Requests For Waivers	J. Brown (R)	R. Baumgardner (R)	Would allow for deadline waivers for certain projects, makes technical changes, and clarifies the role of the joint technology committee.	Introduced In Senate - Assigned to State, Veterans, & Military Affairs (02/01/2016)
HB16-1048	Expand Business Enterprise Program	D. Primavera (D)	K. Lundberg (R)	Among other things, would eliminate the current exemption for institutions of higher education regarding providing preference to blind vendors for vending concessions.	Introduced In House - Assigned to Business Affairs and Labor (01/13/2016)
HB16-1050	Low-income Parents Ed Child Care	B. Pettersen (D)	M. Merrifield (D)	Would create a task force to address the child care needs of low-income parents of young children as the parents seek to advance their education and, among other things, identifying how barriers can be reduced. Task force membership would include the Executive Director of the Department of Higher Education, or designee.	House Committee on Public Health Care & Human Services Refer Unamended to Appropriations (01/26/2016)
HB16-1063	Mental Hlth Professional Disclosure School Safety	M. Foote (D)		Would grant an exception to the prohibition against disclosure when the mental health professional's client either: (1) makes a direct threat against a school or its occupants; or (2) creates a dangerous environment in a school that may jeopardize safety.	Introduced In House - Assigned to Judiciary (01/13/2016)

HB16-1077	Recreate Statutory Revision Committee	D. Moreno (D)	B. Martinez Humenik (R)	Would recreate a statutory revision committee, staffed by legal services, to examine existing law on an ongoing basis.	House Committee on State, Veterans, & Military Affairs Refer Amended to Appropriations (01/20/2016)
HB16-1082	Change Name Area Vocational Schools	A. Garnett (D), Y. Willett (R)	N. Todd (D)	Would change the name of “area vocational schools” to “area technical colleges” and add one representative from an area technical college to both the Concurrent Enrollment Advisory Board and the Colorado Workforce Development Council.	House Committee on Education Refer Unamended to House Committee of the Whole (02/03/2016)
HB16-1083	Western State Colorado University Role And Mission	M. Hamner (D), J. Brown (R)	K. Grantham (R), K. Donovan (D)	Would modify the role and mission for Western State Colorado University to “selective” from “moderately selective.”	Introduced In House - Assigned to Education (01/19/2016)
HB16-1100	Define Tuition Status Unaccompanied Homeless Youth	B. Pettersen (D), D. Esgar (D)		Would provide avenues for unaccompanied homeless youth to establish residency for tuition purposes.	Introduced In House - Assigned to Education (01/19/2016)
HB16-1116	Public Forum On Micro-credentialing	R. Fields (D)		Would require the Colorado Community College System to hold a public forum on micro-credentialing and provide recommendations to the joint Education Committees by January 1, 2017.	Introduced In House - Assigned to Education (01/20/2016)
HB16-1125	Aligning Definition Of Veteran With Federal Law	C. Roupe (R)	R. Baumgardner (R)	Would modify the State’s definition of a veteran to align with the current federal definition of a veteran, thus also impacting tuition classification for these individuals.	House Committee on State, Veterans, & Military Affairs Refer Amended to House Committee of the Whole (02/03/2016)

HB16-1128	Extending Concurrent Enrollment Statewide	P. Lundeen (R)		Would make significant changes to Concurrent Enrollment. Among other things, would (1) allow all students to participate at any Colorado public institution of higher education, and encouraging private institutions to participate; (2) require local education providers to inform students and families of concurrent enrollment opportunities at least twice per school year; and (3) modify the payment structure for concurrent enrollment and requiring payment for tuition at rate that is equal to 5% per credit hour of the LEP's per pupil revenue.	Introduced In House - Assigned to Education (01/20/2016)
HB16-1130	Changes To CDE Reports	K. Priola (R)	M. Johnston (D)	Would make modifications to reports required of the Department of Education: (1) change the reporting date, from February 15 to April 15, for policy recommendations for reducing student dropout rates and increasing student graduation and completion rates; (2) repeal the requirement to report on character education programs; and (3) repeal the requirement to study and prepare an annual report concerning concurrent enrollment options available in the public school system.	House Third Reading Passed - No Amendments (02/04/2016)
HB16-1144	Transparency College Courses High School Students	J. Becker (R), B. Pettersen (D)		Would require a public high school student's education provider to notify the student and parent if the student enrolls in a postsecondary course that does not meet the statutory requirements for concurrent enrollment programs. The notice must also include what postsecondary courses available to the student at low or no cost that do meet the concurrent enrollment requirements; are credit-bearing; and, applicable toward earning a degree or certificate at an institution of higher education.	Introduced In House - Assigned to Education (01/21/2016)
HB16-1177	Sunset Council Of Higher Education Representatives	J. Buckner (D), B. Pettersen (D)	O. Hill (R)	Would indefinitely extend the General Education Council, initially established to create a statewide articulation matrix system of common course numbering. While their initial charge has been completed, their role in continuing and expanding on this discussion is critical.	Introduced In House - Assigned to Education (02/01/2016)

<u>HB16-1178</u>	In-state Tuition American Indian Tribes Ties To CO	<u>J. Salazar (D)</u>	<u>J. Ulibarri (D)</u>	Would provide in-state tuition to students who are a member of a federally recognized American Indian tribe with historical ties to Colorado.	Introduced In House - Assigned to Education + Appropriations (02/01/2016)
<u>SB16-020</u>	Clarify Calculation Issues Of Auto Capital Funding	<u>K. Becker (D)</u>	<u>J. Sonnenberg (R)</u>	Would make technical changes capital construction statutes and clarify the reporting responsibilities of the state institutions of higher education and the department of higher education, streamlining the reporting process from institutions to the Department.	House Committee on Finance Refer Unamended to House Committee of the Whole (02/04/2016)
<u>SB16-024</u>	Private Student Loan Cap Act	<u>D. Moreno (D)</u>	<u>M. Jones (D)</u>	Would establish a cap, of no more two percentage points over the federal rate, on the annual interest rate a nongovernmental lender may charge for a student loan.	Introduced In Senate - Assigned to State, Veterans, & Military Affairs (01/13/2016)
<u>SB16-037</u>	Public Access Digitally Stored Data Under CORA	<u>D. Pabon (D)</u>	<u>J. Kefalas (D)</u>	Would significant expand the Colorado Open records Act (CORA) requiring records, or portions or records, to be provided in a nonproprietary format specified by the requestor. Aside from potentially impacting data privacy laws, it would be a significant fiscal impact to the Department's operating budget - \$256,116 for Fiscal year 2016-17 and \$190,384 in Fiscal year 2017-18.	Introduced In Senate - Assigned to State, Veterans, & Military Affairs (01/13/2016)
<u>SB16-043</u>	Student Loans Consumer Protections	<u>D. Kagan (D)</u>	<u>M. Carroll (D)</u>	Would prohibit private education lenders from offering gifts in exchange for an advantage or revenue sharing, or imposing fees or penalties for early repayment. In addition, requires (1) certain disclosures around deals made for marketing; and (2) additional information to the borrower regarding the interest rate, rate adjustments, financing charges and penalties, payment options, an estimate of the total to be repaid, the terms of the loan, and the opportunity for federal loans.	Introduced In Senate - Assigned to State, Veterans, & Military Affairs (01/19/2016)

<u>SB16-045</u>	Add To Financial Literary Standards For Schools	<u>B. Pettersen (D)</u>	<u>N. Todd (D)</u>	Would add “student loan debt” and “retirement planning” into the financial literacy curriculum.	Introduced In Senate - Assigned to Education (01/19/2016)
<u>SB16-073</u>	State Auditor Auth Audit State Hist Fund Distrib	<u>P. Lawrence (R)</u>	<u>K. Grantham (R)</u>	Would provide the state auditor authority to conduct postaudits and performance audits related to limited gaming fund dollars transferred to the state historical fund.	Introduced In Senate - Assigned to Finance (01/19/2016)
<u>SB16-077</u>	Employment First For Persons With Disabilities	J. Ginal (D), D. Primavera (D)	<u>J. Kefalas (D)</u>	Would create a multi-agency approach to increasing employment opportunities for persons with disabilities by directing several departments, including the Department of Higher Education, to develop a state policy for this purpose.	Introduced In Senate - Assigned to Finance (01/19/2016)
<u>SB16-079</u>	Align Secondary and Postsecondary CTE Initiatives	<u>D. Young (D)</u>	<u>N. Todd (D)</u>	Among other things, would the alignment of a student’s individual and academic plans with a plan of study that reflects their career goal. The Department of Education would be required to (1) align its postsecondary and workforce initiatives with plans of study created by the community colleges and (2) work with the community college system to create and make available informational materials that explain the alignment.	Introduced In Senate - Assigned to Education (01/19/2016)
<u>SB16-104</u>	Incentives To Build Number Of Rural Teachers	<u>J. Becker (R)</u>	<u>N. Todd (D)</u>	Would create infrastructure and provide incentives to increase the recruitment and retention of teachers in rural school districts of Colorado by (1) establishing rural education centers housed in institutions of higher education in rural districts; (2) providing stipends to offset tuition costs for certain educator preparation programs; (3) establishing teacher cadet programs in identified rural districts; and (2) providing funds to teachers to offset costs of becoming either a national board certified or qualified for concurrent enrollment.	Introduced In Senate - Assigned to Education (01/29/2016)

<u>SB16-121</u>	Higher Education Tuition Pledged for Bonding	<u>A. Garnett (D)</u>	<u>J. Tate (R)</u>	Would increase, from 10% to 100%, the amount an institution of higher education is allowed to pledge for certain bond obligations.	Introduced In Senate - Assigned to Finance (02/01/2016)
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TOPIC: TUITION POLICY

PREPARED BY: TODD HAGGERTY, LEAD FINANCE ANALYST

I. SUMMARY

This discussion item presents recommended policy revisions to Commission Policy Section VI, Part C “Tuition and Fees.”

Please note that the Commission will receive the tuition policy as discussion items for February and March. Final action will likely take place at the April meeting. The revisions are based on the CCHE and Governor’s tuition policy proposal that is being considered by the 2016 General Assembly. These proposed CCHE policy revisions assumes the General Assembly will concur with the proposal. If the General Assembly does not concur with the proposal and takes a different approach, the tuition policy will need to be adjusted accordingly.

II. BACKGROUND

HB 14-1319 directed the Colorado Commission on Higher Education (the Commission, CCHE) to submit to the General Assembly by November 1, 2015, new tuition policies that ensure both accessible and affordable higher education for Colorado residents, while reflecting the level of state funding for institutions, and the need of each institution to enhance its financial position and sustainability. In addition, pursuant to statute, for fiscal years beginning on or after July 1, 2016, the Commission shall establish tuition policies based on institutional role and mission, and the governing boards shall set tuition consistent with said policies.

At the October 29, 2015, Commission meeting, CCHE adopted annual process and methodology for setting tuition increase limits, including the tuition increase limit for fiscal year 2016-17, which is:

- If the state General Fund appropriation is flat or falls below the level appropriated in FY 2015-16 (\$672 million), there will be no restrictions on tuition levels set by governing boards.
- If the state General Fund appropriation increases above the level appropriated for FY 2015-16, the tuition increase limit on resident undergraduate tuition is dependent upon the level of state investment. For example, a state General Fund increase of 5 percent will result in a CCHE requested tuition increase limit of 6 percent.
- Because all state general funds are allocated through the higher education allocation funding formula, some governing boards may receive an allocation that is less than the overall percentage growth for higher education. Those governing boards receiving less than the overall percentage growth may increase tuition by one percentage point higher

than the tuition recommendation limit (e.g., if the overall increase is 5 percent with a tuition increase limit of 6 percent; a governing board receiving a general fund increase of less than 5 percent would be able to increase tuition up to 7 percent.

- Governing boards will have the ability to request flexibility above CCHE tuition increase limit through a Tuition Accountability Plan.

This discussion item represents the staff recommended changes to Commission policies to clearly outline the Commission's role and processes and procedures for establishing the tuition increase limit and governing board request for additional flexibility.

The Chief Financial Officers discussed and provided feedback on the proposed changes at their December and January meetings. The Fiscal Affairs and Audit Committee of the Commission reviewed the proposal on January 22, 2016. Also, please note that in addition to the February meeting the Commission will have the tuition policy as discussion item for March. Final action will likely take place at the April meeting. Please see the following Commission dates for more information:

- February 5, 2016: CCHE, Tuition Policy Discussion Item
- February 19, 2016: Fiscal Affairs and Audit Committee
- March 4, 2016: CCHE, Tuition Policy Discussion Item
- March 18, 2016: Fiscal Affairs and Audit Committee
- April 1, 2016: CCHE, Tuition Policy Action Item
- May 6, 2016: CCHE, Tuition Policy Action Item (If necessary)

III. STAFF ANALYSIS

The proposed changes to Commission Policy Section VI, Part C "Tuition and Fees" are as follows:

Section 1.1 General Description and Intent

Strikes statutory references set to sunset at the end of the current fiscal year and adds language consistent with the Commission's guiding values and framework for tuition policy on items to be considered when governing boards are setting tuition and fee rates.

Section 1.50 Definition of Key Terms

Adds a definition for "Tuition Policies."

Section 2.1 Tuition Policy

Expresses that state investment levels are at the core of the Commission's tuition policy. Also, states that for each fiscal year, the Commission will establish a tuition increase limit, if applicable, for resident undergraduate students and that Governing boards shall have the authority to raise tuition rates for resident undergraduate students within specified tuition increase limits, if applicable.

Finally, includes language indicating the Commission shall include the tuition increase limit in the annual budget request and amend policies accordingly.

Section 2.2 Statutory Authority

Specifies the Commission's statutory authority for tuition policy.

Section 2.3 Tuition Increase Limit for Fiscal Year (FY) 2016-17

Expresses the tuition policy limit (full flexibility) for FY 2016-17 that the Commission adopted on October 29, 2015.

2.4 Governing Board Flexibility

Describes the process for governing boards to request flexibility in any given year from the Commission's tuition increase limits.

6.0 Tuition and Fee Appropriation Over Expenditure

Eliminates this section as it relates to the appropriation of tuition.

IV. STAFF RECOMMENDATIONS

This is a discussion item only; no formal action is required by the Commission.

V. STATUTORY AUTHORITY

C.R.S. § 23-1-108(12)(b): For Fiscal years beginning on or after July 1, 2016, the Commission shall establish tuition policies based on institutional role and mission, and the governing boards shall set tuition consistent with said policies.

STAFF NOTE: The following proposed revisions are based on the CCHE and Governor's tuition policy proposal that is being considered by the 2016 General Assembly. These proposed CCHE policy revisions assumes the General Assembly will concur with the proposal. If the General Assembly does not concur with the proposal and takes a different approach, the tuition policy will need to be adjusted accordingly.

SECTION VI

PART C TUITION AND FEES

1.1 General Description and Intent

Tuition and fees, along with state support, provide financial resources to the institutions of higher education to conduct academic programs and to support a complete and comprehensive learning environment for students. Tuition and fees represent a portion of a student's cost of attendance and are used to provide goods and services to students.

Governing boards have the responsibility and authority for the financial management of their institutions. A major component of sound financial management is the setting of tuition and fees, including refund policies. Since institutions have unique roles and missions and differing student needs, governing boards must consider a number of factors when setting tuition and fees, and when establishing a refund policy. The Colorado Commission on Higher Education (the Commission) has responsibility to exercise oversight to ensure that educational quality and student access are maintained consistent with the role and mission of each institution.

It is the intent of the Commission that the following will be considered when Governing Boards are setting tuition and fee rates:

- Be done in an open and transparent manner, **including providing opportunities for student input.**
- **Promote clarity, simplicity and predictability for students, families and public institutions of higher education.**
- Be consistent with the goals of **the Colorado Commission on Higher Education's Master Plan** ~~Senate Bill 10-003 (S.B. 10-003)~~, and strive to maintain access and affordability for resident students.
- **Reflect the need of each institution to enhance the quality of educational programs and offerings, strengthen the financial position of the institution and support institutional strategic plans and goals.**

1.50 Definition of Key Terms

- Academic Course: For purposes of this policy, includes all instruction, including, but not limited to: academic, vocational, occupational, technical, music, and physical education courses.
- Academic Facilities Construction: Includes buildings and site improvements, or specific space within a multi-use building (including utilities and transportation infrastructure) as defined in C.R.S. 24-75-301. The determination of whether it is an academic facility or space shall be 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 institution and may include, but not be limited to, space dedicated to instructional, student services, or administration. If a multi-purpose building, the space determination shall be based on the primary usage of the space during the regular academic year.
- Auxiliary Facility: As defined in C.R.S. 23-5-101.5 (2) (a).
- Fees: 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 a facility fee is approved; intercollegiate and intramural athletics; student health services; technology; mass transit; parking; and bond payments for which fees have been pledged.
- Institution of Higher Education: Means any state-supported institution of higher education in Colorado and the Auraria Higher Education Center. For purposes of this section, does not include local district junior colleges or the area vocational schools.
- Tuition Policies: Means an annual tuition rate increase limit, or cap, (including no limit or cap) established by CCHE on resident undergraduate tuition rate increases.

2.1 Tuition Policy

Tuition increases are a function of higher education costs relative to an institution's ability to generate dollars (either General Fund or tuition) to cover those costs. Because state appropriations are the key incentive to keeping tuition low, the condition of the state general fund and state investment levels in higher education are at the core of the Commission's tuition policy.

For each fiscal year, the Commission will establish a tuition increase limit for resident undergraduate students. In establishing the tuition increase limit, the Commission, in consultation with the governing boards, will examine:

- The condition of the state general fund and state investment levels in higher education;
- Fixed costs institutions must meet in order to maintain and enhance the academic programs and offerings, and
- Any additional information deemed appropriate by the Commission.

Governing boards shall have the authority to raise tuition rates for resident undergraduate students within specified tuition increase limits, if applicable. Tuition rates for nonresident students and resident graduate students are not subject to the provisions of this section.

The Commission shall include the tuition increase limit in the annual budget request and amend section 2.3 of this section accordingly.

2.2 Statutory Authority

C.R.S. § 23-1-108(12)(b): For Fiscal years beginning on or after July 1, 2016, the Commission shall establish tuition policies based on institutional role and mission, and the governing boards shall set tuition consistent with said policies.

2.3 Tuition Increase Limit for Fiscal Year (FY) 2016-17:

For FY 2016-17, the tuition policy recommendation is as follows:

- If the state General Fund appropriation is flat or falls below the level appropriated in FY 2015-16 (\$672 million), there will be no restrictions on tuition levels set by governing boards.
- If the state General Fund appropriation increases above the level appropriated for FY 2015-16, the tuition increase limit on resident undergraduate tuition is dependent upon the level of state investment indicated in the following table.
- Because all state general funds are allocated through the higher education allocation funding formula, some governing boards may receive an allocation that is less than the overall percentage change for higher education. Those governing boards receiving less than the overall percentage change may increase tuition by one percentage point higher than the tuition recommendation limit (e.g., if the overall increase is 5 percent with a tuition increase limit of 6 percent; a governing board receiving a general fund increase of less than 5 percent would be able to increase tuition up to 7 percent).

Governing Board Increase (\$)	Total Higher Education General Fund Increase (\$)	Potential Tuition Increase Range
-	-	<10%
9,143,675	11,676,808	8% to 9%
18,287,350	23,353,616	7% to 8%
27,431,026	35,030,425	6% to 7%
36,574,701	46,707,233	5% to 6%
45,718,376	58,384,041	4% to 5%
54,862,051	70,060,849	3% to 4%
56,601,443	72,280,042	3% to 4%

Note: the Total Higher Education General Fund Increase represents the increase for the 10 governing boards and other higher education costs that must be factored in, according to statute. This includes the same overall percentage increase in funding which must be added to Local District Junior Colleges, Area Vocational Schools, plus the necessary calibration for Need Based Financial Aid.

2.4 Governing Board Flexibility

Governing boards have the ability to request flexibility in any given year from the Commission's tuition increase limits. A governing board that seeks to increase undergraduate, resident tuition by more than the percentages allowed in subsection (2.3) of this section shall submit to the Commission a tuition accountability plan in accordance with timelines adopted by the Commission. The tuition accountability plan shall specify:

- (a) The amount of the increase in undergraduate, resident tuition that the governing board is requesting;
- (b) Price and tuition strategies including substantiated business case for the increase above the limit;
- (c) A demonstration of how the governing board will work to protect resident low and middle income students;
- (d) How tuition increases will help the institution meet the Commission's Master Plan Goals; and
- (e) Any additional information requested by the Commission

The Commission shall review each tuition accountability plan received and, within ninety days, act on the governing board's request. If a request is not approved, the governing board may submit an alternative tuition accountability plan for the Commission's consideration.

- 2.5 In times of emergency, certain students (including reserve military units, individuals with specialized skills, or firefighters) are called to provide services to the country.

When the call for service or national emergency is issued, it is often necessary for students to interrupt their coursework in mid-semester without advance notice. Public two-year and four-year institutions' policies should explicitly recognize that normal withdrawal and refund policies may not be appropriate and make provisions for individuals who leave the institution mid-semester to respond to a state or national emergency, including:

- Institutions' tuition policies should permit individuals to withdraw from the course without a grade or receive an incomplete with an opportunity to complete the course work at a later time and refunds should be made on a pro-rated basis for tuition paid by reservists called to active status during times of national emergency.
- Institutions may offer these individuals the option of crediting the current term's tuition to a future semester's tuition charges.
- Institutions shall waive any fee penalty related to breaking the room and board contract for reservists who are called to active status during a national or state emergency.
- In addition, an institution shall offer a pro-rated refund of fees paid for room and board based on the date that the individual left the residence hall.
- Institutions shall adopt policy language that ensures that individuals who are unable to complete a course due to a call to active status under a state or national emergency have a choice either
- The refund and grading policies should recognize that normal withdrawal procedures such as standard withdrawal timetables may not apply.

2.6 Institutions will not be penalized financially and state support funding will not be reduced for interrupted enrollment and will be allowed to include in-state students who are called to active duty in the FTE report during the semester they are called to active duty.

3.1 Student Fee Policy

C.R.S. 23-1-105.5(1) tasks the Commission to “adopt policies concerning the collection and use of student fees by the governing boards of the state institutions of higher education, as defined in 23-5-119.5 C.R.S. The policies may address, but need not be limited to, the purposes for student fees, categories of student fees, the distinctions between tuition revenue and student fee revenue, accounting for student fee revenue, student fee fund balances, the minimum level of student involvement in the processes for establishing, reviewing, and changing the amount of, and discontinuing student fees...”

In accordance with C.R.S. 23-5-119.5(3), student fees and the use of student fee revenues should provide benefit to students consistent with the stated purpose of the fee by covering related costs including, but not limited, to:

- The construction, maintenance, furnishing, and equipping of buildings and infrastructure;
- Specific courses or programs that benefit the students who choose to enroll in the course or program;
- Student-centered facilities, services, or activities such as student centers, recreation facilities, technology, parking lots, child care, health clinics, mandatory insurance, student government, and other student organizations or activities; and
- Registration costs, costs for student orientation and graduation, and those incurred to communicate with students and their family.

Student fees should be used to support and enhance the overall student experience. Student fees and the use of student fee revenue may benefit students both directly and indirectly. For example, given capital construction timelines some students currently attending an institution may not benefit as directly from fees for capital improvements, however, up-to-date facilities enhance and support the overall student experience and ultimately increase the value of the degree conferred. Likewise, a student may not take advantage of all the programs funded through specific fees, but these fees benefit the student body as a whole.

House Bill 11-1301 made significant changes to State statutes regulating fee policy. Part of the intent of the legislation was to provide greater flexibility at the governing board level to determine fee policy while protecting opportunities for student input and allowing for greater transparency and disclosure. Commission fee policy is consistent with this legislative intent.

3.1 **Governing Board Duties**

- 3.1.1 Each governing board shall adopt for each institution it governs an Institutional Plan for Student Fees within the requirements outlined in Section 3.02 below.
- 3.1.2 Each institution of higher education, including the Auraria Higher Education Center, shall give at least a thirty-day notice to students of any fee assessment or increase. At a minimum, such notice shall specify:
 - The amount of the new fee or fee increase;
 - The reason for the fee assessment or increase;

- The purpose for which the institution will use revenues received from the fee assessment or increase;
 - Whether the fee assessment or increase is temporary or permanent and, if temporary, the repeal date for the fee assessment or increase; and
 - Any additional requirements as outlined in the institution’s student fee plan.
- 3.1.3 “Each governing board shall annually review the institutional plan for student fees and approve any new fees or changes to existing fees.
- 3.1.4 Each governing board shall establish appropriate methods for receiving meaningful student input that consider the unique student-body characteristics of its institution, necessary to establish and set student fees and fee rates. The established level of student input for all fees shall be listed in the Institutional Plan for Student Fees as outlined in section 3.02.
- 3.1.5 For all Four-Year Institutions - The administration of each institution, in consultation with student representatives, shall establish a fee policy for such institution. Such policy shall be subject to the modification and approval of the governing board of the institution, in accordance with the requirements of the Institutional Plan for Student Fees as outlined in section 3.02.
- 3.1.6 For all Colorado Community College System Institutions - The State Board for Community Colleges and Occupational Education shall meet with the Student Advisory Council, established in C.R.S. 23-60-104, to establish a fee policy for all institutions under its control. Such policy shall be subject to the modification and approval of the board, in accordance with the requirements of the Institutional Plan for Student Fees as outlined in section 3.02.
- 3.1.7 For Institutions Located at the Auraria Campus - The administration of the Auraria Higher Education Center and the Student Advisory Council to the Auraria Board (SACAB) shall establish a fee policy for the institutions located at the Auraria Campus. Such policy shall be for all fees assessed by the Auraria Higher Education Center and is in addition to the policy each institution will have with its respective governing board. The policy shall be consistent with the requirements of section 3.06 and C.R.S. 23-70-107 relating to student fees assessed by the Auraria Board. Such policy shall be subject to the modification and approval of the board, in accordance with the requirements of the Institutional Plan for Student Fees as outlined in section 3.02.
- 3.1.8 The student body of the institution, through its duly elected student government may institute rules and processes for assessing student input, including referenda and student government resolutions. No new fee, fee increase, or fee extension that is defeated by a vote of the student body may be resubmitted for a student vote until the following regularly scheduled student government election.

3.2 Institutional Plan for Student Fees:

All fees are subject to the requirements of C.R.S. 23-5-119.5 and section 3.02 of this policy. Governing boards must ensure the opportunity for student involvement in the development and subsequent revisions to the applicable institutional plans for student fees. A governing board shall review its institutional fee plans annually.

Institutional fee plans shall be publicly available on the individual institution's website.

A current and accurate copy of each institution's Institutional Plan for Student Fees and any revisions to the plan must be filed with the Department of Higher Education (DHE) by September 1st of each year with the Tuition and Fee Survey outlined in section 5.00.

Institutional Plans for Student Fees are to contain information, guidance, policies, and procedures with regards to all fees assessed at the institution. Each Institutional Plan for Student Fees shall include, but not be limited to, the following components:

- Definition and categorization of all student fees based on categories deemed relevant by the governing board. Description of the purposes for each fee established at the institution(s).
- Established procedures and the method and level of student participation in establishing, setting, reviewing, modifying, and discontinuing student fees and fee rates at the institution.
- An established complaint resolution process for disputes on the imposition or amount of a student fee.”
- A time frame for budget approval and board action on tuition and fees.
- Language that specifies whether to allow for the use of student fees or tuition for academic facilities construction and describes the method and level of student involvement in any such decision. Established procedures for any student vote or referendum relating to student fees.
- A list and description of any administrative costs charged to students or student groups for the administration of the student fee. These costs may vary by type or category of fee.
- Established procedures for the institutional review of fee fund balances. The institution shall determine the threshold at which such reviews are required and may utilize different thresholds for different fees.

- A clear and transparent process for the regular review and evaluation of: fee rate assessments, fee expenditures, and institution fee policies. The institution may determine whether such reviews are to be conducted by institutional administration, independent internal entities (e.g., departments and offices review each other), or independent, external entities. The processes may vary by type or category of fee.

3.3 Disclosure Requirements:

Each institution of higher education shall separately disclose the fees charged to the students by their respective governing board for the institution, by the institution, or by any auxiliary facility associated with the institution in its student billing statements.

This requirement shall apply to fees; however, such itemization shall not be required for any academic and instructional fee that is specifically listed in the course catalogue.

- If a governing board uses revenues from a general student fee for the repayment of bonds or other debt obligations, the governing board shall specify the portion of the general student fee that is actually applied to repayment of the bonds or other debt obligations.

3.3.1 Each institution shall provide a tuition calculator on its website to enable prospective students, current students, and the general public to accurately assess the cost of attendance at the institution.

Each institution shall make information available to students and the general public on its website containing a description of all current fees, including the purposes for which the institution uses revenues from the fees.

3.3.3 Each billing statement shall conspicuously identify any optional fees or charges that are automatically assessed unless the student chooses not to pay the fee through a negative check off.

- A form or method to elect not to pay the optional fees shall accompany the billing statements.

Any optional fees or charges that are automatically assessed unless the student chooses not to pay, except for health care fees, shall be refunded by the institution or organization that receives the fee, upon request, to any student who paid the fee. The refund shall be available during the entire semester in which the student paid the fee.

3.04 Fees Related to Bonds Issued on Behalf of Auxiliary Facilities

All governing boards shall follow the procedures outlined in statute regarding fees related to bonds issued on behalf of auxiliary facilities. Procedures for fees related to bonds issued on behalf of auxiliary facilities are outlined in C.R.S. 23-5-119.5

4.00 Use of Tuition and Fees for Academic Facilities Construction

Student fees or tuition may be used for academic facilities construction if approved for use in the institutional plan for student fees as outlined in section 3.02.

5.00 Reporting Requirements

5.1 By September 1 of each year, each governing board is required to submit to the DHE a report detailing:

- Tuition rates by credit hour for all differentials assessed to undergraduate, graduate, and professional degree and non-degree seeking students.
- Fee rates by credit hour for all fees assessed to undergraduate, graduate, and professional degree and non-degree seeking students.
- Current and accurate copies of all current Institutional Plans for Student Fees.
- Reporting and explanation of any changes in current student fee rates and all new student fees as including the date of governing board review and approval.
- Other information as may be required by the DHE.

5.2 Tuition and Fee Report

By January 15 of each year, the DHE will submit to the Commission for approval and distribution to the Education Committees of the House of Representatives and the Senate of the Colorado General Assembly a report summarizing:

- Tuition decisions made by each Governing Board and their consistency with Commission policy and legislative intent.
- Fee decisions made by each Governing Board and their consistency with Commission policy.

- Significant changes or trends in tuition and fees throughout the state.

6.00 — ~~Tuition and Fee Appropriation Over Expenditure~~

~~Anytime a governing board exceeds its appropriation for tuition set by the General Assembly in the long bill, the Department of Higher Education will review the reasons for the increase in revenue, in order to determine that tuition policies have been followed, and whether a supplemental appropriation for spending authority should be requested. Governing boards will notify the Department of any projected over expenditure in tuition spending authority following the deadlines established in the budget calendar. If the over expenditure is due to increases in enrollment the governing board may utilize the Enrollment/Tuition and Stipend Contingency line from the annual long bill.~~

~~Pursuant to S.B. 10-003 the requirements of this paragraph 6.00 do not apply from FY 2011-12 through FY 2015-16.~~

TOPIC: POSTSECONDARY AND WORKFORCE READINESS
DESCRIPTION

PREPARED BY: CARL EINHAUS, DIRECTOR OF STUDENT AFFAIRS

I. SUMMARY

In 2009, the State Board of Education and Colorado Commission on Higher Education adopted a description of “postsecondary and workforce readiness” (PWR). C.R.S. 22-7-1008(3)(a) dictates that this description be revisited every six years. Both the Department of Education (CDE) and Colorado Department Higher Education (CDHE) need to approve of any revisions by the end of December.

This item requests approval of a new PWR Description. Three options were presented at the October 29th, 2015 CCHE meeting for discussion. On December 9th, the Colorado Board of Education approved of a description with minor changes. This Board approved description is listed in the Background section below and is presented to CCHE for approval.

II. BACKGROUND

Working with WestEd, a nonprofit, public research and development agency and 2Revolutions, an education design lab that creates and launches “Future of Learning” models, CDE and CDHE conducted two stakeholder convenings to discuss the current PWR Description and guide informed conversations regarding potential revisions. The convenings were held in Denver and took place on June 4th, 2015 and August 27th, 2015. The stakeholders represented included educators and administrators in K-12 and higher education, policymakers, as well as workforce and agency partners.

The current PWR Description follows:

“Postsecondary and workforce readiness” describes the knowledge, skills, and behaviors essential for high school graduates to be prepared enter college and the workforce and to complete in the global economy.

Those in attendance at the convenings sought to update the PWR description and to simplify the wording to make it less “education-ese”. The two convenings resulted in four (4) proposed revised PWR descriptions.

Input regarding the four descriptions, as well as components and phrases of descriptions, were solicited by WestEd via a survey sent to parents, educators, business and industry leaders, community-based and non-profit organizations, and policymakers in September 2015. Two descriptions received the highest votes. However, there were components and phrases which received very high numbers of votes that were not included in either description. As such, a new description was created using the components that received the highest votes. This new description was most favored at the October 2015 CCHE meeting in comparison to the other

two. Feedback from the October CCHE meeting was used to edit the new description. Subsequently, an additional survey was sent to the Colorado community to vote on the three descriptions. The newly created description received the most votes and was presented to the Board of Education meeting in November for discussion, and on December 9th, 2015 for approval. The Board of Education approved the description with minor edits.

The Board of Education approved PWR Description which we are presenting to CCHE for approval follows:

Colorado high school graduates demonstrate the knowledge and skills (competencies) needed to succeed in postsecondary settings and to advance in career pathways as lifelong learners and contributing citizens.

Original Version of the New Description with Board Changes Marked in Red:

~~“In partnership with families, communities, schools, and businesses,~~ Colorado high school graduates demonstrate the **competencies (knowledge and skills)** needed to succeed in postsecondary settings and to advance in ~~economically viable~~ career pathways as lifelong learners and contributing citizens.”

Just as a reminder, here are the other two descriptions which did not receive as many votes as the Board of Education approved description:

- *Description A: In partnership with families, communities, schools, and businesses, Colorado high school graduates demonstrate, through a rich body of evidence, the knowledge and skills needed to succeed in postsecondary settings and the workforce.*
- *Description B: Colorado high school graduates demonstrate the knowledge and skills necessary to enter and advance in economically viable career pathways as lifelong learners and contributing citizens.*

III. STAFF ANALYSIS

Based on the thorough vetting with relevant stakeholders, CDE and CDHE staff are confident that the revised PWR description will be clearer and better reflect what postsecondary and workforce readiness represents.

IV. STAFF RECOMMENDATION

Staff recommends approval of the PWR Description that was approved by the Board of Education.

V. STATUTORY AUTHORITY

C.R.S. 22-7-1008(3)(a) On or before July 1, 2015, and on or before July 1 every six years thereafter, the state board and the commission shall review, negotiate a consensus, and adopt any appropriate revisions to the description of postsecondary and workforce readiness. The state

board and the commission shall ensure that any revisions adopted pursuant to this paragraph (a) meet the requirements for the description of postsecondary and workforce readiness specified in subsection (1) of this section.

TOPIC: PRIOR LEARNING ASSESSMENT: RECOMMENDATIONS FOR PHASE 1, GOAL 1 – ADVANCE PLACEMENT & INTERNATIONAL BACCALAUREATE CUT SCORES FOR GENERAL EDUCATION CREDIT

PREPARED BY: DR. RUSSELL MEYER, INTERIM CHIEF STUDENT SUCCESS & ACADEMIC AFFAIRS OFFICER AND DR. IAN MACGILLIVRAY, DIRECTOR OF ACADEMIC AFFAIRS

I. SUMMARY

This action item contains recommendations of the Constituent Review Team for Phase 1, Goal 1 of the Commission's process for a statewide policy on prior learning assessment. This set of recommendations includes common statewide cut scores on AP and IB exams for awarding general education (GT Pathways) credit. This agenda item was presented for discussion at the Commission's December 3, 2016 meeting and is recommended for approval as an action item for today's meeting.

II. BACKGROUND

The Commission approved a [process for establishing a statewide policy on prior learning assessment](#) (PLA) during its May 8, 2015 meeting.

The main purposes of the policy will be to (1) to ensure that credits awarded for prior learning by one institution are not lost in transfer, and (2) to provide transparent information to students, families and advisors to enhance degree completion.

The process is divided into three main phases of work, each with its own goals and tasks:

- Phase 1: Establish common cut scores for standardized assessments for general education credit;
- Phase 2: Establish cut scores for credit as it applies to the major; and
- Phase 3: Reporting, transcribing, communication and periodic review of goals.

Phase 1, Goal 1 is to establish common cut scores for standardized assessments - such as Advanced Placement (AP), International Baccalaureate (IB), College Level Examination Program (CLEP) and DSST; and follow ACE's recommended amount of military and workforce credit, for purposes of creating transferability among public institutions for credits to be applied toward fulfillment of GT Pathways (general education) curriculum categories. The due date for this phase of the process was December 2015.

While Academic Council, General Education Council, the state public institutions and their faculty, and the CDHE are accomplishing the major work of the Goals, the Commission

recommended a Constituent Review Team (CRT) to provide periodic review of the process and recommendations. The membership of the CRT is in Appendix A.

III. STAFF ANALYSIS

Changes to This Agenda Item since the Commission's December 3, 2015 Meeting

1. **Recommendations, #2** – Where this recommendation gives the example of a student bringing passing scores on multiple history exams, staff clarified (in **bold, underline**):

“Once a GT Pathways content area requirement has been met, any additional credit may be awarded to fulfill other degree requirements, such as general education, elective or major/prerequisite credit. For example, the GT Pathways history requirement is 3 credits. If a student brings passing cut scores on **two different** history exams (such as US History and also World History, which qualifies the student for at least 6 credits), then the student shall receive 3 credits applied towards the GT Pathways history requirement. Any additional credits may be awarded to fulfill other degree requirements, such as general education, elective or major/prerequisite credit.”

This clarification was requested on the part of several Constituent Review Team and General Education Council members. Staff agrees this is a good clarification to make.

2. **Recommendations, A** – Where the Constituent Review Team requested guidance from the Commission on differing amounts of credit from institution to institution for AP and IB scores above the minimum, a note was added to reflect the Commission's feedback at its December 3, 2015 meeting that the institutions of higher education should decide on the amounts of credit for now.
3. **Next Steps, Goals 1 & 3** – The due dates to establish common cut scores for CLEP & DSST (Goal 1) and to define a process for testing out of core courses (Goal 3) were changed to April 1, 2016. Staff and stakeholders agree that delaying these two goals by one month (from the original date of March 2016) is more realistic and will allow sufficient time for faculty and the Constituent Review Team to consider recommendations in March and then make a recommendation to the Commission for its April meeting. The Commission should note that work on these two goals began in December 2015. Webinars to engage faculty were held February 3 & 4, 2016.
4. **Feedback from CU System** – Staff and the Commission acknowledge the concerns expressed by the CU System provost at the Commission's December 3, 2015 meeting and in a January 15, 2016 email to the Commission (see Appendix D). The first concern expressed at the December 3, 2015 meeting was, “...a broad-brush decision of common PLA cut scores minimizes and devalues the different roles and missions of our institutions.” The intent of the Commission's PLA process is not to devalue any

institution's role and mission but to enhance our shared concern that students be given a variety of opportunities to be successful. The second concern was, "...there has been minimal faculty involvement in the current PLA process and that faculty responsibility for program requirements has not been sufficiently acknowledged." Staff encourages institutions' chief academic officers to engage their faculty in these discussions, encourages faculty to participate in the webinars and utilize the resources on the Department's PLA website, and reaffirms its offer to attend, either in person or via webinar/conference call, departmental and other faculty meetings to explain the PLA process and solicit faculty feedback. Dr. Lightner's January 15, 2016 email and attachments contained proposals and concerns (in *italics* below) that are addressed in turn:

- i. Proposal/Concern 1: *In any policy regarding the use of AP in PLA, students must provide evidence of passing an AP course as well as achieving a specified score on the associated AP exam.* Staff maintains that one of the points of a statewide PLA policy is to prevent students from spending time and money on coursework for which they can demonstrate they have already learned the content and competencies. Similarly, this is consistent with the statute that requires each public institution of higher education to grant full course credits to students for the core courses they successfully test out of. Last, requiring students to also pass an AP high school course would negatively affect home-schooled students.
- ii. Proposal/Concern 2: *Each AP course/exam pair being considered for a specific gtPathways category should be reviewed using the GEC process to verify it has the appropriate content and competencies.* Staff maintains that the GT Pathways content criteria and competencies are designed to be sufficiently general that each institution's faculty should decide what its corresponding general education course is for each AP exam. It should also be noted, with the corresponding course, that faculty designation may not be a GT Pathways course because not all general education courses participate in GT Pathways. Though the GT Pathways content criteria and competencies provide minimum expectations for general education courses to be approved for participation, there are a variety of ways a student could potentially complete their entire general education curriculum without ever having taken a GT Pathways course. For instance, students who enter a Colorado institution from out of state and have their general education requirements met, will not have completed any GT Pathways coursework. While GT Pathways is meant to enhance transferability between Colorado institutions, no research has been conducted to show that GT Pathways is a measure of quality control.
- iii. Proposal/Concern 3: *Our next concern is that the research on AP and IB that has been presented to the CCHE by the CDHE is relatively limited... the CDHE material only considered studies done by the College Board, which produces the tests.* The Commission's May 8, 2015 agenda item recommending a process for a statewide PLA policy, which the Commission approved, contained research from other sources besides the College Board. For instance, "the Council for Adult & Experiential

- Learning (CAEL, 2010) analyzed data on 62,475 students at 48 institutions of higher education and concluded "...that PLA students had better academic outcomes, particularly in terms of graduation rates and persistence, than other adult students (these results were confirmed by Hayward and Williams in 2015). Many PLA students also shortened the time required to earn a degree, depending on the number of PLA credits earned" (p. 7)." Also, staff has spoken with and has the reports of both Ohio and Florida that require institutions to accept a 3 on AP exams. Both of those states analyzed their data and concluded there is no harm to students who are given college credit for a 3 on an AP exam. It should also be noted that Ohio State University and Florida State University have the same Carnegie classification as CU Boulder and Colorado State University and students at those institutions are not harmed by a 3 on an AP exam.
- iv. Proposal/Concern 4: *A key concern is whether any single 'test' can effectively judge whether a student has gained the content and competencies of a college course, and specific to the issue before the CCHE, a gtPathways course. AP courses and exams are designed by university faculty and assessment experts to assess students' proficiency in the content and competencies. As noted previously, Colorado institutions regularly accept general education coursework in transfer from out-of-state institutions and those courses are not GT Pathways approved.*
 - v. Proposal/Concern 5: *College courses, because of the range of resources available, are (or should be) a far richer experience than high school courses. Staff maintains that the point of both competency-based education and prior learning assessment is to assess whether or not a student is proficient enough to move on to subsequent coursework. Whether or not they became proficient in the content and competencies by taking a course, serving in the military, or life experience is a moot point. Activity should not be confused with outcome.*
 - vi. Proposal/Concern 6: *The research does not indicate that AP students are disadvantaged in their post-secondary work, however some questions remain unanswered and positive impacts should not be overstated. Staff agrees.*
5. Last, representatives also responded to CU System's proposals/concerns and that response is included in Appendix E: Response to CU System Concerns from the College Board.

General Education - GT Pathways Degree Requirements

The first task in Phase 1, Goal 1 was to establish common cut scores AP and IB exams for credit to be applied toward fulfillment of GT Pathways (general education) requirements.

Since Colorado has a state-approved and guaranteed-to-transfer general education curriculum (GT Pathways), setting common cut scores to fulfill these requirements makes good sense. However, one important point essential for advisors to explain to students, will be that not every

bachelor's degree contains the GT Pathways curriculum. This is often true for engineering, nursing and computer science degrees, which have received waivers from the Commission to be exempt from the GT Pathways core requirement. On its website, the Department has made available a list of those [degrees at institutions that do not contain any or all of the gtPathways general education core](#). The list is intended to be used as an advising tool. Similarly, Colorado

School of Mines, as an engineering institution, is a special case because none of its degrees contain courses that apply as general education or GT Pathways credit. The CRT's recommendation is that Colorado School of Mines award (1) "Free elective" credit for those AP and IB exams that do not fulfill any degree requirements and (2) credit towards major requirements when students meet the cut scores set by faculty for major credit.

The fact that not every bachelor's degree at every institution contains GT Pathways must be communicated to advisors and students because it means that, although a student may qualify for college credit because they passed an AP or IB exam, there may be no corresponding course or requirement to which the credit can apply in the degree program they choose. The good news is that every AA and AS degree, as well as the vast majority of bachelor's degrees at Colorado's public institutions, contains the GT Pathways general education core.

Implementing Phase 1, Goal 1

Staff held five webinars for faculty, divided by content area, in September 2015. The webinars explained the Commission's process, as approved at the May 8, 2015 meeting; the goals of a statewide PLA policy; and, asked faculty if they could agree to "3" as the minimum cut score for AP exams and "4" as the cut score for IB exams for awarding GT Pathways (general education) credit.

Stakeholder groups agreed, to make the workload manageable, the focus would first be on the most common AP and IB exams that students complete (listed in Appendix B). Both the Standard Level (SL) and Higher Level (HL) versions of the IB exams were considered.

Faculty were provided with a [website](#) containing research and resources and took until October 31, 2015 to discuss the process and goals with their departments, at which time institutions were asked to submit their recommendations. Academic or GE Council members were appointed as the representatives to submit their faculty recommendations to the CRT.

The CRT met November 9, 2015 to consider the recommendations collected from the institutions. Four institutions submitted recommendations (MSU Denver, UCB, UCCS and UCD) and one (Colorado School of Mines) met independently with staff. The faculty recommendations submitted to the CRT are summarized in Appendix C.

Recommendations

After careful consideration of all the evidence, the CRT voted unanimously to recommend the Commission approve the following items for Phase 1, Goal 1:

1. The statewide minimum cut score for awarding GT Pathways credit for AP exams shall be 3, and for both the SL and HL versions of the IB exams shall be 4.
2. At least 3 credit hours shall apply first to the appropriate GT Pathways content area requirements until the amount of credit has been met for that GT Pathways content area. In the case of AP science exams, at least 3 credit hours shall apply to the GT-SC2 category (lecture course without laboratory) or, if there is a verified laboratory experience that is discipline-specific to the AP exam or advanced high school course taken, then at least 4 credit hours shall apply to the GT-SC1 category (course with required laboratory). For example, a student seeking biology GT-SC1 credit through the AP Biology exam must have biology laboratory experience specifically, not science laboratory experience in general.

Once a GT Pathways content area requirement has been met, any additional credit may be awarded to fulfill other degree requirements, such as general education, elective or major/prerequisite credit. For example, the GT Pathways history requirement is 3 credits. If a student brings passing cut scores on two different history exams (such as US History and also World History, which qualifies the student for at least 6 credits), then the student shall receive 3 credits applied towards the GT Pathways history requirement. Any additional credits may be awarded to fulfill other degree requirements, such as general education, elective or major/prerequisite credit.

3. Institutions may use their existing processes to determine the amount of credit to award for AP scores of 4 & 5 and IB (both SL & HL) scores of 5, 6 & 7 but they must award at least 3 credits, or at least 4 credits for GT-SC1 (science courses with labs).
4. Credit awarded shall be transcribed as a course satisfying the appropriate GT Pathways category at the institution. When there is no equivalent, the institution shall create a generic transfer equivalency for a course in that GT Pathways content area (i.e., GT-AH1, GT-AH2, and etc.).

Though not part of the recommendation, the CRT requested the Commission provide guidance on the following item that will be considered by faculty and the CRT again in the future:

- A. In the case of transfer, if the credit awarded at the sending institution is more than the amount of credit for the equivalent course at the receiving institution, then the additional credit may be applied as elective credit. For example, the student is awarded 4 credits for PSYC 100 at the sending institution but at the receiving institution PSYC 100 is only 3

credits. The receiving institution shall award 3 credits for its PSYC 100 course and may apply the additional 1 credit to other degree requirements, such as general education, elective or major/prerequisite credit.

At its December 3, 2015 meeting, the Commission recommended to let the institutions of higher education decide this for now, to keep moving forward and complete the other goals, and to ensure that amounts of credit awarded by institutions are clearly communicated to students.

Next Steps

The next steps for Phase I and their timelines are:

Goal 1, continued: Establish common cut scores for CLEP & DSST, and follow ACE's recommended amount of military and workforce credit, for purposes of creating transferability among public institutions for credits to be applied toward fulfillment of gtPathways curriculum categories. (due April 2016. *Note: This was originally due December 2015)

Goal 2: Address transfer of gen ed credit based on Portfolio Assessment. This was originally due March 2016. Department staff recommends delaying this until late 2016.

Goal 3: Each institution defines process for testing out of core courses, per §23-1-125(4), C.R.S. (due April 2016)

Goal 4: Understand what has supported student military/veteran success. This was originally due March 2016. Department staff recommends delaying this until late 2016.

The next two phases are:

Phase 2: Establish cut scores for credit as it applies to the major; and

Phase 3: Reporting, transcribing, communication and periodic review of goals - which includes mechanisms to consistently transcript PLA credit, a reporting model, communication mechanisms, appropriate fees for PLA, and an advisory group to track progress.

IV. STAFF RECOMMENDATIONS

That the Commission approves the Constituent Review Team's recommendations 1-4 above, as regards Advanced Placement and International Baccalaureate cut scores for general education credit, and approve delaying Goals 1 & 3 until its April 2016 meeting and Goals 2 & 4 until late 2016.

V. STATUTORY AUTHORITY

Pertinent parts of the applicable statutes have been **underlined and put in bold** to help identify statutory authority for the policy recommendations herein.

C.R.S. §23-1-108. Duties and powers of the commission with regard to systemwide planning

(7) (a) ...The statewide degree transfer agreements shall include provisions under which state **institutions of higher education shall accept all credit hours of acceptable course work for automatic transfer** from an associate of arts, associate of applied science, or associate of science degree program in another state institution of higher education in Colorado. The commission shall have final authority in resolving transfer disputes.

C.R.S. §23-1-108.5. Duties and powers of the commission with regard to common course numbering system

(5) **All credits earned by a student in any general education course** identified as corresponding with a course included in the course numbering system [gtPathways] **shall be automatically transferable among all higher education institutions** upon transfer and enrollment of the student... **The commission shall adopt such policies and guidelines as may be necessary for the implementation of this section. Each governing board shall modify its existing policies as may be necessary to accept the transfer of these credits.**

C.R.S. §23-1-113.2. Department directive - admission standards for students holding international baccalaureate diplomas

(2) (a) The department shall ensure that each governing board of a state-supported baccalaureate and graduate institution of higher education in the state adopt and implement, for each of the institutions under its control, a policy for the acceptance of first-time freshman students who have successfully completed an international baccalaureate diploma program.

(b) Each governing board shall report the policy adopted and implemented pursuant to paragraph (a) of this subsection (2) to the department and shall make the policy available to the public in an electronic format.

(c) **Each governing board shall set the number of credits the institution may grant to a student who has successfully completed an international baccalaureate diploma program.** Except as otherwise provided in paragraph (d) of this subsection (2), **the number of credits granted by an institution shall be, at a minimum, twenty-four semester credits or their equivalent.** Each governing board **shall identify the specific general education or elective requirements** that the student satisfies by having successfully completed the international baccalaureate diploma program and shall outline the conditions necessary to award the credits.

(d) Each institution may determine the level of student performance necessary to grant the credits, as measured by a student's exam performance in the specific courses constituting the international baccalaureate diploma program. **An institution may only grant less than twenty-four semester credits or their equivalent if the student has received a score of less than four on an exam administered as part of the international baccalaureate diploma program,** in which case the number of semester credits or their equivalent granted by the institution shall be reduced accordingly.

(3) The provisions of this section shall not apply to any institution of higher education that has entered into a performance contract with the commission as an exemplary institution of higher education.

C.R.S. §23-1-125. Commission directive - student bill of rights - degree requirements - implementation of core courses - competency test - prior learning

(1) Student bill of rights. The general assembly hereby finds that students enrolled in public institutions of higher education shall have the following rights:

(a) **Students should be able to complete their associate of arts and associate of science degree programs in no more than sixty credit hours or their baccalaureate programs in no more than one hundred twenty credit hours** unless there are additional degree requirements recognized by the commission;

(b) A student can sign a two-year or four-year graduation agreement that formalizes a plan for that student to obtain a degree in two or four years, unless there are additional degree requirements recognized by the commission;

(c) Students have a right to clear and concise information concerning which courses must be completed successfully to complete their degrees;

(d) **Students have a right to know which courses are transferable among the state public two-year and four-year institutions of higher education;**

(e) **Students, upon completion of core general education courses, regardless of the delivery method, should have those courses satisfy the core course requirements of all Colorado public institutions of higher education;**

(f) **Students have a right to know if courses from one or more public higher education institutions satisfy the students' degree requirements;**

(g) **A student's credit for the completion of the core requirements and core courses** shall not expire for ten years from the date of initial enrollment and **shall be transferrable**...

(3) Core courses. The department, in consultation with each Colorado public institution of higher

education, is directed to outline a plan to implement a core course concept that defines the general education course guidelines for all public institutions of higher education. The core of courses shall be designed to ensure that students demonstrate competency in reading, critical thinking, written communication, mathematics, and technology. The core of courses shall consist of at least thirty credit hours but shall not exceed forty credit hours. Individual institutions of higher education shall conform their own core course requirements with the guidelines developed by the department and shall identify the specific courses that meet the general education course guidelines. Any such guidelines developed by the department shall be submitted to the commission for its approval. In creating and adopting the guidelines, the department and the commission, in collaboration with the public institutions of higher education, may make allowances for baccalaureate programs that have additional degree requirements recognized by the commission. If a statewide matrix of core courses is adopted by the commission, the courses identified by the individual institutions as meeting the general education course guidelines shall be included in the matrix. **The commission shall adopt such policies to ensure that institutions develop the most effective way to implement the transferability of core course [gtPathways] credits.**

(4) Competency testing. On or before July 1, 2010, the commission shall, in consultation with each public institution of higher education, define a process for students to test out of core courses, including specifying use of a national test or the criteria for approving institutionally devised tests. Beginning in the 2010-11 academic year, each public institution of higher education shall grant full course credits to students for the core courses they successfully test out of, free of tuition for those courses.

(4.5) Prior learning. Beginning in the 2013-14 academic year, each public institution of higher education shall adopt and make public a policy or program to determine academic credit for prior learning.

APPENDICES

Appendix A: Constituent Review Team Membership

Appendix B: Most Common Exams Recommended for Cut Score of 3 on AP and 4 on IB

Appendix C: Summary of Recommendations from Faculty

Appendix D: January 15, 2016 E-mail from Dr. Michael Lightner, CU System

Appendix E: Response to CU System Concerns from the College Board

Appendix A: Constituent Review Team Membership

Agreed to at Academic Council – October 13, 2015

1. Academic Council, 2-yr member
 - Diane Hegeman (ACC)
2. Academic Council, 4-yr member
 - Barbara Morris (FLC)
 - Rick Miranda (CSU)
3. General Education Council, 2-yr member
 - Scott Thompson (NJC)
4. General Education Council, 4-yr member
 - John Lanning (UCD)
 - Bernice Harris (MSU Denver)
5. Data Advisory Group, 2-yr member
 - Lee Ann Sappington, Assoc. Dean (Aims)
6. Data Advisory Group, 4-yr member
 - Paula Dickson, Director, Institutional Research and Effectiveness and a member of the PLA committee at UCD (UCD)
7. Commissioner
 - Jeanette Garcia
8. Workforce/Veteran representative
 - Marc Barker (CSU), Military and Veteran Benefits Manager & President, National Association of Veteran Program Administrators
9. Parent representative
 - Stacey Zis, Chair, State Advisory Council for Parent Involvement in Education (SACPIE)
10. Registrar, 2-year
 - Darcy Briggs (ACC, Registrar)
11. Registrar, 4-year
 - Charlie Couch (UNC, research)

Appendix B: Most Common Exams Recommended for Cut Score of 3 on AP and 4 on IB

Advanced Placement Exams

- Biology
- Calculus AB
- Chemistry
- English Language & Composition
- English Literature & Composition
- Psychology
- Spanish
- Statistics
- United States Government & Politics
- United State History
- World History

International Baccalaureate Exams

- Biology, SL & HL
- Chemistry, SL & HL
- Economics, SL & HL
- English A Literature, SL & HL
- English A Language & Literature, SL & HL
- Environmental Systems & Societies SL
- History - Americas, HL
- History – European, SL & HL
- Mathematics, SL & HL
- Mathematics Studies, SL
- Physics, SL & HL
- Psychology, SL & HL
- Spanish B, SL & HL
- Visual Arts, SL & HL

Appendix C: Summary of Recommendations from Faculty

Colorado School of Mines (CSM)

CSM is a special case because none of its degrees contain courses that apply as general education (gtPathways) credit. CDHE's and CSM's recommendation is that CSM award (1) "Free elective" credit for those AP and IB exams that do not fulfill any degree requirements and (2) credit towards major requirements when students meet the cut scores set by CSM faculty for major credit. *Note: This recommendation should probably also apply to those [degrees at other institutions that do not contain any or all of the gtPathways gen ed core](#).

MSU Denver

Written Communication faculty voted to:

- 1) change the minimum cut score to a 4 to grant credit for GT-CO1; and
- 2) not grant credit for GT-CO2 at any score level.

The faculty recommendation is based in part on a position paper from Council of Writing Program Administrators (CWPA) [*see handout: cwpa-statement-for MSU Denver memo.pdf*]. CWPA recommends no credit for freshman writing for AP (pg. 6) or for IB (pg. 8). The recommendation is also based in part on a faculty analysis of AP's Language and Composition and the Literature and Composition exams compared to MSU Denver's curriculum for GT-CO1 courses.

University of Colorado Boulder (UCB)

Faculty are opposed to lowering AP cut scores for gen ed courses from 4 to 3 and believe it will result in more students earning D/F/W's during their first year and will lower the graduation rate.

University of Colorado Colorado Springs (UCCS)

Faculty support accepting a 3 on the AP exams and 4 on the IB exams for gen ed credit.

University of Colorado Denver (UCD)

Faculty support 3 on AP (for AP science exams, transcript verification of science laboratory experience is required to earn GT-SC1 (science with lab) general education credit, otherwise science general education credit is lecture only as gt-SC2 (science without lab) and 4 on IB.

Appendix D: January 15, 2016 E-mail from Dr. Michael Lightner, CU System



To: CCHE Commissioners and CDHE Leadership
From: Dr. Michael Lightner, VP for Academic Affairs, University of Colorado
Date: January 15, 2015
Re: Prior Learning Assessment

A policy setting the requirements for accepting Prior Learning Assessment (PLA) for postsecondary credit is being considered by the CCHE. Specifically, the question of cut scores for AP and IB will be on the February CCHE agenda for second reading. We are concerned that there has been insufficient discussion of this item by the Commission, and are providing additional material for your consideration.

Our initial concern is the equating of an AP exam score to an entire college course. We have prepared a short document providing a reminder of what a college course entails, how it is graded and what it takes to pass. Additionally, there are no studies examining student performance in postsecondary institutions when taking the AP exam without the associated AP course. We propose that: *In any policy regarding the use of AP in PLA, students must provide evidence of passing an AP course as well as achieving a specified score on the associated AP exam.*

When we consider AP courses and their associated exams as equivalent to certain gtPathways course categories there is an inconsistency between the process we require for Colorado higher education institutions and that being proposed in the CCHE AP policy. Currently, when a state institution wants to introduce a new course in a gtPathways category, it is reviewed by faculty, under a process set by the General Education Council (GEC) of CDHE, to verify that it meets the required content and competencies. The proposed CCHE policy only considers the AP exam. We hope that the CCHE will require a pairing of the AP course and AP exam. Given that pairing we propose that: *Each AP course/exam pair being considered for a specific gtPathways category should be reviewed using the GEC process to verify it has the appropriate content and competencies.*

Our next concern is that the research on AP and IB that has been presented to the CCHE by the CDHE is relatively limited. Specifically, the material that the Commission has seen suggests that lowering AP cut scores to a 3 will lead to shorter times to graduation, decreased cost of a degree, increased retention, without any downside risks. Unfortunately, the CDHE material only considered studies done by the College Board, which produces the tests. In contrast, considerable third party research, as well as more detailed research by the College Board itself, results in less certainty about these outcomes. Evidence indicates that students with a 3 on some tests are put at additional risk of failure in subsequent courses. Overall, for AP scores of 3, 4, or 5, students do not complete sooner, and cost of degree is therefore not reduced. We attach a summary of many studies on this, including College Board sources. These studies suggest that careful discussion and consideration should be given to any blanket decisions on AP cut scores.



Finally, Colorado has a rich public higher education “ecosystem.” We usually differentiate our institutions by role and mission, admission requirements, level of research activity, 2-year and 4-year programs, etc. This diverse ecosystem serves the diverse needs of Colorado citizens ranging from a postsecondary trade certificate to a PhD in theoretical physics.

The currently existing PLA system, which meets statutory requirements, has evolved from the principle that the faculty in each institution have the responsibility for determining the requirements for granting credit and earning a degree, including setting the appropriate cut score for specific courses. This system is in place and has been working for decades. The proposed CCHE policy reduces the breadth of our system by overlooking the differentiated role and mission of our institutions and the primary responsibility of faculty in determining the requirements and performance necessary for degree programs.

The Carnegie Classification “Doctoral: Highest Research Activity” institutions are at one extreme in the spectrum of state public higher education. These include the University of Colorado Boulder and Colorado State University, Ft. Collins. Currently, only Boulder is a member of the prestigious Association of American Universities (AAU), the top tier of Highest Research Activity universities. Our top-tier institutions have a highly beneficial differentiated mission and vision within the state and we propose: *The top-tier research institutions in the state be allowed to set their PLA cut scores on a course/disciplinary basis with a focus on student success for the benefit of all citizens in the state.*

We are highly supportive of efforts that we think will be effective in promoting transfer between our institutions and support effective mechanisms focused on student success. We respectfully suggest that the proposed common cut score policy, while straightforward and transparent, is simply not the best approach for improving success for students across the broad spectrum of Colorado’s institutions, and ask that the CCHE seriously considers the changes we propose.



What Characterizes a College Course and How is Performance Assessed?

Prior learning assessment discussions center on whether a student has demonstrated knowledge and experience that is equivalent to that which would be gained by completing a college course. To have this conversation, it is important to understand what is involved in taking a college course and what is required to pass one. College courses differ from high school courses in several important ways and successful completion of a college course requires much more than passing a final exam. A key concern is whether any single 'test' can effectively judge whether a student has gained the content and competencies of a college course, and specific to the issue before the CCHE, a gtPathways course.

While we encourage and support PLA, by reviewing what constitutes a college course at a highly research-intensive institution, we hope to suggest that a PLA assessment should be more than a single 'test'. Specifically, in the case of AP, we suggest that the student must take and pass the AP course and achieve a specified score on the AP exam before being granted college credit.

While courses vary by subject and institution we present an average view of a college undergraduate course. We will consider several styles of courses/pedagogy.

Course Characteristics

The component parts of a course are:

- Individual responsibility
- The syllabus
- The book(s), and/or reading material
- Any required technical infrastructure (library, laboratory, software, museum, special online resources)
- The course website and online material
- The pedagogical style
- The students in the class
- The assessment mechanisms
- The instructor
- Any supporting graders and teaching assistants

Perhaps as important as the many course elements that we will describe below is the expectation that students in college are adults and responsible for their actions. This means that if a student fails to attend class, turn in assignments or performs poorly, the instructor does not check on the student, call their parents, send notes home, etc. Significant resources, as discussed below, are made available to the student, but it is their responsibility to take advantage of them. Colleges and college



courses do not act in loco parentis. Even very good students can be challenged by the degrees of freedom they have on a college campus.

The syllabus, most often approved at various levels in the department, college, and university, describes the goals of the course, the sequence of the material, expected daily/weekly schedule often including reading and homework assignments, assessments and their schedule, the grading scheme, the faculty and teaching assistant information and the course website.

We often associate a course with a textbook, but in many college level courses this is not the case. There may be a number of books that the students purchase and read, and there can be special reading material available, either physically or virtually, through the library. Specific materials may be available online. The simple view of a course being tied to a textbook is often the exception rather than the rule for college courses.

Depending on the course there can be required laboratory equipment – either in a typical lab or for home use. Specialized equipment can be found in music, art, theatre, film, engineering, the sciences, and many other disciplines. Equipment can vary dramatically in its quality, usability, and availability. Online resources include special access to research journals, art and music collections and online monographs. Students may need special software for a course. All these resources are costly and can make a significant difference to the student experience. It is rare that this range of resources is available in a high school.

Essentially all college courses have a website as the hub for course activity. The website contains schedule updates, detailed assignments, examples of expected work, homework solutions (if appropriate), and links to external sites that have been curated by the instructor. Grades are often tracked on the website and the site can contain recorded mini-lectures by the instructor. Most importantly, the site acts as the communication hub for the course in terms of Q&A, student discussions, group work, etc. While we have used the term website, more common today is the use of a learning management system or LMS. The LMS can also track student use, time on particular tasks, and participation in online discussions, quizzes and surveys.

Courses are taught using a variety of pedagogies. There is the traditional large lecture course (which is becoming less common), small seminars, medium size lecture/discussion classes, laboratories, studio courses, project courses, online courses, special topics individualized courses, and many more variations where active learning in multiple forms is added to any of the previous styles. Truly, the range of styles of courses is remarkable and faculty members are constantly trying new techniques to better serve students.

Often overlooked, but truly critical are the students in the class. It is held by many faculty that the particular mix of students in the class makes all the difference. A



class with motivated students, willing to work hard, support each other, engage the material, and challenge the instructor and each other will be exciting for everyone and remembered for years to come. A class with students who are not interested, willing to scrape by with a C-, who don't interact with faculty or other students, or behave poorly all lead to a class that may be remembered for all the wrong reasons. Of course, this negative extreme is rare, but the impact on individual learning of the students in the class is often overlooked or underappreciated.

Finally, we come to those actually teaching the course. In college the instructor typically has a PhD or other terminal degree in the subject being taught. Even if considering a freshman or sophomore course, the instructor has a PhD and is also teaching upper division and graduate classes and typically conducting their own research. This rich background allows the instructor to interact with the students and material in a creative way giving extemporaneous examples that provide breadth and depth for the students. The college course is not rote recitation of fixed material, but an exploration of material modulated by student needs and interest, often impacted by news and discoveries of the day and punctuated by the latest research and thinking in a field. The students also interact with teaching assistants and graders who are typically graduate students with a commitment and devotion to the field but a closer connection to the students' perspective than the faculty.

Course Assessment

Assessment of student learning or progress, takes place in multiple ways. There is the usual in-class exam and written paper, but there is also in-class discussion, group and team projects, short and long form essays, online assignments, exams taken in large or small groups, exams focused on assessing student/class progress in order to modify the pace or focus of the course and those that are used as a defined part of the course grade. One thing that is important to understand is that it is *very rare* for a course grade to be determined by the final exam – and, of course, this is what an AP or IB exam purports to be, when separated from the AP course.

Now, given that we are considering how to determine when a score on a single exam can be judged sufficient to replace an entire college course (*recall that the proposed CCHE policy only considers the AP exam score and does not require the AP course to be taken or passed*), we should consider how college courses are graded and what it takes to pass. First, and foremost, passing a college course, in general, is not possible by 'passing' a final exam. When the grading scheme places sufficient weight on the final it can be possible to pass a college course by getting an *A on the final* and an F on all other work, but this is rare. Notice that a C on the final will not pass even this style of course if the student has not done well enough in other parts of the course.

Let us examine two different types of course and their grading schemes. (We acknowledge that we are simplifying for purposes of discussion).



The large lecture course is prototypically graded based on homework, midterms and a final. A typical breakdown might be homework 10%, midterm 1 25%, midterm 2 25%, final 40%. The question is what determines the letter grade? There are two primary methods; fixed performance requirements, or a curve. In many courses where the material must be mastered for the students to succeed in follow-on courses it is not unusual to see a fixed performance requirement similar to that often used by high schools: A 90-100%, B 80-89%, C 70-79%, D 60-69%, F below 60%. There are obviously variations on this, especially when a +/- grading scheme is used. Nonetheless, it is clear that even getting a perfect score on the final will not result in passing the course if other work is missing. Given this, how can we think a C on an AP or IB exam is equivalent to passing a college course?

The second large lecture course grading scheme starts with the fixed performance requirements but examines the class performance and may adjust the passing mark based on student performance. Indeed, if students perform poorly, material may be reviewed outside of class and a make-up exam offered.

In a small seminar course a prototypical grading scheme might be class discussion 30%, small writing assignments 20%, major writing assignments 25%, final assignment 25%. Again the question of translating this into a grade is key and often a similar 70/80/90% scheme is used. Notice that a student who does not participate in class discussion will not perform well in the course. These types of courses are often taught at the upper division level or to honors classes at the lower division level. The writing assignments will vary, but they are focused on analysis and synthesis and not the regurgitation of characters, events, plots, etc. This type of course can never be effectively replaced by performance on any single prior learning assessment.

Conclusion

This brief review of the characteristics and assessment methods of a college course demonstrates the many differences between a college course and a high school course, even if an AP or IB course. It should drive home several points. First, college is not high school. College courses are not passed by passing a final. College courses, because of the range of resources available, are (or should be) a far richer experience than high school courses.

Taking AP and IB courses is good for students who are up to the challenge. They get a more intense course and a sense of the type of material covered in an introductory college course. However, too often AP and IB are judged to be inherently good. Many faculty members will tell you that they would rather a student master the basics in math, writing, and science rather than push on to something like college material. In engineering, solid skills in high school algebra and trigonometry are much more important than marginal success in AP calculus.



Post-secondary Outcomes for Advanced Placement Students

Jill Taylor
Director of Academic Planning, Programs and Analysis
October 2015

Summary

There is a large body of research on the success of Advanced Placement (AP) students who enroll in post-secondary institutions. Some of it points to better outcomes for students who enter a college or university with AP credit; however, research published by the College Board is among the most frequently cited and this organization has a strong interest in promoting the AP program. This document provides a brief overview of research related to AP and student outcomes. It is not an exhaustive review of the literature on this topic, but it provides a balanced view of the research by referencing College Board studies as well as independent research studies.

The review of the literature reveals varied findings regarding the impact of AP on student outcomes. It has been reported that AP students have higher retention and completion rates and higher GPAs than students who have no AP experience; however, when researchers control for academic ability and socioeconomic characteristics, the results are less conclusive. Also, when better outcomes for AP students are found, the differences are sometimes minimal or significant for only a small number of students (e.g. students with a large number of AP credits). There are also many questions that are largely unanswered, which adds to the lack of certainty about how well AP students perform in college.

Introduction

There is an extensive body of research on the success of Advanced Placement (AP) students who enroll in post-secondary institutions. AP proponents often claim that students who receive AP credit fare better than other students in terms of grade point average, retention, graduation, and time to degree. However, research published by the College Board is among the most frequently cited. This organization has a strong interest in promoting the AP program, as it generates millions in revenue by administering AP exams.

The College Board publications consistently report positive outcomes for AP students. While these studies should not be automatically dismissed, a more inclusive review of the literature offers a less definitive picture of student success. This brief provides an overview of research related to AP and student outcomes. It is not an exhaustive review of the literature on this topic, but it provides a more balanced view of the research by referencing College Board studies as well as independent research studies.

Relationship between AP and GPA

Several studies have found that AP students generally have higher grade point averages than other students. Hargrove et al. (2008) examined college outcomes for AP and non-AP students in Texas public institutions and found that AP students who had completed the course and exam had higher first- and fourth-year GPAs than other students even when controlling for SAT scores and family income. Eimers and Mullen (2003) had similar results from their study of Missouri students. They found that when holding student ability constant, students entering with AP credit had slightly higher first-year GPAs than other students. An analysis of first year GPA of Colorado State University Students (Schneider, 2010) found that across all AP exams, new undergraduates who received a passing AP score (3 or higher, as defined by the College Board) had higher first year GPAs than new students with no AP credit, but this study did not control for student academic ability.

Other studies have not supported the conclusion that AP participation is related to higher GPA. Klopfenstein and Thomas (2005) and Duffy (2010) both found that when controlling for background variables, including academic achievement, differences in GPA were insignificant.

Relationship between AP and Retention and Completion

Increased retention and completion rates are often cited as benefits of AP participation. Eimers and Mullen (2003) found that students entering University of Missouri institutions with AP credits had higher first-year retention rates than other students. Morgan and Klaric (2007) examined outcomes for students entering 27 different institutions in 1994 and determined that AP students had higher completion rates than other students, even when accounting for the higher SAT scores of AP participants. Hargrove, et al. (2008) also found that AP students graduated at consistently higher rates.

Again, the results from other studies conflict with these findings. Delicath (1999) found no impact on first-year retention in his study of St. Louis University students. Klopfenstein and Thomas (2005) and Duffy (2010) found that retention rates for AP students were no higher when student background was taken into consideration. Duffy found the same to be true for graduation rates.

Relationship between AP and Time to Degree

Because students can enter college with credit earned, AP is often presented as a way to accelerate time to degree and lower costs for students. Research generally does not support this claim. Klopfenstein (2010) examined the impact of AP on time to degree for more than 28,000 Texas students and found no evidence that passing an AP course lead to faster graduation. Only a small number of students graduated early – those who attended high schools with a wide array of AP course offerings and adequate support to allow students to pass multiple AP exams. For the typical student, passing an AP exam did not increase the likelihood of graduating in four or five years.

Eykamp (2006) reached a similar conclusion based on his study of more than 15,000 University of California students. He found no clear relationship between time to degree and the number of AP or other college credits earned prior to enrollment. He determined that many students took lighter course loads or graduated with more credits than needed. Eykamp found that students with a large number of AP credits did graduate in slightly less time, but the return was minimal – two quarter's worth of AP units was associated with half a quarter less time enrolled. The average time to degree still exceeded four years.

Delicath's (1999) study of St. Louis University students found no impact on time to degree when controlling for student background. In a review of students who enrolled in Binghamton University with 12 or more AP credits, Cusker (2000) did find that the four-year completion rates for AP students exceeded the four-year rate for other students, but when addressing the issue of timelier completion, she notes that "despite more than 40 years of AP history, the evidence is sporadic and unconvincing."

Relationship between AP and Course Grades

Some research has focused more directly on how students perform in subsequent courses when they receive advanced placement based on their AP exam score. Studies published by the College Board have determined that AP students generally receive higher grades in the second-level course than students who completed the introductory course at the institution, even when controlling for academic ability (Morgan & Ramist, 1998; Morgan & Klaric, 2007). In the earlier study (Morgan & Ramist, 1998), the finding generally held for students who scored 3 on the AP exam (although grades were higher for students who scored 4 or 5). In the minority of cases where grades were lower for AP students, the differences were small. In the latter study (Morgan & Klaric, 2007), the results showed more variation for students who scored lower on the AP exam. For students with a score of 3, the difference between AP and non-AP student grades was minimal and insignificant for most of the exams, indicating that the higher overall performance was primarily attributable to the students with AP scores greater than 3.

Sadler and Sonnert (2010) examined course performance in the sciences for students who passed the AP exam, but still took the introductory course in college (either by choice or because the institution required a higher score). They found that the AP students generally had higher grades in the introductory course, but that their grades (B to B+ average) were not as high as might be expected given that they were essentially repeating the course.

Schneider (2010) examined how Colorado State University students performed in a subsequent math course based on whether they earned credit for the prior course by taking the course at CSU, at another institution, or by passing an AP exam. More than one-third (36.4%) of students who received credit based on an AP exam score of 3 received a grade of D, F, or W in the subsequent course. Students who took the introductory course at CSU had a similar failure/withdrawal rate as students who received credit based on an AP exam score of 3, which suggests students with the minimum passing score were about as well prepared as other students. However, students with

scores of 4 or 5 performed significantly better in the subsequent course. For students with an AP exam score of 4, the percentage of students failing or withdrawing from the subsequent course was 25.4 percent. The percentage dropped to 11.0 percent for students who earned a 5 on the AP exam.

Discussion

This review of the literature reveals varied findings regarding the impact of AP on student outcomes. It has been reported that AP students have higher retention and completion rates and higher GPAs than students who have no AP experience; however, when researchers control for academic ability and socioeconomic characteristics, the results are less conclusive. Also, when better outcomes for AP students are found, the differences are sometimes minimal or significant for only a small number of students (e.g. students with a large number of AP credits).

There are also many questions that are largely unanswered, which adds to the lack of certainty about how well AP students perform in college. Relatively few studies have examined whether outcomes vary for students who pass the AP exam with a score of 3 (claimed equivalent to a B-, C+, or C) versus a higher score. There is no understanding of the impact of awarding students AP credit for elective or general education courses versus courses required for their major. Nor does the research indicate whether AP student outcomes differ depending on the level of selectivity of the receiving institution. It is possible that differences could be lost in data aggregation. Generalized findings might not apply to individual students taking specific courses at specific institutions.

The inconsistent conclusions about AP may, in fact, reflect reality, as the experiences of AP participants might vary substantially based on a number of factors. The research does not indicate that AP students are *disadvantaged* in their post-secondary work, however some questions remain unanswered and positive impacts should not be overstated.

Annotated Bibliography

Sadler, P.M. & Sonnert, G. (2010). High School Advanced Placement and Success in College Coursework in the Sciences. In P.M. Sadler, G.S. Sonnert, R.H. Tai, & K. Klopfenstein (Eds.), AP: A Critical Examination of the Advanced Placement Program (119-137). Cambridge, MA: Harvard Education Press.

Harvard scientists Sadler and Sonnert examined evidence for the equivalence of AP coursework in the sciences and performance in *introductory* college science courses. They relied on survey data from students in 124 different first-semester introductory college biology, chemistry, and physics courses in 55 randomly selected colleges and universities to examine student performance in these courses. They formed six cohorts: 1) no high school course; 2) high school course but not AP or honors level; 3) high school honors course; 4) AP student with failing scores; 5) AP students who didn't take the exam; 6) AP students with passing scores (3 or higher).

Sadler and Sonnet found that students who reported passing their AP exam earned grades that were, in most cases, significantly higher than those of students with other experiences. However, even the grades earned by AP exam passers only averaged B to B+ after taking what was essentially their second introductory college level class.

Duffy, W. (2010). Persistence and Performance at a Four-year University. In P.M. Sadler, G.S. Sonnert, R.H. Tai, & K. Klopfenstein (Eds.), AP: A Critical Examination of the Advanced Placement Program (139-163). Cambridge, MA: Harvard Education Press.

Duffy studied 786 first-time, full-time freshmen enrolling at the University of Tennessee at Martin (a moderately selective four-year institution) between fall 2000 and fall 2006. He examined differences in persistence, degree completion, first-year GPA and cumulative GPA. The study included 300 students with no college credit, 181 students with AP credit, and 305 students with other college credit. Independent variables included income, parent education, ACT score, high school rank, race, and student type (no credit, AP credit, other credit).

In all cases, the AP group had greater persistence and performance than the control group and total population, but when background variables were accounted for, the differences were insignificant.

Klopfenstein, K. (2010). Does the Advanced Placement Program Save Taxpayers Money? In P.M. Sadler, G.S. Sonnert, R.H. Tai, & K. Klopfenstein (Eds.), AP: A Critical Examination of the Advanced Placement Program (189-218). Cambridge, MA: Harvard Education Press.

Klopfenstein examined the impact of AP experience on how long it takes students to earn a baccalaureate degree, using a sample of 28,702 students from Texas public universities. She compared students who passed an AP exam to students without AP experience; the study did not identify whether credits were awarded for all passing scores. She used the time to degree analysis to explore the cost-benefit of state subsidies to AP programs.

Klopfenstein found no evidence that AP courses lead to faster graduation. She determined that passing AP exams increases the likelihood of graduating in three years for only a small number of students who attended high schools offering a wide array of AP courses and who have the support necessary to pass multiple AP exams. She concluded that passing AP exams does not increase the likelihood of graduating in four years for the typical student or in five years for those who have not graduated in four years. As a result, Klopfenstein contends that subsidies to AP programs are not justified based on the idea that AP experience shortens time to degree. Klopfenstein noted that the

findings are consistent with the idea that most AP students would do well in college even without AP experience.

Klopfenstein, K. & Thomas, K. M. (2005). The Advanced Placement Performance Advantage: Fact or Fiction? Paper presented at the American Economic Association 2005 Annual Meeting. Retrieved from: https://www.aeaweb.org/assa/2005/0108_1015_0302.pdf

North Carolina University scientists Klopfenstein and Thomas examined the effect of AP courses on first-year persistence and first semester GPA. Their sample consisted of more than 28,000 Texas high school graduates who attended 31 four-year Texas public universities in the fall of 1999. The study was based on students who passed AP exams, but did not identify whether credits were awarded for all passing scores.

The researchers concluded that “after controlling for the balance of a student’s high school curriculum, family, and school characteristics, AP students are generally no more likely than non-AP students to return for a second year of college or to have higher first semester grade point averages.” They noted that the results might be partly due to the expansion of the AP program since 1990 which may have impacted program quality.

Schneider, J. (2014). Advanced Placement Analysis. Colorado State University Office of Institutional Research.

An analysis conducted by Jennifer Schneider Colorado State University (CSU) examined first year GPA to determine whether it differed based on AP exam scores. The population included full-time undergraduates enrolling at CSU between Fall 2007 and Fall 2012 and full-time undergraduate transfer students with a first-year GPA who were enrolled during the same time period. Schneider found that across all AP exams, new undergraduates who received an AP score of a 3, 4, or 5 had significantly higher first year GPA than new students who no AP credit. However, she also determined that in seven content areas, new students with higher AP exam scores (4 versus 3 and 5 versus 4) had higher first year GPAs.

Schneider also examined how students performed in a subsequent math course (MATH 161) based on whether they earned credit for the prior course (MATH 160) by taking the course at CSU, at another institution, or by passing an AP exam. More than one-third (36.4%) of students who received credit based on an AP exam score of 3 received a grade of D, F, or W in the subsequent course. Students who took the introductory course at CSU had a similar failure/withdrawal rate, which suggests students with the minimum passing score were about as well prepared as other students. Students with scores of 4 or 5 performed significantly better in the subsequent course. For students with an AP exam score of 4, this percentage of students failing or withdrawing from the subsequent course was 25.4 percent. The percentage dropped to 11.0 percent for students who earned a 5 on the AP exam.

Eykamp, P.W. (2006). Using data mining to explore which students use advanced placement to reduce time to degree. *New Directions for Institutional Research*, 131, 83–99.

Eykamp examined a cohort of University of California students to determine the effect of AP credits on time to degree, course load, and propensity for students to double major. The study population included 15,667 first-time freshmen entering a UC system campus in 1994. Sixty percent of those students had AP or other university credit when they enrolled. Eykamp converted those credits to course equivalents for the purposes of the study; 25% had two or fewer course equivalents, but more than 25% had enough units to replace at least a quarter of coursework.

Eykamp found no clear relationship between time to degree and the number of AP and other college credits earned. Some students did use AP credits to substitute for university coursework, but it was also determined that 70% of students did not need the credits because they earned the required university credits without including the AP credits.

The study did reveal that students with a large number of AP units tend to enroll for slightly fewer quarters than those with fewer AP units, but two quarter's worth of units was associated with only half a quarter less time enrolled and the average still exceeded four years. Only a small percentage of students with more than 51 AP units graduated in less than four years. Students with AP credits showed no greater likelihood to graduate with high-unit majors or double majors.

Eykamp concluded that only about a third of UC students used AP units to graduate, and many of them took a slightly lighter course load as a way of using them.

Delicath, T. (1999). The influence of dual credit programs on college students' integration and goal attainment. *Journal of College Student Retention*, 1(4), 377-398.

Delicath sought to identify differences in first-year persistence and six-year graduation for students with credits earned through the Advanced College Credit Program (ACC) or Advance Placement (AP) program versus those without ACC/AP credits. He conducted a cohort longitudinal study of 2,760 first-time, undergraduate students who enrolled at St. Louis University between the fall of 1989 and the fall of 1991. Of the students included in the study, 644 had an average of 11.62 ACC credits and 6.11 AP credits.

Initial regression models showed a correlation between ACC/AP credits and time to degree, but the relationship did not hold when controlling for the student's level of academic achievement using ACT scores. Delicath concluded that ACC/AP credits did not significantly influence students' time to graduation.

Eimers, M.T. & Mullen, R. (2003). Dual Credit and Advanced Placement: Do They Help Prepare Students for Success in College? Paper presented at the 43rd Annual Conference of the Association of Institutional Research. Retrieved from:
<https://uminfopoint.umsystem.edu/media/fa/planning/students/dualcreditpaperair.pdf>

Eimers and Mullen studied 7,913 first-time degree-seeking resident freshmen who enrolled in one of four University of Missouri System campuses within one year of high school graduation. They examined whether there were differences in first-year GPA and first-year retention between students who received AP or dual credit versus students who did not. They controlled for academic ability using ACT scores, high school rank, and completion of Missouri's high school core curriculum.

The researchers found when holding student ability constant, students entering with AP credit tended to have slightly higher GPAs than students entering with dual credit only or those entering with no credit. Students entering with AP credit or dual credit both had higher retention rates.

Morgan, R. & Ramist, L. (1998) Advanced Placement Students in College: An Investigation of Course Grades at 21 Colleges. Report No. SR-98-13. Educational Testing Service. Retrieved from: <http://www.collegeboard.com/ap/pdf/validity2.pdf>

Morgan and Ramist compared performance in upper level courses of those who received advanced placement based on AP exam scores with performance of students who took introductory college

courses. They received data from 21 institutions, including several highly selective institutions. The data file included information on 66,125 students; 27,268 records had a least one AP grade.

Students who scored 5 on AP exams generally performed better in the subsequent course than students who scored 4, and students who scored 4 generally outperformed students who scored a 3. However, in most cases, students who scored 3 on the AP exam and were placed directly into the second-level course performed better than students who took the introductory course in college. Where grades were lower for AP students, the difference was minimal.

Cusker, E.R. (2000). A Study of the Use of Advanced Placement Credit by Undergraduates Entering Binghamton University in 1990. Learning Productivity Network Newsletter. Retrieved from: <http://gse.buffalo.edu/org/lpn/news/cusker.html>

Cusker conducted a case study of students who entered Binghamton University in 1990 with 12 or more AP credits. She examined how students used AP credits toward their degrees. Cusker found: 1) 30% completed more ambitious programs including double majors or degrees and minors; 2) over 90% used AP credit for college requirements; 3) no student completed credit that duplicated AP work and 46 earned some AP credit that met no requirement; 4) 19.4% graduated with excess credit above the minimum degree requirement; and 5) early graduation was achieved in less than four years by 8.3% while another 165 or 76.4% graduated in four years. The amount of AP credit and graduation date correlated negatively and significantly for native students. There was no significant relationship between the amount of AP and excess credit.

While few students graduated in less than four-years, the four-year graduation rate for students with AP credits was significantly higher than the rate for the student body as a whole. However Cusker noted that evidence that AP participation decreases time to degree has been sporadic and unconvincing throughout more than 40 years of AP history.

Morgan, R. and Klaric, J. (2007). AP Students in College: An Analysis of Five-Year Academic Careers. College Board. Retrieved from: <http://research.collegeboard.org/publications/content/2012/05/ap-students-college-analysis-five-year-academic-careers>

Morgan and Klaric compared the academic careers of students who took AP exams with those who did not take AP exams. Their research was based on data on students entering 27 different institutions in 1994. They study included five research questions, including questions related to performance in intermediate college courses and graduation rates.

The researchers sought to determine if performance in intermediate-level courses into which AP students are placed is comparable to that of non-AP students. They compared the performance in intermediate courses for AP students receiving advanced placement with students who took the introductory college course. In general, AP students performed better in the intermediate course than students who took the introductory course, even when adjusting for SAT scores to control for level of academic ability; however, for students who scored a 3 on the AP exam, the differences were smaller and statistically significant for only three exams.

Morgan and Klaric also examined the graduation rates for AP students compared to non-AP students. They determined that even after accounting for the higher SAT scores of AP participants, their completion rate was higher than non-AP students.

Hargrove, L. Godin, D. & Dodd, B. (2008). **College Outcomes Comparisons by AP and Non-AP High School Experiences**. College Board. Retrieved from:
<http://research.collegeboard.org/publications/content/2012/05/college-outcomes-comparisons-ap-and-non-ap-high-school-experiences>

Hargrove, et al. examined post-secondary outcomes of students based on their AP experience. Outcomes measures included first- and fourth-year GPA, first- and fourth-year credits earned, and four-year graduation. AP experience was delineated in several ways - course only, exam only, both course and exam, non-AP dual enrollment, and non-AP other course only. The study was based on five cohorts of 1998-2002 Texas public high school graduates enrolled at a Texas public higher education institution.

The researchers examined differences in college outcomes based on AP experience, accounting for a number of factors including SAT score, family income, and AP exam grade. Overall, they found that subject specific analyses showed that students matched on SAT scores and family income who took both and an AP course and exam outperformed students who took only the AP course, and students with dual enrollment only or other courses (both non-AP) on all college outcomes. AP course and exam students graduated at consistently higher rates than any of the other groups, and those students with the highest AP exam grades graduated at the highest rates.

Appendix E: Response to CU System Concerns from the College Board

Received by CDHE on January 21, 2016

Advanced Placement (AP) represents a significant collaboration between colleges and universities and secondary schools. Designed to provide high school students with college-level instruction, these courses conclude with rigorous examinations which are reviewed annually by higher education faculty annually. This process gives an external and standardized assessment of students' measures of success, using a scoring rubric that aligns with the academic proficiency needed for first-year college work.

AP Courses and Exams are nationally standardized and externally assessed. Similar to Similar to University of Colorado course characteristics, they embody all of the following:

- Individual responsibility
- The syllabus
- The book(s), and/or reading material
- Any required technical infrastructure (library, laboratory, software, museum, special online resources)
- The course website and online material
- The pedagogical style
- The students in the class
- The assessment mechanisms
- The instructor
- Any supporting graders and teaching assistants

While it is true that AP Exams can be taken without completion of the AP courses, a policy that makes AP Examinations available to well-prepared homeschooled students and some IB students who choose to take AP Exams, the vast majority of AP Students complete the corresponding courses and AP Exams.

CU Concern: We hope that the CCHE will require a pairing of the AP course and AP exam. Given that pairing we propose that: Each AP course/exam pair being considered for a Specific Pathways category should be reviewed using the GEC process to verify it has the appropriate content and competencies.

College Board Response: AP routinely invites the engagement of higher education faculty to review, advise, and develop AP Courses and Exams. Faculty from the University of Colorado schools participates as well. The Website information available at both AP Central and AP Redesign provides in-depth transparency to course and exam descriptions, content, sample syllabi, released exams, and exam score distribution data. We expect campuses to regularly review AP credit policies, and new AP course and Exam changes and additions, in order to ensure policies are current and evidenced-based. CDHE has provided faculty with AP course and exam descriptions.

CU concern: Evidence indicates that students with a 3 on some tests are put at additional risk of failure in subsequent courses. Overall, for AP scores of 3, 4, or 5, students do not complete sooner, and cost of degree is therefore not reduced.

College Board Response: There are a number of studies and findings supporting AP students' college success coordinated by College Board Research with leading institutions and states agencies, and independent research conducted at the campus and state level all report similar results. AP students earning college credit for AP Exam scores of 3, 4, and 5 perform as well or better in subsequent courses when compared to non-AP students who completed the intro college course. If CU has conducted studies of AP Students' performance using valid data, student matching, and sound methodology, it would be very beneficial to review and explore the findings.

CU Concern: The proposed CCHE policy reduces the breadth of our system by overlooking the differentiated role and mission of our institutions and the primary responsibility of faculty in determining the requirements and performance necessary for degree programs.

College Board Response: When comparing AP Exam performance to college course grades, it is important to note the alignment of scores of 3 to passing college course grades of B-/C. We understand this aligns with Colorado's GT Pathways program, which guarantees transfer of courses from other institutions as long as the student passed the course with a C- or better. This is important, when considering the transfer policy for CU. Often, transfer courses that articulate for CU credit, can provide limited information about the content, learning outcomes, or instructional quality, and yet, commonly transfer without intense scrutiny. The national agenda for increasing postsecondary efficiencies recognizes the unique mission and sensitivity of campuses across the state, but is deliberate in the expectation that colleges and universities remove obstacles that hinder persistence and degree completion rates. AP provides significant course and exam transparency, and accomplished research; encouraging faculty review and consideration.

First-time visitors to AP classes are likely to be impressed. The teachers are engaging, the intellectual rigor is high, instructional quality is innovative and pedagogically skillful and student assignments are challenging. It is true that most high school teachers, including AP instructors are passionate about both the academic content and the well-being of their students. While it is common for the college environment to employ graduate assistants and adjuncts to manage large enrollment sections of introductory courses, that are often taught in lecture format, with less attention than the student focused support of AP teachers, the bottom line is clear: the acquisition of learning comparable to expectations of introductory college courses instruction should not be assessed by subjective opinion of how students were taught, but measured by nationally standardized rigorous externally assessed AP Examinations. (Cited from the Chronicle of Higher Education, University of Colorado Boulder employs 68.5% full time faculty, <http://chroni.cl/IJSXOEo>.)

AP Teachers participate in ongoing professional development, are actively engaged with AP teachers across the world, often working in partnership with College and University faculty on development committees and the scoring of AP Exams. Sharing best practice and course syllabi, promoting website ideas, and fostering collaboration in the content area as well as igniting enthusiasm for effective instructional models are commonplace in the AP Teacher community.

College Board - Advanced Placement Program - Skills and Practices identified in AP Courses

This “shared work” between the AP and the Higher Education Community is the foundation of Advanced Placement Redesign, <https://advancesinap.collegeboard.org/>. AP alignment to college level learning outcomes reflects core academic skills needed for college, career, and life readiness. Attention to critical thinking and inquiry, exemplary study habits, and a depth of content knowledge are expectation leading the national conversation relative to postsecondary reform, and the advances in AP can influence how higher education can improve and innovate.

More than 5,000 faculty from colleges and universities nationwide participate in the development of AP Courses and Exams , and convene annually to score the Free Response Sections of AP Examinations. In collaboration with a number of national leaders, AP Redesign was inspired and supported by the following leading organizations:

- The Association of American Colleges and Universities (AAC&U)
College Learning for the New Global Century, Essential Learning Outcomes
- Common Core State Standards Initiative,
Literacy in History/Social Studies, Science, and Technical Subjects 6-12
- The Partnership for 21st Century Skills (P21),
A Framework for 21st Century Learning
- Council of Writing Program Administrators,
Framework for Success in Postsecondary Writing
- Association of College and Research Libraries,
Information Literacy Standards for Higher Education

Convinced of the worthiness of Advanced Placement study, the private sector also has stepped up. Exxon Mobil, Dell Computers, and Lockheed Martin, for example, have donated millions of dollars to the National Math and Science Initiative’s Advanced Placement Training and Incentive Program (APTIP), an investment that has produced sustained and significant results in the number of qualifying or passing scores on AP math, science, and English exams for all students, and particularly students of color.

AP is a potentially powerful disruptor of the high-end achievement gap. Given our national goals to challenge more young people with rigorous course work, we need to better understand the barriers and challenges that currently prevent us from enrolling students in programs that already exist.

Are some colleges' AP credit policies discouraging students from participating in AP courses?

A recent survey of AP students reports that 85% of students indicate the most important factor in a student's decision to take an AP course is whether the college awards credit.

CU concern: Perhaps as important as the many course elements that we will describe below is the expectation that students in college are adults and responsible for their actions. This means that if a student fails to attend class, turn in assignments or performs poorly, the instructor does not check on the student, call their parents, send notes home, etc. Significant resources, as discussed below, are made available to the student, but it is their responsibility to take advantage of them.

College Board Response: While it is important to consider an undercurrent of questions about how young adults develop the maturity and responsibility needed to succeed in the conventional postsecondary environment, we cannot propose a correlation between college expectations and students' developing maturity, nor could we propose that all AP experiences are directly related to the growth of students' habits of mind-as there multiple influences that contribute to the evolution of these skills.

Data for University of Colorado

Cited from the Chronicle of Higher Education, University of Colorado Boulder's four- and six-year college completion rates are as follows:

- 44.3% of students completing degrees in four year
- 69.7% of students completing degrees in six years.

The completion data for University of Colorado Colorado Springs and University of Colorado Denver are comparable. The estimated costs for tuition by specific majors reports that students pay more than \$25,000.00 for two semesters, <https://bursar.colorado.edu/tuition-fees/estimated-cost-of-attendance/in-state-undergraduate-estimated-costs/>. Credit for AP can save students time and money.

Awarding Credit for AP

<http://www.colorado.edu/catalog/2015-16/content/advanced-placement-ap-credit>

Note that University of Colorado Boulder's AP credit policy requires that students must earn scores of 4+ on AP exams in most AP subjects. Note that:

- In 2015, 3,097- graduating HS students sent 2,714 AP Exam scores of 3 to U to Colorado Boulder
- In 2015, 1,315 graduating low income HS students sent 228 AP scores of 3 to University of Colorado Boulder

Among the credit policies listed in the 2015-16 catalogue, University of Colorado indicates they are GI Bill certified, and include CLEP examinations for credit- a College Board Examination

program without an associated course. Also included in the catalogue, is credit for Advanced Placement-noting credit for Exam scores of 3, 4, and 5. In addition, credit can be applied for Study Abroad and Independent study-all of which do not specify a required course. <http://www.colorado.edu/catalog/2015-16/content/advanced-placement-ap-credit>



COLORADO

**Colorado Commission on
Higher Education**

Department of Higher Education

Tuition and Fees Report Fiscal Year 2015-16 January 2016

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LT. GOVERNOR JOSEPH GARCIA, EXECUTIVE DIRECTOR

Introduction

In Colorado and across the nation, the rising cost of college tuition is receiving considerable public attention. At the same time, the importance of having a postsecondary credential has never been more important. The postsecondary credential a student earns can provide substantial returns on investment in the form of higher income and greater employment opportunities. Equally important, Colorado's Master Plan calls for increasing the attainment of high quality postsecondary credentials to meet anticipated workforce demands by 2025. However, Colorado's decade-long shift from a funding structure, largely supported by state appropriations, to one primarily dependent on tuition revenues has challenged institutions' ability to balance operational realities with the need to provide affordable access to higher education for Colorado families.

Analysis of tuition and fees at public institutions of higher education in Colorado must include an analysis of General Fund support for higher education. The last 15 years have witnessed a marked reversal in who bears the burden for higher education costs. As General Fund is reduced, tuition increases comprise the difference - resulting in more costs for students and families. In Fiscal Year (FY) 2000-01, the state covered 68 percent of the cost of college, while students and families were responsible for 32 percent. By FY 2011-12, those numbers had reversed: students and families were covering two-thirds of the costs and the state was paying for a third. However, recent investments by the General Assembly slowed what had been a high rate of growth in tuition rate increases.

In fiscal years 2014-15 and 2015-16, Colorado's public institutions witnessed their smallest year-over-year percent increase in tuition rates in more than a decade. This was largely the result of increases in General Fund support for higher education. In 2014 the College Affordability Act (Senate Bill 14-001) was passed, providing an historic \$60 million (11 percent) increase for Colorado's public institutions of higher education. Tied to this investment, in operating dollars, was a requirement that resident tuition rate increases be capped at no more than 6 percent for FY 2014-15 and FY 2015-16. For FY 2015-16, the state provided a total operating increase for public colleges and universities of 11 percent or \$66.6 million. All Colorado public institutions of higher education complied with the requirements of tuition restraint in FY 2015-16.

However, the progress made in the past two years may be short lived as the Governor's FY 2016-17 budget request for the Department of Higher Education includes a decrease of \$20.0 million (3 percent). The reduction could result in higher

tuition increases.

In accordance with C.R.S. § 23-1-105.5(2), this report provides detailed information on the tuition and fee rates that Colorado public institutions of higher education charged to resident and non-resident students in Fiscal Year 2015-16 and is organized into the following sections:

- (1) Key Finding and Definitions
- (2) The Process of Tuition Setting and its relationship to costs
- (3) A Summary of Tuition and Fee Changes in the 2015-2016 Academic Year and
- (4) Tuition and Fee Interstate Comparisons.
- (5) The appendices provide detailed examples and comparisons across institution type, student groups and year to year comparisons.

Key Findings

- All institutions complied with SB-001 tuition rate increase limit in FY 2015-16 and in most cases, set rates well below the 6 percent maximum.
- General Fund support was the decisive factor in keeping tuition rate increases relatively low and within the statutorily prescribed limit.
- According to College Board, Colorado ranks 48th in the nation in state funded support per student to higher education. This has resulted in greater reliance on tuition by institutions.
- Despite this, Colorado is just above the median (32nd) in resident tuition charges, however, non-resident tuition charges are among the highest in the nation (41st).

Definitions

In order to assess trends in tuition and fees, it is important to understand higher education terminology:

1. Student Groups encompasses all of the following:
 - a. In-state undergraduate, out-of-state undergraduate, in-state graduate, out-of-state graduate, in-state professional and out-of-state professional students.
2. Full Time Equivalent Student (FTE): The number of full time equivalent students at an institution is calculated by taking the total number of credit hours divided by 30 credit hours a year for a school following the semesters system and 45 credit hours for a school following the quarter system.

A student planning to attend a public college or university in Colorado should expect to pay the charges defined as follows:

3. Mandatory Fees: Mandatory student charges used to support a range of activities and programs related to the student experience. This includes but may not be limited to: instruction, research and public service, academic

- support, student health services, athletics, recreational activities, campus transportation and capital debt service.
4. Designated Fees: Student charges assessed to specific students based on course enrollment, program participation or services used.
 5. Tuition and Fees: Sum of tuition and mandatory fees (designated fee data are submitted to DHE as part of the Institutional Plan for Student Fees). This sum amounts to the base charges for an institution of higher education.
 6. Room and Board: Optional charges used to support the on-campus housing and dining functions for students choosing to live on campus. Students living off campus are exempt from these charges.
 7. Cost of Attendance: The total charge to students (and parents) excluding student financial aid. This total includes the sum of tuition, mandatory fees and room and board.

Various financing mechanisms are employed by institutions of higher education to determine a student's final cost of attendance:

8. Tuition Differential: A tuition setting strategy whereby an institution charges a higher per-credit-hour rate for more expensive programs (i.e. nursing, engineering).
9. Credit Hour Window: A tuition setting strategy whereby an institution charges a flat rate over a range of credit hours to encourage students to take a greater number of credit hours.
10. Linear Tuition Structure: A tuition setting strategy whereby students are charged the same amount per credit hour, regardless of the number of hours taken
11. Institutional Aid
 - a. Need-based: Assists students who cannot otherwise afford to attend college. Colorado Student Grant Program and Colorado Graduate Grant Program (hereinafter "Critical Colorado Career Graduate Grant Program") are designed for students with demonstrated need.
 - b. Merit-based: Recognizes and recruits Colorado's most outstanding students. "Merit-based assistance" is financial aid that an institution awards to a student based on the student's academic, artistic, athletic, or other special accomplishments.

Process of Tuition Setting

Governing boards have the responsibility and authority for the financial management of their institutions. A major component of sound financial management is the setting of tuition. Since institutions have unique roles and missions and differing student needs, governing boards are best equipped to set tuition and hold a fiduciary duty to their respective institutions. The Commission has a responsibility to exercise oversight and to ensure that educational quality and student access are maintained. While governing boards determine the tuition for the institutions they govern, they often do so within statutorily prescribed limits, such as the 6 percent tuition cap under the College Affordability Act (SB14-001). Historically, tuition setting parameters have

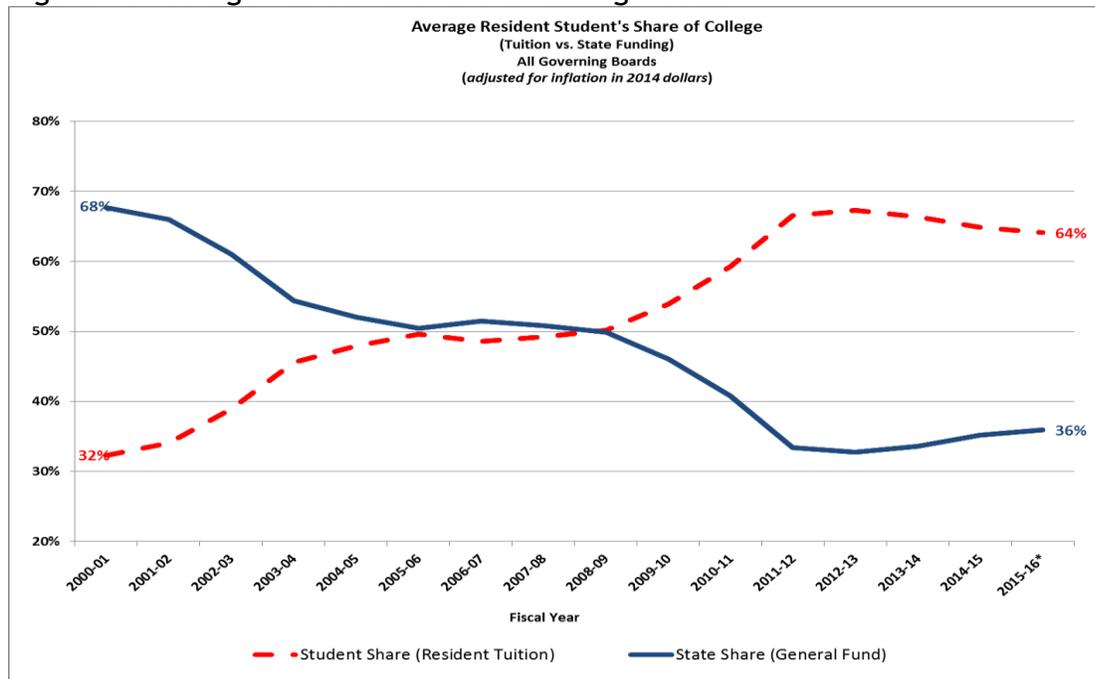
been defined either through footnote in the Long Bill or through special legislation.

Tuition setting usually occurs in the spring to allow incoming and returning students to make financial decisions in preparation for the upcoming year. The actual impact of tuition rate increases varies from student to student and depends on a number of factors such as the student’s selected area of study and eligibility for financial aid. A governing board’s tuition price determination process includes a variety of factors that depend on the pricing strategy at the particular institution. According to 2013 report from the State Higher Education Executive Officers Association, state appropriations is the number one factor influencing decisions about tuition followed by prior year’s tuition, financial aid, cost of instruction and institutional role and mission. This underscores the point that changes in tuition rates are closely tied to the level of state funding received by institutions of higher education—as state funding decreases students’ share of the cost typically increases.

Tuition Costs and their Relationship to Higher Education Costs

Tuition increases are a function of higher education costs relative to an institution’s ability to generate dollars (either General Fund or tuition) to cover those costs. Costs which are not funded by General Fund may need to be supported through tuition increases. The last 15 years have witnessed a marked reversal in who bears the burden of higher education costs. In FY 2000-01, the state covered 68 percent of the cost of college, while students and families picked up 32 percent. By FY 2011-12, those numbers had reversed: students and families were covering two-thirds of the costs and the state was paying for a third. Recent investments by the General Assembly have started to reverse this trend, so that in FY 2016, the state will be paying for 36 percent.

Figure 1. Average Residents Share of College Costs



The Colorado Department of Higher Education contracted with the National Center for Higher Education Management Systems (NCHEMS) to perform an analysis of higher education costs in Colorado, and how these compared to national costs (“Why Higher Education Costs are What They Are” June 30, 2015). Chief among the findings is that all of Colorado’s public institutions of higher education have fewer resources to support basic operations than do similar institutions in other states. This low level of funding means that Colorado institutions are less able to absorb revenue shortfalls through productivity enhancements.

Because state appropriations are the key incentive to keeping tuition low, the condition of the state general fund and state investment levels in higher education are at the core of the Commission’s recently adopted tuition policy. The new policy integrates the tuition recommendation process with the General Fund appropriation process. More information on the Commission’s new tuition policy can be found in Appendix F.

Tuition and Fee Changes in the 2015-2016 Academic Year

Tuition and mandatory fees comprise the base charges for an institution of higher education. In FY 2015-16, higher education received an 11 percent increase in state funding. This influx of money allowed institutions to stay within the 6 percent tuition increase limit set forth by the College Affordability Act (SB 14-001). The charts below detail the tuition and fee rate increases by type of institution (2 or 4 year) and by student group: in-state undergraduate and out-of-state undergraduate. Detailed tuition and fee information as it pertains to graduate and professional students can be found in Appendix E.

In Colorado, on average, tuition and mandatory fees for in-state undergraduates increased by \$297 (4.7 percent) at all Colorado public institutions of higher education. At four-year institutions, tuition and mandatory fees increased by an average of \$444 (5.2 percent) and at two year institutions, tuition and mandatory fees increased by an average of \$194 (4.3 percent). See Appendix A for more details.

**Table 1. One-Year Change In-State Undergraduate Base Tuition and Fees
(30 Credit Hours Per Academic Year)**

Institution	FY 2014-15 Resident Tuition	FY 2014-15 Student Fees	FY 2014-15 Tuition and Fees	FY 2015-16 Resident Tuition	FY 2015-16 Student Fees	FY 2015-16 Tuition and Fees	% Increase Resident Tuition	% Increase Resident Fees	Dollar Increase Tuition and Fees	% Increase Resident Tuition & Fees
University of Colorado - Boulder	\$9,048	\$1,741	\$10,789	\$9,312	\$1,778	\$11,090	2.9%	2.1%	\$301	2.8%
University of Colorado - Colorado Springs	\$7,710	\$1,433	\$9,143	\$7,980	\$1,448	\$9,428	3.5%	1.1%	\$285	3.1%
University of Colorado - Denver	\$8,760	\$1,078	\$9,838	\$9,090	\$1,299	\$10,389	3.8%	20.5%	\$551	5.6%
Colorado State University	\$7,868	\$2,029	\$9,897	\$8,300	\$2,257	\$10,557	5.5%	11.3%	\$660	6.7%
Colorado State University - Pueblo	\$5,824	\$2,010	\$7,834	\$6,159	\$2,123	\$8,281	5.7%	5.6%	\$447	5.7%
Fort Lewis College	\$5,544	\$1,708	\$7,252	\$5,856	\$1,745	\$7,601	5.6%	2.1%	\$349	4.8%
University of Northern Colorado	\$6,024	\$1,709	\$7,733	\$6,372	\$1,794	\$8,166	5.8%	5.0%	\$433	5.6%
Adams State University	\$5,160	\$2,855	\$8,015	\$5,448	\$3,126	\$8,574	5.6%	9.5%	\$559	7.0%
Colorado Mesa University	\$6,812	\$813	\$7,625	\$7,185	\$823	\$8,008	5.5%	1.2%	\$383	5.0%
Metropolitan State University of Denver	\$4,973	\$1,097	\$6,070	\$5,222	\$1,198	\$6,420	5.0%	9.2%	\$350	5.8%

**Table 1. One-Year Change In-State Undergraduate Base Tuition and Fees
(30 Credit Hours Per Academic Year)**

Institution	FY 2014-15 Resident Tuition	FY 2014-15 Student Fees	FY 2014-15 Tuition and Fees	FY 2015-16 Resident Tuition	FY 2015-16 Student Fees	FY 2015-16 Tuition and Fees	% Increase Resident Tuition	% Increase Resident Fees	Dollar Increase Tuition and Fees	% Increase Resident Tuition & Fees
Western State Colorado University	\$5,539	\$2,335	\$7,874	\$5,844	\$2,607	\$8,451	5.5%	11.7%	\$577	7.3%
Colorado School of Mines	\$14,790	\$2,128	\$16,918	\$15,225	\$2,128	\$17,353	2.9%	0.0%	\$435	2.6%
Colorado Community College System										
Arapahoe Community College	\$3,747	\$178	\$3,925	\$3,915	\$202	\$4,117	4.5%	13.4%	\$192	4.9%
CO Northwestern Community College	\$3,747	\$280	\$4,027	\$3,915	\$295	\$4,210	4.5%	5.4%	\$183	4.5%
Community College of Aurora	\$3,747	\$194	\$3,941	\$3,915	\$248	\$4,163	4.5%	28.3%	\$223	5.7%
Community College of Denver	\$3,747	\$833	\$4,580	\$3,915	\$1,001	\$4,916	4.5%	20.2%	\$336	7.3%
Front Range Community College	\$3,747	\$287	\$4,034	\$3,915	\$478	\$4,393	4.5%	66.4%	\$359	8.9%
Lamar Community College	\$3,747	\$409	\$4,156	\$3,915	\$414	\$4,329	4.5%	1.1%	\$173	4.2%
Morgan Community College	\$3,747	\$180	\$3,927	\$3,915	\$182	\$4,097	4.5%	1.5%	\$171	4.3%
Northeastern Junior College	\$3,747	\$599	\$4,346	\$3,915	\$600	\$4,515	4.5%	0.1%	\$169	3.9%
Otero Junior College	\$3,747	\$299	\$4,046	\$3,915	\$294	\$4,209	4.5%	-1.7%	\$163	4.0%
Pikes Peak Community College	\$3,747	\$296	\$4,043	\$3,915	\$303	\$4,218	4.5%	2.4%	\$175	4.3%
Pueblo Community College	\$3,747	\$550	\$4,297	\$3,915	\$564	\$4,479	4.5%	2.6%	\$182	4.2%
Red Rocks Community College	\$3,747	\$292	\$4,039	\$3,915	\$298	\$4,213	4.5%	2.0%	\$174	4.3%
Trinidad State Junior College	\$3,747	\$445	\$4,192	\$3,915	\$435	\$4,350	4.5%	-2.2%	\$158	3.8%
Aims Community College	\$2,021	\$260	\$2,281	\$2,021	\$260	\$2,281	0.0%	0.0%	\$0	0.0%
Colorado Mountain College	\$1,710	\$180	\$1,890	\$1,710	\$180	\$1,890	0.0%	0.0%	\$0	0.0%
Average Four Year institution	\$7,338	\$1,745	\$9,082	\$7,666	\$1,860	\$9,527	4.8%	6.6%	\$444	5.2%
Average Two Year Institution	\$3,736	\$439	\$4,175	\$3,893	\$476	\$4,369	3.9%	9.1%	\$194	4.3%
Average All Institutions	\$5,203	\$971	\$6,174	\$5,430	\$1,040	\$6,470	4.3%	8.1%	\$296	4.7%

At all Colorado public institutions, tuition and mandatory fees for out-of-state undergraduates increased by \$631 (3.5 percent). At four-year institutions, tuition and mandatory fees increased by an average of \$831 (3.6 percent) and at two-year institutions, tuition and fees increased by an average by \$514 (3.7 percent). Although the percentage rate increases for out-of-state undergraduate students averages only 3.5 percent, this number is deceptively low because the base rate charged is significantly higher than that of resident students. A more detailed look at out-of-state undergraduate base tuition and fees for FY 2015-16 can be found in Appendix B.

**Table 2. One-Year Change Out-of-State Undergraduate Base Tuition and Fees
(30 Credit Hours Per Academic Year)**

Institution	FY 2014-15 Non-Resident Tuition	FY 2014-15 Student Fees	FY 2014-15 Tuition and Fees	FY 2015-16 Tuition	FY 2015-16 Student Fees	FY 2015-16 Tuition and Fees	% Increase Non-Resident Tuition	% Increase Non-Resident Fees	Dollar Increase Tuition and Fees	% Increase Non-Resident Tuition & Fees
University of Colorado - Boulder	\$31,410	\$1,741	\$33,151	\$32,346	\$1,778	\$34,124	3.0%	2.2%	\$974	2.9%
University of Colorado - Colorado Springs	\$20,250	\$1,433	\$21,683	\$20,850	\$1,448	\$22,298	3.0%	1.1%	\$615	2.8%
University of Colorado - Denver	\$27,030	\$1,078	\$28,108	\$28,020	\$1,279	\$29,299	3.7%	18.7%	\$1,192	4.2%
Colorado State University	\$24,048	\$2,028	\$26,076	\$25,010	\$2,257	\$27,267	4.0%	11.3%	\$1,191	4.6%
Colorado State University - Pueblo	\$16,765	\$2,010	\$18,775	\$17,729	\$2,123	\$19,851	5.7%	5.6%	\$1,076	5.7%
Fort Lewis College	\$16,072	\$1,709	\$17,781	\$16,072	\$1,745	\$17,817	0.0%	2.1%	\$36	0.2%
University of Northern Colorado	\$17,568	\$1,709	\$19,277	\$17,958	\$1,794	\$19,752	2.2%	5.0%	\$475	2.5%
Adams State University	\$15,960	\$2,754	\$18,714	\$15,960	\$3,126	\$19,086	0.0%	13.5%	\$372	2.0%
Colorado Mesa University	\$18,173	\$813	\$18,986	\$18,540	\$823	\$19,363	2.0%	1.2%	\$377	2.0%
Metropolitan State University of Denver	\$17,791	\$1,097	\$18,888	\$18,859	\$1,198	\$20,057	6.0%	9.2%	\$1,169	6.2%
Western State Colorado University	\$15,984	\$2,335	\$18,319	\$16,848	\$2,607	\$19,455	5.4%	11.7%	\$1,136	6.2%
Colorado School of Mines	\$31,470	\$2,009	\$33,479	\$32,700	\$2,128	\$34,828	3.9%	5.9%	\$1,349	4.0%
Colorado Community College System										
Arapahoe Community College	\$15,371	\$178	\$15,549	\$16,062	\$202	\$16,264	4.5%	13.4%	\$715	4.6%
CO Northwestern Community	\$6,704	\$280	\$6,984	\$6,704	\$295	\$6,999	0.0%	5.4%	\$15	0.2%

**Table 2. One-Year Change Out-of-State Undergraduate Base Tuition and Fees
(30 Credit Hours Per Academic Year)**

Institution	FY 2014-15 Non-Resident Tuition	FY 2014-15 Student Fees	FY 2014-15 Tuition and Fees	FY 2015-16 Tuition	FY 2015-16 Student Fees	FY 2015-16 Tuition and Fees	% Increase Non-Resident Tuition	% Increase Non-Resident Fees	Dollar Increase Tuition and Fees	% Increase Non-Resident Tuition & Fees
College										
Community College of Aurora	\$15,371	\$194	\$15,564	\$16,062	\$248	\$16,310	4.5%	28.3%	\$746	4.8%
Community College of Denver	\$15,371	\$833	\$16,204	\$16,062	\$1,001	\$17,063	4.5%	20.2%	\$860	5.3%
Front Range Community College	\$15,371	\$287	\$15,658	\$16,062	\$478	\$16,540	4.5%	66.4%	\$882	5.6%
Lamar Community College	\$6,704	\$409	\$7,113	\$6,704	\$414	\$7,117	0.0%	1.1%	\$5	0.1%
Morgan Community College	\$15,371	\$180	\$15,550	\$16,062	\$182	\$16,244	4.5%	1.5%	\$694	4.5%
Northeastern Junior College 1	\$6,704	\$599	\$7,303	\$6,704	\$600	\$7,303	0.0%	0.1%	\$1	0.0%
Otero Junior College	\$6,704	\$299	\$7,003	\$6,704	\$294	\$6,997	0.0%	-1.7%	-\$5	-0.1%
Pikes Peak Community College	\$15,371	\$296	\$15,667	\$16,062	\$303	\$16,365	4.5%	2.4%	\$699	4.5%
Pueblo Community College	\$15,371	\$550	\$15,921	\$16,062	\$564	\$16,626	4.5%	2.6%	\$706	4.4%
Red Rocks Community College	\$15,371	\$292	\$15,663	\$16,062	\$298	\$16,360	4.5%	2.0%	\$697	4.5%
Trinidad State Junior College	\$6,704	\$445	\$7,149	\$6,704	\$435	\$7,139	0.0%	2.5%	\$11	0.1%
Aims Community College	\$12,758	\$260	\$13,018	\$12,758	\$260	\$13,018	0.0%	0.0%	-\$1	0.0%
Colorado Mountain College	\$9,510	\$180	\$9,690	\$11,190	\$180	\$11,370	17.7%	0.0%	\$1,680	17.3%
Average Four Year Institutions	\$21,043	\$1,726	\$22,770	\$21,741	\$1,859	\$23,600	3.2%	7.3%	\$830	3.6%
Average Two Year Institutions	\$11,917	\$352	\$12,269	\$12,397	\$384	\$12,781	3.6%	9.6%	\$514	3.7%
Average All Institutions	\$15,402	\$928	\$16,331	\$15,959	\$1,002	\$16,961	3.3%	8.3%	\$631	3.5%
Note:										
* Continuing out-of-state students at UCB do not pay annual tuition increases during their studies. The tuition reported is for the entering freshman class.										
1 In 2013-14, Northeastern Junior College included room and board fees in non-resident tuition										

Tuition and Fee Interstate Comparisons

State appropriations are the key incentive to keeping tuition low and play the biggest role in determining the actual tuition rate charged to students. According to the *Trends in College Pricing 2015* report by the College Board, Colorado ranks 48th in the amount (\$4,010) of state support per full-time equivalent student. Despite some of the lowest levels of state investment in the country, Colorado’s public institutions of higher education fall near the U.S. average in-state tuition and fees charged at public institution—meaning Colorado’s public institutions have been able to more with less and contain costs. Colorado ranks 31st in average tuition and fees at four-year public institutions and 27th at two-year public institutions. For more information on interstate tuition and fees comparisons please see:

<http://trends.collegeboard.org/sites/default/files/trends-college-pricing-web-final-508-2.pdf>

Financial Aid

One of the ways institutions attempt to alleviate the growing cost of attendance is through institution and foundation-based financial assistance. Strong financial aid programs have also been shown to enhance retention and completion, especially among low and middle income students. Table 3 shows the changes in institutional need and merit-based aid per FTE over the past 5 years (Please note that Table 3 reflects FY 2010-11 through FY 2014-15, since financial aid data is one year behind tuition and fee data). On average, institutional aid has increased by 38.4 percent while tuition and fees has increased by 33.4 percent. Institutions are no longer required to report institutional aid awarded through foundations.

Table 3. Five year Increase in Institutional¹ Financial Aid

Institution	FY 2010-11 Institutional Aid Per FTE	FY 2014-15 Institutional Aid Per FTE	5 Year % Increase Per FTE
University of Colorado Boulder	\$3,199	\$4,344	36%
University of Colorado Colorado Springs	\$1,019	\$1,085	6%
University of Colorado Denver	\$1,326	\$2,396	81%
Colorado State University	\$2,148	\$3,057	42%
Colorado State University - Pueblo	\$307	\$337	10%
Fort Lewis College	\$982	\$897	-9%
University of Northern Colorado	\$938	\$1,117	19%
Adams State University	\$2,044	\$2,246	10%
Colorado Mesa University	562	\$916	63%
Colorado School of Mines	\$3,711	\$4,979	34%
Metropolitan State University of Denver	143	\$413	190%
Western State Colorado University	\$1,617	\$2,364	46%
Colorado Community College System	\$118	\$137	16%
Aims Community College	\$254	\$334	32%
Colorado Mountain College	-	-	0%

¹Data pulled from the financial aid files (2010-11 to 2014-15) and includes all need and merit based aid paid by the institution.

Reporting changed this year. The Department no longer collects institutional aid from University Foundations



COLORADO

**Colorado Commission on
Higher Education**

Department of Higher Education

Tuition and fees report Fiscal Year 2015-16

Appendices

Appendix A

One-Year Change In-State Undergraduate Tuition and Fees (30 Credit Hours Per Academic Year)

Institution	FY 2014-15 In-State Tuition	FY 2014-15 Student Fees	FY 2014-15 Tuition and Fees	FY 2015-16 In-State Tuition	FY 2015-16 Student Fees	FY 2015-16 Tuition and Fees	% Increase In-State Tuition	% Increase In-State Fees	% Increase In-State Tuition & Fees
University of Colorado - Boulder									
All-Other	\$9,048	\$1,741	\$10,789	\$9,312	\$1,778	\$11,090	2.9%	2.2%	2.8%
Business	\$13,632	\$1,741	\$15,373	\$13,896	\$1,778	\$15,674	1.9%	2.2%	2.0%
Engineering	\$12,048	\$1,741	\$13,789	\$12,312	\$1,778	\$14,090	2.2%	2.2%	2.2%
Media, Communication and Information	\$9,360	\$1,741	\$11,101	\$10,824	\$1,778	\$12,602	3.2%	9.7%	4.1%
Music	N/A	N/A	N/A	\$9,624	\$1,778	\$11,402	N/A	N/A	N/A
University of Colorado - Colorado Springs									
Linear Freshman & Sophomore	\$7,710	\$1,433	\$9,143	\$7,980	\$1,448	\$9,428	3.5%	1.1%	3.1%
Linear Junior/Senior in LAS or SPA	\$8,310	\$1,433	\$9,743	\$8,610	\$1,448	\$10,058	3.6%	1.1%	3.2%
Linear Junior/Senior in COB or EAS	\$9,480	\$1,433	\$10,913	\$9,810	\$1,448	\$11,258	3.5%	1.1%	3.2%
Linear Junior/Senior in Beth El	\$11,070	\$1,433	\$12,503	\$11,070	\$1,448	\$12,518	0.0%	1.1%	0.1%
University of Colorado - Denver									
Lower Level	\$8,760	\$1,078	\$9,838	\$9,090	\$1,299	\$10,389	3.8%	20.6%	5.6%
Upper Level	\$9,420	\$1,078	\$10,498	\$9,420	\$1,299	\$10,719	0.0%	20.6%	2.1%
School of Nursing	\$11,445	\$297	\$11,742	\$11,850	\$297	\$12,147	3.5%	0.1%	3.5%
Colorado State University									
Resident	\$7,868	\$2,029	\$9,897	\$8,300	\$2,257	\$10,557	5.5%	11.3%	6.7%
Level I	\$9,278	\$2,029	\$11,307	\$9,770	\$2,257	\$12,027	5.3%	11.3%	6.4%
Level II	\$9,728	\$2,029	\$11,757	\$10,250	\$2,257	\$12,507	5.4%	11.3%	6.4%
Level III	\$10,358	\$2,029	\$12,387	\$10,910	\$2,257	\$13,167	5.3%	11.3%	6.3%
Colorado State University - Pueblo									
Base	\$5,824	\$2,010	\$7,834	\$6,159	\$2,123	\$8,281	5.8%	5.6%	5.7%
Differential	\$6,619	\$2,010	\$8,629	\$7,020	\$2,123	\$9,142	6.1%	5.6%	6.0%
Fort Lewis College									
Resident	\$5,544	\$1,709	\$7,253	\$5,856	\$1,745	\$7,601	5.6%	2.1%	4.8%
University of Northern Colorado									
Resident	\$6,024	\$1,709	\$7,733	\$6,372	\$1,794	\$8,166	5.8%	5.0%	5.6%
Music, Theatre, and Dance	\$7,104	\$1,709	\$8,813	\$7,452	\$1,794	\$9,246	4.9%	5.0%	4.9%
Nursing	\$7,944	\$1,709	\$9,653	\$8,292	\$1,794	\$10,086	4.4%	5.0%	4.5%
Business	\$7,224	\$1,709	\$8,933	\$7,572	\$1,794	\$9,366	4.8%	5.0%	4.8%
Sciences	\$6,564	\$1,709	\$8,273	\$6,912	\$1,794	\$8,706	5.3%	5.0%	5.2%
Adams State University									
Resident	\$5,160	\$2,755	\$7,915	\$5,448	\$3,126	\$8,574	5.6%	13.5%	8.3%
Business	\$5,472	\$2,755	\$8,227	\$5,448	\$3,126	\$8,574	-0.4%	13.5%	4.2%
Nursing	\$6,816	\$2,755	\$9,571	\$7,350	\$3,126	\$10,476	6.0%	6.9%	6.2%
Colorado Mesa University									
Resident	\$6,812	\$813	\$7,625	\$7,185	\$823	\$8,008	5.5%	1.2%	5.0%
Metropolitan State University of Denver									
Resident	\$4,973	\$1,097	\$6,070	\$5,222	\$1,198	\$6,420	5.0%	9.2%	5.8%
Western State Colorado University									
Resident	\$5,539	\$2,335	\$7,874	\$5,844	\$2,607	\$8,451	5.5%	11.7%	7.3%
Colorado School of Mines									
Resident	\$14,790	\$2,128	\$16,918	\$15,225	\$2,128	\$17,353	2.9%	0.0%	2.6%
Colorado Community College System									
Arapahoe Community College	\$3,747	\$178	\$3,925	\$3,915	\$202	\$4,117	4.5%	13.4%	4.9%
Colorado Northwestern Community College	\$3,747	\$280	\$4,027	\$3,915	\$295	\$4,210	4.5%	5.4%	4.3%
Community College of Aurora	\$3,747	\$194	\$3,941	\$3,915	\$248	\$4,163	4.5%	28.3%	5.7%
Community College of Denver	\$3,747	\$833	\$4,580	\$3,915	\$1,001	\$4,916	4.5%	20.2%	4.6%
Front Range Community College	\$3,747	\$287	\$4,034	\$3,915	\$478	\$4,393	4.5%	66.4%	0.6%
Lamar Community College	\$3,747	\$409	\$4,156	\$3,915	\$414	\$4,329	4.5%	1.1%	4.2%
Morgan Community College	\$3,747	\$180	\$3,927	\$3,915	\$182	\$4,097	4.5%	1.5%	4.3%
Northeastern Junior College	\$3,747	\$599	\$4,346	\$3,915	\$600	\$4,515	4.5%	0.1%	11.6%
Otero Junior College	\$3,747	\$299	\$4,046	\$3,915	\$294	\$4,209	4.5%	(1.7%)	4.3%
Pikes Peak Community College	\$3,747	\$296	\$4,043	\$3,915	\$303	\$4,218	4.5%	2.4%	5.0%
Pueblo Community College	\$3,747	\$550	\$4,297	\$3,915	\$564	\$4,479	4.5%	2.6%	2.3%
Red Rocks Community College	\$3,747	\$292	\$4,039	\$3,915	\$298	\$4,213	4.5%	2.0%	3.8%
Trinidad State Junior College	\$3,747	\$445	\$4,192	\$3,915	\$435	\$4,350	4.5%	(2.2%)	2.4%
Aims Community College									
In District Resident	\$2,021	\$260	\$2,281	\$2,021	\$260	\$2,281	0.0%	0.0%	0.0%
In District - Low Differential	\$3,554	\$260	\$3,814	\$3,554	\$260	\$3,814	0.0%	0.0%	0.0%
In District - Medium Differential	\$3,708	\$260	\$3,968	\$3,708	\$260	\$3,968	0.0%	0.0%	0.0%
In District - High Differential	\$3,863	\$260	\$4,123	\$3,863	\$260	\$4,123	0.0%	0.0%	0.0%
Out of District Resident	\$3,172	\$260	\$3,432	\$3,172	\$260	\$3,432	0.0%	0.0%	0.0%
Out of District - Low Differential	\$6,180	\$260	\$6,440	\$6,180	\$260	\$6,440	0.0%	0.0%	0.0%
Out of District - Medium Differential	\$6,475	\$260	\$6,735	\$6,475	\$260	\$6,735	0.0%	0.0%	0.0%
Out of District - High Differential	\$6,802	\$260	\$7,062	\$6,802	\$260	\$7,062	0.0%	0.0%	0.0%
Colorado Mountain College ¹									
100/200 Level In District	\$1,710	\$180	\$1,890	\$1,710	\$180	\$1,890	0.0%	0.0%	0.0%
300/400 Level In District	\$2,970	\$180	\$3,150	\$2,970	\$180	\$3,150	0.0%	0.0%	0.0%
100/200 Level In State	\$3,015	\$180	\$3,195	\$3,210	\$180	\$3,390	6.5%	0.0%	6.1%
300/400 Level In State	\$6,360	\$180	\$6,540	\$6,360	\$180	\$6,540	0.0%	0.0%	0.0%

Notes:
 N/A denotes a year in which the stated differential no longer exists.
 Dark shading denotes what CCH & DHE consider to be the "Base Tuition Rate" when differentials exist
¹ Fees at Colorado Mountain College do not apply to campuses without residence halls.

5 Year History of In-State Undergraduate Tuition Differentials (30 Credit Hours Per Academic Year)

Institution	FY 2011-12 In-State Tuition	FY 2012-13 In-State Tuition	FY 2013-14 In-State Tuition	FY 2014-15 In-State Tuition	FY 2015-16 In-State Tuition	5 Year % Increase In-State Tuition
University of Colorado - Boulder						
All-Other	\$7,672	\$8,056	\$8,760	\$9,048	\$9,312	21.4%
Business	\$12,262	\$12,646	\$13,344	\$13,632	\$13,896	13.3%
Engineering	\$10,666	\$11,048	\$11,760	\$12,048	\$12,312	15.4%
Media, Communication & Information	\$7,966	\$8,348	\$9,072	\$9,360	\$10,824	35.9%
Music	N/A	N/A	N/A	N/A	\$9,624	N/A
University of Colorado - Colorado Springs						
Linear Freshman & Sophomore	\$6,720	\$7,050	\$7,470	\$7,710	\$7,980	18.8%
Linear Junior/Senior in LAS or SPA	\$7,230	\$7,590	\$8,040	\$8,310	\$8,610	19.1%
Linear Junior/Senior in COB or EAS	\$8,250	\$8,670	\$9,180	\$9,480	\$9,810	18.9%
Linear Junior/Senior in Beth El	\$9,630	\$10,110	\$10,710	\$11,070	\$11,070	15.0%
University of Colorado - Denver						
Lower Level	\$6,776	\$7,980	\$8,460	\$8,760	\$9,090	34.1%
Upper Level	\$7,272	\$8,580	\$9,098	\$9,420	\$9,420	29.5%
School of Nursing	\$9,900	\$10,200	\$10,800	\$11,445	\$11,850	19.7%
Colorado State University						
Resident	\$6,307	\$6,875	\$7,494	\$7,868	\$8,300	31.6%
Level I	\$7,057	\$7,925	\$8,844	\$8,073	\$9,770	38.4%
Level II	\$7,357	\$8,225	\$9,294	\$8,798	\$10,250	39.3%
Level III	\$7,657	\$8,675	\$9,834	\$9,113	\$10,910	42.5%
Colorado State University - Pueblo						
Base	\$4,592	\$5,494	\$5,494	\$5,824	\$6,159	34.1%
Differential	\$5,282	\$6,244	\$6,244	\$6,221	\$7,020	32.9%
Fort Lewis College						
Resident	\$4,048	\$4,800	\$5,232	\$5,544	\$5,856	44.7%
University of Northern Colorado						
Resident	\$5,300	\$5,464	\$5,748	\$6,024	\$6,372	20.2%
Music, Theatre, and Dance	\$6,380	\$6,544	\$6,828	\$7,104	\$7,452	16.8%
Nursing	\$7,220	\$7,384	\$7,668	\$7,944	\$8,292	14.8%
Business	\$6,500	\$6,664	\$6,948	\$7,224	\$7,572	16.5%
Sciences	\$5,840	\$6,004	\$6,288	\$6,564	\$6,912	18.4%
Adams State University ¹						
Resident	\$3,312	\$3,816	\$4,872	\$5,160	\$5,448	64.5%
Business	\$3,552	\$3,981	\$5,160	\$5,472	\$5,448	53.4%
Nursing	\$3,672	\$4,206	\$6,432	\$6,816	\$7,350	100.2%
Colorado Mesa University						
Freshmen	\$5,780	\$6,102	\$6,438	\$6,812	\$7,185	24.3%
Sophomore-Senior ²	\$5,394	\$5,694	N/A	N/A	N/A	N/A
Metropolitan State University of Denver						
Resident	\$3,809	\$4,304	\$4,691	\$4,973	\$5,222	37.1%
Western State Colorado University						
Resident	\$3,922	\$4,627	\$5,275	\$5,539	\$5,844	49.0%
Colorado School of Mines						
Resident	\$12,585	\$13,590	\$14,400	\$14,790	\$15,225	21.0%
Colorado Community College System						
Arapahoe Community College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
CO NW Community College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Community College of Aurora	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Community College of Denver	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Front Range Community College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Lamar Community College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Morgan Community College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Northeastern Junior College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Otero Junior College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Pikes Peak Community College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Pueblo Community College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Red Rocks Community College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Trinidad State Junior College	\$3,176	\$3,383	\$3,585	\$3,747	\$3,915	23.3%
Aims Community College						
In District Resident	\$2,021	\$2,021	\$2,021	\$2,021	\$2,021	0.0%
In District - Low Differential	\$3,554	\$3,554	\$3,554	\$3,554	\$3,554	0.0%
In District - Medium Differential	\$3,708	\$3,708	\$3,708	\$3,708	\$3,708	0.0%
In District - High Differential	\$3,863	\$3,863	\$3,863	\$3,863	\$3,863	0.0%
Out of District Resident	\$3,172	\$3,172	\$3,172	\$3,172	\$3,172	0.0%
Out of District - Low Differential	\$6,180	\$6,180	\$6,180	\$6,180	\$6,180	0.0%
Out of District - Medium Differential	\$6,475	\$6,475	\$6,475	\$6,475	\$6,475	0.0%
Out of District - High Differential	\$6,802	\$6,802	\$6,802	\$6,802	\$6,802	0.0%
Colorado Mountain College						
100/200 Level In District	\$1,590	\$1,680	\$1,680	\$1,710	\$1,710	7.5%
300/400 Level In District	\$2,850	\$2,850	\$2,850	\$2,970	\$2,970	4.2%
100/200 Level In State	\$2,670	\$2,850	\$2,850	\$3,015	\$3,210	20.2%
300/400 Level In State	\$6,000	\$6,000	\$6,000	\$6,360	\$6,360	6.0%

NOTE:

Gray shading denotes a year in which the stated differential did not exist, but the base or equivalent differential is provided as a proxy for comparison purposes.

N/A denotes a year in which the stated tuition differential no longer exists.

¹ In 2013-14, Adams State University converted a portion of their fees to tuition.

² 2012-13 was the final year for the returning phase in rate at Colorado Mesa University.

Percent Change in 5 Year History of In-State Undergraduate Tuition Differentials (30 Credit Hours Per Academic Year)

Institution	% Change FY2010-11 to FY2011-12	% Change FY2011-12 to FY2012-13	% Change FY2012-13 to FY2013-14	% Change FY2013-14 to FY2014-15	% Change FY2014-15 to FY2015-16
University of Colorado - Boulder					
All-Other	9.3%	5.0%	8.7%	3.3%	2.9%
Business	9.3%	3.1%	5.5%	2.2%	1.9%
Engineering	9.4%	3.6%	6.4%	2.4%	2.2%
Media, Communication and Information	9.4%	4.8%	8.7%	3.2%	15.6%
Music	N/A	N/A	N/A	N/A	N/A
University of Colorado - Colorado Springs					
Incoming Freshman	7.2%	4.9%	6.0%	3.2%	3.5%
Linear Junior/Senior in LAS or SPA	7.1%	5.0%	5.9%	3.4%	3.6%
Linear Junior/Senior in COB or EAS	7.0%	5.1%	5.9%	3.3%	3.5%
Linear Junior/Senior in Beth El	7.0%	5.0%	5.9%	3.4%	0.0%
University of Colorado - Denver					
Lower Level	9.0%	17.8%	6.0%	3.5%	3.8%
Upper Level	9.0%	18.0%	6.0%	3.5%	0.0%
School of Nursing	3.1%	3.0%	5.9%	6.0%	3.5%
Colorado State University					
Resident	20.0%	9.0%	9.0%	5.0%	5.5%
Level I	N/A	12.3%	11.6%	-8.7%	21.0%
Level II	N/A	11.8%	13.0%	-5.3%	16.5%
Level III	N/A	13.3%	13.4%	-7.3%	19.7%
Colorado State University - Pueblo					
Base	12.9%	19.6%	0.0%	6.0%	5.8%
Differential	12.9%	18.2%	0.0%	-0.4%	12.8%
Fort Lewis College					
Resident	19.8%	18.6%	9.0%	6.0%	5.6%
University of Northern Colorado					
Resident	13.2%	3.1%	5.2%	4.8%	5.8%
Music, Theatre, and Dance	18.5%	2.6%	4.3%	4.0%	4.9%
Nursing	19.4%	2.3%	3.8%	3.6%	4.4%
Business	16.8%	2.5%	4.3%	4.0%	4.8%
Sciences	N/A	2.8%	4.7%	4.4%	5.3%
Adams State University ¹					
Resident	12.2%	15.2%	27.7%	5.9%	5.6%
Business	20.3%	12.1%	29.6%	6.0%	-0.4%
Nursing	24.4%	14.5%	52.9%	6.0%	7.8%
Colorado Mesa University					
Freshmen	5.5%	5.6%	5.5%	5.8%	5.5%
Sophomore-Senior ¹	5.5%	5.6%	N/A	N/A	N/A
Metropolitan State University of Denver					
Resident	22.6%	13.0%	9.0%	6.0%	5.0%
Western State Colorado University					
Resident	14.6%	18.0%	14.0%	5.0%	5.5%
Colorado School of Mines					
Resident	9.0%	8.0%	6.0%	2.7%	2.9%
Colorado Community College System					
Arapahoe Community College	10.0%	6.5%	6.0%	4.5%	4.5%
Colorado Northwestern Community College	10.0%	6.5%	6.0%	4.5%	4.5%
Community College of Aurora	10.0%	6.5%	6.0%	4.5%	4.5%
Community College of Denver	10.0%	6.5%	6.0%	4.5%	4.5%
Front Range Community College	10.0%	6.5%	6.0%	4.5%	4.5%
Lamar Community College	10.0%	6.5%	6.0%	4.5%	4.5%
Morgan Community College	10.0%	6.5%	6.0%	4.5%	4.5%
Northeastern Junior College	10.0%	6.5%	6.0%	4.5%	4.5%
Otero Junior College	10.0%	6.5%	6.0%	4.5%	4.5%
Pikes Peak Community College	10.0%	6.5%	6.0%	4.5%	4.5%
Pueblo Community College	10.0%	6.5%	6.0%	4.5%	4.5%
Red Rocks Community College	10.0%	6.5%	6.0%	4.5%	4.5%
Trinidad State Junior College	10.0%	6.5%	6.0%	4.5%	4.5%
Aims Community College					
In District Resident	3.0%	0.0%	0.0%	0.0%	0.0%
In District - Low Differential	3.0%	0.0%	0.0%	0.0%	0.0%
In District - Medium Differential	3.0%	0.0%	0.0%	0.0%	0.0%
In District - High Differential	3.0%	0.0%	0.0%	0.0%	0.0%
Out of District Resident	9.0%	0.0%	0.0%	0.0%	0.0%
Out of District - Low Differential	9.0%	0.0%	0.0%	0.0%	0.0%
Out of District - Medium Differential	9.0%	0.0%	0.0%	0.0%	0.0%
Out of District - High Differential	9.0%	0.0%	0.0%	0.0%	0.0%
Colorado Mountain College					
100/200 Level In District	8.2%	5.7%	0.0%	1.8%	0.0%
300/400 Level In District	N/A	0.0%	0.0%	4.2%	0.0%
100/200 Level In State	8.5%	6.7%	0.0%	5.8%	6.5%
300/400 Level In State	N/A	0.0%	0.0%	6.0%	0.0%

NOTE:

Gray shading denotes a year in which the stated differential did not exist, but the base or equivalent differential is provided as a proxy for comparison purposes.

N/A denotes a year in which the stated tuition differential no longer exists.

¹ In 2013-14, Adams State University converted a portion of their fees to tuition.

² 2012-13 was the final year for the returning phase in rate at Colorado Mesa University.

**Appendix B
One-Year Change Out-of-State Undergraduate Tuition and Fees (30 Credit Hours Per Academic Year)**

Institution	FY 2014-15 Out-of-State Tuition	FY 2014-15 Student Fees	FY 2014-15 Tuition and Fees	FY 2015-16 Out-of-State Tuition	FY 2015-16 Student Fees	FY 2015-16 Tuition and Fees	% Increase Out-of-State Tuition	% Increase Out-of-State Fees	% Increase Out-of-State Tuition & Fees
University of Colorado - Boulder									
All-Other	\$31,410	\$1,741	\$33,151	\$32,346	\$1,778	\$34,124	3.0%	2.2%	2.9%
Business	\$34,416	\$1,741	\$36,157	\$35,352	\$1,778	\$37,130	2.7%	2.2%	2.7%
Engineering	\$34,056	\$1,741	\$35,797	\$35,082	\$1,778	\$36,860	3.0%	2.2%	3.0%
Media, Communication and Information	\$31,734	\$1,741	\$33,475	\$33,846	\$1,778	\$35,624	6.7%	2.2%	6.4%
University of Colorado - Colorado Springs									
Linear Freshman & Sophomore	\$20,250	\$1,433	\$21,683	\$20,850	\$1,448	\$22,298	3.0%	1.1%	2.8%
Linear Junior/Senior in LAS or SPA	\$21,000	\$1,433	\$22,433	\$21,630	\$1,448	\$23,078	3.0%	1.1%	2.9%
Linear Junior/Senior in COB or EAS	\$21,750	\$1,433	\$23,183	\$22,410	\$1,448	\$23,858	3.0%	1.1%	2.9%
Linear Junior/Senior in Beth El	\$21,750	\$1,433	\$23,183	\$22,410	\$1,448	\$23,858	3.0%	1.1%	2.9%
University of Colorado - Denver									
Lower and Upper Level	\$27,030	\$1,078	\$28,108	\$28,020	\$1,299	\$29,319	3.7%	20.5%	4.3%
School of Nursing	\$26,040	\$297	\$26,337	\$26,250	\$297	\$26,547	0.8%	0.1%	0.8%
Colorado State University									
Non-Resident	\$24,048	\$2,029	\$26,076	\$25,010	\$2,257	\$27,267	4.0%	11.3%	4.6%
Level I	\$25,458	\$2,029	\$27,486	\$26,480	\$2,257	\$28,737	4.0%	11.3%	4.6%
Level II	\$25,908	\$2,029	\$27,936	\$26,960	\$2,257	\$29,217	4.1%	11.3%	4.6%
Level III	\$26,538	\$2,029	\$28,566	\$27,620	\$2,257	\$29,877	4.1%	11.3%	4.6%
Colorado State University - Pueblo									
Base	\$16,765	\$2,010	\$18,775	\$17,729	\$2,123	\$19,851	5.7%	5.6%	5.7%
Differential	\$17,560	\$2,010	\$19,570	\$18,569	\$2,123	\$20,692	5.7%	5.6%	5.7%
Fort Lewis College									
Non-Resident	\$16,072	\$1,708	\$17,780	\$16,072	\$1,745	\$17,817	0.0%	2.1%	0.2%
University of Northern Colorado									
Non-Resident	\$17,568	\$1,709	\$19,277	\$17,958	\$1,794	\$19,752	2.2%	5.0%	2.5%
Music, Theatre, and Dance	\$18,648	\$1,709	\$20,357	\$19,038	\$1,794	\$20,832	2.1%	5.0%	2.3%
Nursing	\$19,488	\$1,709	\$21,197	\$19,878	\$1,794	\$21,672	2.0%	5.0%	2.2%
Business	\$18,768	\$1,709	\$20,477	\$19,158	\$1,794	\$20,952	2.1%	5.0%	2.3%
Sciences	\$18,108	\$1,709	\$19,817	\$18,498	\$1,794	\$20,292	2.2%	5.0%	2.4%
Adams State University									
Non-Resident	\$15,960	\$2,855	\$18,815	\$11,580	\$3,126	\$14,706	-27.4%	9.5%	-21.8%
Colorado Mesa University									
Base	\$18,173	\$813	\$18,986	\$18,540	\$823	\$19,363	2.0%	1.2%	2.0%
Metropolitan State University of Denver									
Non-Resident	\$17,791	\$1,097	\$18,888	\$18,859	\$1,198	\$20,057	6.0%	9.2%	6.2%
Colorado HS/GED Tuition	\$8,210	\$1,097	\$9,308	\$8,676	\$1,198	\$9,874	5.7%	9.2%	6.1%
Western State Colorado University									
Non-Resident	\$15,984	\$2,335	\$18,319	\$16,848	\$2,607	\$19,455	5.4%	11.7%	6.2%
Colorado School of Mines									
Non-Resident	\$31,470	\$2,128	\$33,598	\$32,700	\$2,128	\$34,828	3.9%	0.0%	3.7%
Colorado Community College System									
Arapahoe Community College	\$15,371	\$178	\$15,549	\$16,062	\$202	\$16,264	4.5%	13.4%	4.6%
CO NW Community College	\$6,704	\$280	\$6,984	\$6,704	\$295	\$6,999	0.0%	5.4%	0.2%
Community College of Aurora	\$15,371	\$194	\$15,564	\$16,062	\$248	\$16,310	4.5%	28.3%	4.8%
Community College of Denver	\$15,371	\$833	\$16,204	\$16,062	\$1,001	\$17,063	4.5%	20.2%	5.3%
Front Range Community College	\$15,371	\$287	\$15,658	\$16,062	\$478	\$16,540	4.5%	66.4%	5.6%
Lamar Community College	\$6,704	\$409	\$7,113	\$6,704	\$414	\$7,117	0.0%	1.1%	0.1%
Morgan Community College	\$15,371	\$180	\$15,550	\$16,062	\$182	\$16,244	4.5%	1.5%	4.5%
Northeastern Junior College ¹	\$6,704	\$599	\$7,303	\$6,704	\$600	\$7,303	0.0%	0.1%	0.0%
Otero Junior College	\$6,704	\$299	\$7,003	\$6,704	\$294	\$6,997	0.0%	-1.7%	-0.1%
Pikes Peak Community College	\$15,371	\$296	\$15,667	\$16,062	\$303	\$16,365	4.5%	2.4%	4.5%
Pueblo Community College	\$15,371	\$550	\$15,921	\$16,062	\$564	\$16,626	4.5%	2.6%	4.4%
Red Rocks Community College	\$15,371	\$292	\$15,663	\$16,062	\$298	\$16,360	4.5%	2.0%	4.5%
Trinidad State Junior College	\$6,704	\$445	\$7,149	\$6,704	\$435	\$7,139	0.0%	-2.2%	-0.1%
Aims Community College									
Non-Resident	\$12,758	\$260	\$13,018	\$12,758	\$260	\$13,018	0.0%	0.0%	0.0%
Non-Resident - Low Differential	\$17,735	\$260	\$17,995	\$17,735	\$260	\$17,995	0.0%	0.0%	0.0%
Non-Resident - Medium Differential	\$18,617	\$260	\$18,877	\$18,617	\$260	\$18,877	0.0%	0.0%	0.0%
Non-Resident - High Differential	\$19,530	\$260	\$19,790	\$19,530	\$260	\$19,790	0.0%	0.0%	0.0%
Colorado Mountain College ²									
100/200 Level Non-Resident	\$9,510	\$180	\$9,690	\$11,190	\$180	\$11,370	17.7%	0.0%	17.3%
300/400 Level Non-Resident	\$12,870	\$180	\$13,050	\$12,870	\$180	\$13,050	0.0%	0.0%	0.0%

Note:
* Continuing non-resident students at UCB do not pay annual tuition increases during their studies. The tuition reported is for the entering freshman class.
N/A denotes a year in which the stated differential no longer exists.

Dark shading denotes what CCHE & DHE consider to be the "Base Tuition Rate" when differentials exist

¹ In 2013-14, Northeastern Junior College included room and board fees in non-resident tuition

² Fees at Colorado Mountain College do not apply to campuses without residence halls.

5 Year History of Out-of-State Undergraduate Tuition Differentials (30 Credit Hours Per Academic Year)

Institution	FY 2011-12 Out-of-State Tuition	FY 2012-13 Out-of-State Tuition	FY 2013-14 Out-of-State Tuition	FY 2014-15 Out-of-State Tuition	FY 2015-16 Out-of-State Tuition	5 Year % Increase Out-of-State Tuition
University of Colorado - Boulder						
All-Other	\$28,850	\$29,952	\$30,528	\$31,410	\$32,346	12.1%
Business	\$32,400	\$33,462	\$33,804	\$34,416	\$35,352	9.1%
Engineering	\$31,300	\$32,490	\$33,102	\$34,056	\$35,082	12.1%
Media, Communication and Information	\$29,150	\$30,258	\$30,834	\$31,734	\$33,846	16.1%
University of Colorado - Colorado Springs						
Linear Freshman & Sophomore	\$16,240	\$16,720	\$17,388	\$20,250	\$20,850	28.4%
Linear Junior/Senior in LAS or SPA	\$16,460	\$16,960	\$17,640	\$21,000	\$21,630	31.4%
Linear Junior/Senior in COB or EAS	\$16,760	\$17,260	\$17,960	\$21,750	\$22,410	33.7%
Linear Junior/Senior in Beth El	\$16,760	\$17,260	\$17,960	\$21,750	\$22,410	33.7%
University of Colorado - Denver						
Resident	\$21,138	\$23,124	\$24,940	\$27,030	\$28,020	32.6%
School of Nursing	\$24,570	\$24,570	\$24,570	\$26,040	\$26,250	6.8%
Colorado State University						
Non-Resident	\$22,007	\$22,667	\$23,347	\$24,048	\$25,010	13.6%
College of Business	N/A	N/A	N/A	N/A	N/A	N/A
College of Engineering	N/A	N/A	N/A	N/A	N/A	N/A
Department of Computer Science	N/A	N/A	N/A	N/A	N/A	N/A
Upper Division Courses	N/A	N/A	N/A	N/A	N/A	N/A
High Cost Programs	N/A	N/A	N/A	N/A	N/A	N/A
Level I	\$22,757	\$23,717	\$24,697	\$24,753	\$26,480	16.4%
Level II	\$23,057	\$24,017	\$25,147	\$24,978	\$26,960	16.9%
Level III	\$23,357	\$24,467	\$25,747	\$25,293	\$27,620	18.2%
Colorado State University - Pueblo						
Base	\$15,294	\$15,816	\$15,816	\$16,765	\$17,729	15.9%
Differential	\$15,984	\$16,566	\$16,566	\$17,162	\$18,569	16.2%
Fort Lewis College						
Non-Resident	\$16,072	\$16,072	\$16,072	\$16,072	\$16,072	0.0%
University of Northern Colorado						
Non-Resident	\$16,822	\$16,988	\$17,292	\$17,568	\$17,958	6.8%
Music, Theatre, and Dance	\$17,902	\$18,068	\$18,372	\$18,648	\$19,038	6.3%
Nursing	\$18,742	\$18,908	\$19,212	\$19,488	\$19,878	6.1%
Business	\$18,022	\$18,188	\$18,492	\$18,768	\$19,158	6.3%
Sciences	\$17,362	\$17,528	\$17,832	\$18,108	\$18,498	6.5%
Adams State University						
Non-Resident	\$13,560	\$14,784	\$15,504	\$15,960	\$11,580	-14.6%
Colorado Mesa University						
Freshmen	\$15,958	\$16,280	\$17,178	\$18,173	\$18,540	16.2%
Sophomore-Senior ¹	\$14,894	\$15,195	N/A	N/A	N/A	N/A
Metropolitan State University of Denver						
Non-Resident	\$14,665	\$15,985	\$16,784	\$17,791	\$18,859	28.6%
Colorado HS/GED Tuition	N/A	\$7,157	\$7,801	\$8,210	\$8,676	N/A
Western State Colorado University						
Non-Resident	\$13,536	\$14,496	\$15,216	\$15,984	\$16,848	24.5%
Colorado School of Mines						
Non-Resident	\$27,270	\$28,620	\$30,330	\$31,470	\$32,700	19.9%
Colorado Community College System						
Arapahoe Community College	\$13,029	\$13,877	\$14,709	\$15,371	\$16,062	23.3%
Colorado Northwestern Community College	\$6,294	\$6,704	\$6,704	\$6,704	\$6,704	6.5%
Community College of Aurora	\$13,029	\$13,877	\$14,709	\$15,371	\$16,062	23.3%
Community College of Denver	\$13,029	\$13,877	\$14,709	\$15,371	\$16,062	23.3%
Front Range Community College	\$13,029	\$13,877	\$14,709	\$15,371	\$16,062	23.3%
Lamar Community College	\$6,294	\$6,704	\$6,704	\$6,704	\$6,704	6.5%
Morgan Community College	\$13,029	\$13,877	\$14,709	\$15,371	\$16,062	23.3%
Northeastern Junior College ²	\$10,421	\$11,099	\$11,765	\$6,704	\$6,704	-35.7%
Otero Junior College	\$6,294	\$6,704	\$6,704	\$6,704	\$6,704	6.5%
Pikes Peak Community College	\$13,029	\$13,877	\$14,709	\$15,371	\$16,062	23.3%
Pueblo Community College	\$13,029	\$13,877	\$14,709	\$15,371	\$16,062	23.3%
Red Rocks Community College	\$13,029	\$13,877	\$14,709	\$15,371	\$16,062	23.3%
Trinidad State Junior College	\$6,294	\$6,704	\$6,704	\$6,704	\$6,704	17.1%
Aims Community College						
Non-Resident	\$12,756	\$12,756	\$12,758	\$12,758	\$12,758	0.0%
Non-Resident - Low Differential	\$17,735	\$17,735	\$17,735	\$17,735	\$17,735	0.0%
Non-Resident - Medium Differential	\$18,617	\$18,617	\$18,617	\$18,617	\$18,617	0.0%
Non-Resident - High Differential	\$19,530	\$19,530	\$19,530	\$19,530	\$19,530	0.0%
Colorado Mountain College						
100/200 Level Non-Resident	\$8,370	\$8,970	\$8,970	\$9,510	\$11,190	33.7%
300/400 Level Non-Resident	\$12,150	\$12,150	\$12,150	\$12,870	\$12,870	5.9%

NOTE:

Gray shading denotes a year in which the stated differential did not exist, but the base or equivalent differential is provided as a proxy for comparison purposes.

N/A denotes a year in which the stated tuition differential no longer exists.

¹ 2012-13 was the final year for the returning phase in rate at Colorado Mesa University.

² Before 2014-15, Northeastern Junior College included room and board fees in out-of-state tuition

Percent change in 5 Year History of Out-of-State Undergraduate Tuition Differentials (30 Credit Hours Per Academic Year)

Institution	% Change FY2010-11 to FY2011-12	% Change FY2011-12 to FY2012-13	% Change FY2012-13 to FY2013-14	% Change FY2013-14 to FY2014-15	% Change FY2014-15 to FY2015-16
University of Colorado - Boulder					
All-Other	3.0%	3.8%	1.9%	3%	3%
Business	2.9%	3.3%	1.0%	2%	3%
Engineering	3.0%	3.8%	1.9%	3%	3%
Media, Communication and Information	3.0%	3.8%	1.9%	3%	7%
University of Colorado - Colorado Springs					
Linear Freshman & Sophomore	2.0%	3.0%	4.0%	16%	3%
Linear Junior/Senior in LAS or SPA	2.0%	3.0%	4.0%	19%	3%
Linear Junior/Senior in COB or EAS	1.9%	3.0%	4.1%	21%	3%
Linear Junior/Senior in Beth El	1.9%	3.0%	4.1%	21%	3%
University of Colorado - Denver					
Non-Resident	10.5%	9.4%	7.9%	8%	4%
School of Nursing	0.0%	0.0%	0.0%	6%	1%
Colorado State University					
Non-Resident	3.0%	3.0%	3.0%	3%	4%
College of Business	N/A	N/A	N/A	N/A	N/A
College of Engineering	N/A	N/A	N/A	N/A	N/A
Department of Computer Science	N/A	N/A	N/A	N/A	N/A
Upper Division Courses	N/A	N/A	N/A	N/A	N/A
High Cost Programs	N/A	N/A	N/A	N/A	N/A
Level I	N/A	4.2%	4.1%	0%	7%
Level II	N/A	4.2%	4.7%	-1%	8%
Level III	N/A	4.8%	5.2%	-2%	9%
Colorado State University - Pueblo					
Base	8.2%	3.4%	0.0%	6%	6%
Differential	8.4%	3.6%	0.0%	4%	8%
Fort Lewis College					
Non-Resident	0.0%	0.0%	0.0%	0%	0%
University of Northern Colorado					
Non-Resident	6.0%	1.0%	1.8%	2%	2%
Music, Theatre, and Dance	8.0%	0.9%	1.7%	2%	2%
Nursing	8.8%	0.9%	1.6%	1%	2%
Business	7.6%	0.9%	1.7%	1%	2%
Sciences	N/A	1.0%	1.7%	2%	2%
Adams State University					
Non-Resident	5.0%	9.0%	4.9%	3%	-27%
Colorado Mesa University					
Freshmen	1.9%	2.0%	5.5%	6%	2%
Sophomore-Senior ¹	1.9%	2.0%	N/A	N/A	N/A
Metropolitan State University of Denver					
Non-Resident	9.0%	9.0%	5.0%	6%	6%
Colorado HS/GED Tuition	N/A	N/A	9.0%	5%	6%
Western State Colorado University					
Resident	5.0%	7.1%	5.0%	5%	5%
Colorado School of Mines					
Resident	5.0%	5.0%	6.0%	4%	4%
Colorado Community College System					
Arapahoe Community College	5.0%	6.5%	6.0%	4%	4%
Colorado Northwestern Community College	10.0%	6.5%	0.0%	0%	0%
Community College of Aurora	5.0%	6.5%	6.0%	4%	4%
Community College of Denver	5.0%	6.5%	6.0%	4%	4%
Front Range Community College	5.0%	6.5%	6.0%	4%	4%
Lamar Community College	10.0%	6.5%	0.0%	0%	0%
Morgan Community College	5.0%	6.5%	6.0%	4%	4%
Northeastern Junior College ²	5.0%	6.5%	6.0%	-43%	0%
Otero Junior College	10.0%	6.5%	0.0%	0%	0%
Pikes Peak Community College	5.0%	6.5%	6.0%	4%	4%
Pueblo Community College	5.0%	6.5%	6.0%	4%	4%
Red Rocks Community College	5.0%	6.5%	6.0%	4%	4%
Trinidad State Junior College	10.0%	6.5%	0.0%	0%	0%
Aims Community College					
Non-Resident	5.0%	0.0%	0.0%	0%	0%
Non-Resident - Low Differential	5.0%	0.0%	0.0%	0%	0%
Non-Resident - Medium Differential	5.0%	0.0%	0.0%	0%	0%
Non-Resident - High Differential	5.0%	0.0%	0.0%	0%	0%
Colorado Mountain College					
100/200 Level Non-Resident	9.0%	7.2%	0.0%	6%	18%
300/400 Level Non-Resident	N/A	0.0%	0.0%	6%	0%

NOTE:
 Gray shading denotes a year in which the stated differential did not exist, but the base or equivalent differential is provided as a proxy for comparison purposes.
 N/A denotes a year in which the stated tuition differential no longer exists.
¹ 2012-13 was the final year for the returning phase in rate at Colorado Mesa University.
² Before 2014-15, Northeastern Junior College included room and board fees in Out-of-State tuition

Appendix C

5 Year History of Undergraduate Mandatory Fees (30 Credit Hours per Academic Year)

* Includes mandatory fees paid by all enrolled students. Institutions may utilize course or program specific fees or charges-for-service which are not listed.

Institution	FY 2011-12 Student Fees	FY 2012-13 Student Fees	FY 2013-14 Student Fees	FY 2014-15 Student Fees	FY 2015-16 Student Fees	5 Year % Increase
University of Colorado - Boulder Mandatory Fees	\$1,480	\$1,426	\$1,587	\$1,741	\$1,778	20.1%
University of Colorado - Colorado Springs Mandatory Fees	\$1,174	\$1,189	\$1,189	\$1,433	\$1,448	23.3%
University of Colorado - Denver Mandatory Fees	\$926	\$960	\$1,016	\$1,078	\$1,299	40.3%
Colorado State University Mandatory Fees	\$1,735	\$1,774	\$1,819	\$2,029	\$2,257	30.1%
Colorado State University - Pueblo Mandatory Fees	\$1,677	\$1,833	\$1,833	\$2,010	\$2,123	26.6%
Fort Lewis College Mandatory Fees	\$1,544	\$1,662	\$1,691	\$1,708	\$1,745	13.0%
University of Northern Colorado Mandatory Fees	\$1,324	\$1,373	\$1,420	\$1,709	\$1,794	35.5%
Adams State University Mandatory Fees ¹	\$2,315	\$2,632	\$2,577	\$2,855	\$3,126	35.0%
Colorado Mesa University Mandatory Fees	\$768	\$768	\$768	\$813	\$823	7.1%
Metropolitan State University of Denver Mandatory Fees	\$1,025	\$1,037	\$1,053	\$1,097	\$1,198	16.9%
Western State Colorado University Mandatory Fees	\$1,582	\$1,822	\$2,068	\$2,335	\$2,607	64.8%
Colorado School of Mines Mandatory Fees	\$1,869	\$2,064	\$2,085	\$2,128	\$2,128	13.9%
Colorado Community College System						
Arapahoe Community College	\$185	\$192	\$174	\$178	\$202	9.2%
CO Northwestern Community College	\$249	\$280	\$280	\$280	\$295	18.4%
Community College of Aurora	\$179	\$185	\$189	\$194	\$248	38.7%
Community College of Denver	\$652	\$729	\$800	\$833	\$1,001	53.6%
Front Range Community College	\$227	\$230	\$282	\$287	\$478	110.6%
Lamar Community College	\$397	\$402	\$405	\$409	\$414	4.3%
Morgan Community College	\$172	\$175	\$177	\$180	\$182	5.8%
Northeastern Junior College	\$595	\$596	\$599	\$599	\$600	0.8%
Otero Junior College	\$206	\$287	\$292	\$299	\$294	42.5%
Pikes Peak Community College	\$274	\$283	\$288	\$296	\$303	10.7%
Pueblo Community College	\$511	\$529	\$537	\$550	\$564	10.4%
Red Rocks Community College	\$243	\$285	\$286	\$292	\$298	22.3%
Trinidad State Junior College	\$406	\$435	\$434	\$445	\$435	7.2%
Aims Community College Mandatory Fees	\$600	\$600	\$260	\$260	\$260	-56.7%
Colorado Mountain College Mandatory Fees ²	\$180	\$180	\$180	\$180	\$180	0.0%

NOTE:

¹In 2013-14, Adams State University converted a portion of their fees to tuition.

²Fees at Colorado Mountain College do not apply to campuses without residence halls.

Percent Change in 5 Year History of Undergraduate Mandatory Fees (30 Credit Hours per Academic Year)

Institution	% Change FY2010-11 to FY2011-12	% Change FY2011-12 to FY2012-13	% Change FY2012-13 to FY2013-14	% Change FY2013-14 to FY2014-15	% Change FY2014-15 to FY2015-16
University of Colorado - Boulder Mandatory Fees	(0.9%)	(3.6%)	11.3%	9.7%	2.1%
University of Colorado - Colorado Springs Mandatory Fees	2.4%	1.3%	0.0%	20.5%	1.1%
University of Colorado - Denver Mandatory Fees	4.9%	3.7%	5.8%	6.1%	20.5%
Colorado State University Mandatory Fees	0.4%	2.2%	2.6%	11.5%	11.3%
Colorado State University - Pueblo Mandatory Fees	8.4%	9.3%	0.0%	9.7%	5.6%
Fort Lewis College Mandatory Fees	0.0%	7.6%	1.7%	1.0%	2.1%
University of Northern Colorado Mandatory Fees	0.5%	3.7%	3.4%	20.3%	5.0%
Adams State University Mandatory Fees ¹	14.7%	13.7%	(2.1%)	10.8%	9.5%
Colorado Mesa University Mandatory Fees	0.0%	0.0%	(0.0%)	5.9%	1.2%
Metropolitan State University of Denver Mandatory Fees	4.0%	1.2%	1.6%	4.2%	9.2%
Western State Colorado University Mandatory Fees	16.9%	15.2%	13.5%	12.9%	11.7%
Colorado School of Mines Mandatory Fees	0.8%	10.4%	1.0%	2.1%	0.0%
Colorado Community College System					
Arapahoe Community College	1.9%	3.6%	(9.4%)	2.6%	13.4%
CO Northwestern Community College	0.2%	12.4%	0.0%	0.0%	5.4%
Community College of Aurora	0.6%	3.3%	2.2%	2.4%	28.3%
Community College of Denver	2.4%	11.9%	9.7%	4.1%	20.2%
Front Range Community College	(23.4%)	1.5%	22.6%	1.8%	66.4%
Lamar Community College	0.7%	1.3%	0.7%	1.1%	1.1%
Morgan Community College	1.1%	1.5%	1.1%	1.5%	1.5%
Northeastern Junior College	0.0%	0.2%	0.5%	0.0%	0.1%
Otero Junior College	0.2%	39.1%	1.7%	2.4%	-1.7%
Pikes Peak Community College	1.8%	3.4%	1.8%	2.8%	2.4%
Pueblo Community College	0.1%	3.5%	1.5%	2.4%	2.6%
Red Rocks Community College	0.4%	17.1%	0.4%	2.1%	2.0%
Trinidad State Junior College	0.1%	7.2%	(0.2%)	2.5%	-2.2%
Aims Community College Mandatory Fees	7.1%	0.0%	(56.7%)	0.0%	0.0%
Colorado Mountain College Mandatory Fees ²	0.0%	0.0%	0.0%	0.0%	0.0%

NOTE:

For FY09-10 the official CCHE policy on mandatory fees was amended with new definitions for mandatory fees. This may impact the

¹In 2013-14, Adams State University converted a portion of their fees to tuition.

² Fees at Colorado Mountain College do not apply to campuses without residence halls.

Appendix D

Additional Charges

Institution	Course Fee	Program Fee	Charge-For-Service
Adams State University	Yes	No	Yes
Colorado School of Mines	Yes	Yes	Yes
Colorado State University System			
Colorado State University	Yes	Yes	Yes
Colorado State University - Pueblo	Yes	Yes	Yes
Fort Lewis College	Yes	No	Yes
Colorado Mesa University	Yes	No	Yes
Metropolitan State University of Denver	No	Yes	Yes
University of Colorado System			
University of Colorado - Boulder	Yes	Yes	Yes
University of Colorado - Colorado Springs	Yes	Yes	Yes
University of Colorado - Denver	Yes	Yes	Yes
University of Northern Colorado	Yes	Yes	Yes
Western State Colorado University	Yes	Yes	Yes
Colorado Community College System			
Arapahoe Community College	Yes	No	Yes
Colorado Northwestern Community College	Yes	No	Yes
Community College of Aurora	Yes	Yes	Yes
Community College of Denver	Yes	No	Yes
Front Range Community College	Yes	No	Yes
Lamar Community College	Yes	No	Yes
Morgan Community College	Yes	Yes	Yes
Northeastern Junior College	Yes	No	Yes
Otero Junior College	Yes	Yes	Yes
Pikes Peak Community College	Yes	No	Yes
Pueblo Community College	Yes	No	Yes
Red Rocks Community College	Yes	Yes	Yes
Trinidad State Junior College	Yes	No	Yes
Aims Community College	Yes	No	Yes
Colorado Mountain College	Yes	Yes	Yes

NOTE:

Course Fees - Charges associated with the delivery of a specific course that are required only by students enrolled in the course (e.g. Art 101)

Program Fees - Charges associated with an academic program that are required only by students enrolled in the program (e.g. All Art)

Charges-For-Service - Costs associated with a specific service that are required only by students using said service (e.g. transcript fee; application fee; returned check charge; orientation charge)

Appendix E

5 Year History of In-State Graduate & Professional Tuition Differentials (24 Credit Hours per Academic Year)

Institution	FY 2011-12 In-State Tuition	FY 2012-13 In-State Tuition	FY 2013-14 In-State Tuition	FY 2014-15 In-State Tuition	FY 2015-16 In-State Tuition	5 Year % Increase In- State Tuition
University of Colorado - Boulder						
All-Other	\$9,378	\$9,738	\$9,918	\$10,224	\$10,530	12.3%
Engineering	\$12,258	\$12,726	\$12,960	\$13,356	\$13,680	11.6%
Engineering Prof Masters	N/A	N/A	N/A	N/A	\$20,640	N/A
Media, Communications and Information	\$9,378	\$9,738	\$9,918	\$10,224	\$10,530	28.2%
Law- JD	N/A	N/A	N/A	\$29,718	\$29,718	N/A
Law Prof Masters	N/A	N/A	N/A	N/A	\$25,464	N/A
Business Prof	N/A	N/A	N/A	\$21,816	\$22,464	N/A
Business PhD	N/A	N/A	N/A	\$14,634	\$14,994	N/A
MBA	N/A	N/A	N/A	\$16,866	\$17,370	N/A
University of Colorado - Colorado Springs						
Communication	\$7,974	\$8,434	\$8,960	\$9,252	\$10,368	30.0%
Geography	\$7,974	\$8,434	\$8,960	\$9,252	\$10,368	30.0%
History	\$7,974	\$8,434	\$8,960	\$9,252	\$10,368	30.0%
Psychology	\$7,974	\$8,434	\$8,960	\$9,252	\$10,368	30.0%
Sociology	\$7,974	\$8,434	\$8,960	\$9,252	\$10,368	30.0%
Basic Science	\$7,974	\$8,434	\$8,960	\$9,252	\$10,368	30.0%
Education	\$9,180	\$9,600	\$10,288	\$11,824	\$11,800	28.5%
Public Affairs	\$9,180	\$9,600	\$10,288	\$11,824	\$11,800	28.5%
Business	\$9,180	\$9,600	\$10,288	\$11,940	\$13,314	45.0%
Engineering	\$9,180	\$9,600	\$10,288	\$11,940	\$13,314	45.0%
Geropsychology	\$9,180	\$9,600	\$10,288	\$11,940	\$13,314	45.0%
Beth El Nursing	\$12,558	\$13,056	\$13,840	\$15,620	\$14,088	12.2%
Health Sciences	\$12,558	\$13,056	\$13,840	\$15,620	\$14,088	12.2%
University of Colorado - Denver						
Liberal Arts & Sciences	\$6,744	\$6,980	\$7,260	\$8,344	\$8,688	28.8%
Architecture & Planning	\$8,134	\$8,418	\$8,754	\$10,014	\$10,488	28.9%
Arts & Media	\$8,226	\$8,514	\$8,854	\$10,188	\$10,608	29.0%
Education	\$6,978	\$7,222	\$7,510	\$8,174	\$8,544	22.4%
Engineering & Applied Science	\$8,226	\$8,514	\$8,854	\$10,188	\$10,608	29.0%
Engineering & Applied Science, Bioengineering					\$11,256	N/A
Public Affairs	\$9,388	\$9,718	\$10,106	\$11,560	\$12,096	28.8%
Phd Engineering	N/A	N/A	N/A	\$7,044	\$6,984	N/A
Health						
MS in Anesthesiology	N/A	N/A	\$11,280	\$16,080	\$14,880	N/A
MS in Physician Assistant Studies	N/A	N/A	N/A	\$8,568	\$8,568	N/A
MS in Genetic Counseling	\$12,120	\$15,900	\$13,368	\$13,368	\$14,040	15.8%
MS in Clinical Science	\$3,384	\$3,888	\$2,264	\$6,072	\$9,600	183.7%
MS in Modern Anatomy	N/A	N/A	N/A	\$15,720	\$16,344	N/A
MS in Nursing	\$11,400	\$11,760	\$12,480	\$13,440	\$14,040	23.2%
PhD in Nursing	\$10,800	\$11,160	\$12,000	\$12,600	\$13,200	22.2%
MS in Public Health	\$14,472	\$15,336	\$16,176	\$16,992	\$17,592	21.6%
DRPH in Public Health	N/A	N/A	N/A	\$10,608	\$10,992	N/A
MS Biomedical Science and Technology	N/A	N/A	N/A	N/A	\$10,920	N/A
MS in Biostatistics and PhD in Analytical Health Sciences	\$9,024	\$9,576	\$10,104	\$11,592	\$12,000	40.0%
PhD in Biostatistics	N/A	N/A	N/A	\$10,608	\$10,992	N/A
PhD Basic Science	N/A	N/A	N/A	N/A	\$7,872	N/A
Professional						
Doctor of Physical Therapy	\$9,576	\$10,056	\$10,560	\$11,208	\$11,544	20.6%
Doctor of Nursing Practice	\$11,400	\$11,760	\$12,480	\$13,440	\$14,040	23.2%
Dentistry - DDS	\$26,484	\$28,868	\$30,889	\$32,125	\$33,330	25.8%
Medicine - MD	\$29,984	\$32,683	\$33,663	\$34,639	\$35,678	19.0%
Pharmacy - PharmD	\$20,910	\$22,582	\$24,614	\$25,599	\$26,632	27.4%
Colorado State University						
Graduate School	\$7,992	\$8,392	\$8,811	\$9,075	\$9,348	17.0%
Professional Veterinary Medicine	\$21,764	\$23,328	\$24,452	\$25,919	\$27,474	26.2%
Colorado State University - Pueblo						
Base	\$5,150	\$5,640	\$5,640	\$5,978	\$6,322	22.7%
Teacher Education	\$4,690	\$5,135	\$5,135	\$5,978	\$5,980	27.5%
Business	\$7,154	\$7,824	\$7,824	\$8,858	\$9,367	30.9%
Computer Information Sciences	\$7,154	\$7,824	\$7,824	\$8,858	\$9,367	30.9%
Nursing	\$6,314	\$6,912	\$6,912	\$8,858	\$9,367	48.4%
Engineering	\$6,314	\$6,912	\$6,912	\$8,858	\$9,367	48.4%
Fort Lewis College						
Resident ¹	N/A	N/A	\$7,200	\$7,632	\$8,088	N/A
University of Northern Colorado ²						
Masters-Education	\$8,520	\$10,224	\$10,632	\$10,944	\$11,496	34.9%
Masters-Biomedical Science	\$10,680	\$11,256	\$11,592	\$11,928	\$12,288	15.1%
Masters-Liberal Arts & Sciences	\$9,792	\$11,256	\$11,712	\$12,072	\$12,552	28.2%
Masters-Science, Accounting & Music	\$10,680	\$12,288	\$12,648	\$13,032	\$13,296	24.5%
Doctoral-Audiology	\$11,952	\$10,920	\$11,352	\$11,688	\$12,144	1.6%
Doctoral -Higher Ed and Student Affairs	\$10,920	\$12,312	\$12,816	\$13,200	\$13,608	24.6%
Leadership	\$10,920	\$12,888	\$13,392	\$13,800	\$14,208	30.1%
Doctoral-Education & Liberal Arts	\$10,920	\$13,392	\$13,920	\$14,328	\$14,616	22.3%
Doctoral-Nursing, Sciences, Music	\$11,952	\$13,392	\$13,920	\$14,328	\$14,616	22.3%
Adams State University						
Art	\$4,656	\$5,136	\$5,568	\$5,568	\$5,880	26.3%
Counselor Education	\$6,840	\$7,440	\$7,680	\$7,680	\$14,040	105.3%
HPPE	\$4,656	\$5,136	\$5,568	\$5,568	\$5,880	26.3%
Teacher Education	\$7,080	\$7,440	\$7,680	\$7,680	\$7,680	8.3%
Colorado Mesa University						
Base	\$5,450	\$5,690	\$6,022	\$6,371	\$6,720	23.3%
Business	\$7,560	\$7,800	\$8,248	\$8,726	\$9,206	21.8%
Nursing	\$7,440	\$7,680	\$8,121	\$8,592	\$9,072	21.9%
Teacher Education	\$7,080	\$7,320	\$7,742	\$8,191	\$8,640	22.0%
Metropolitan State University of Denver						
Teacher Education	\$6,960	\$7,865	\$8,573	\$8,573	\$10,716	54.0%
Accounting	\$3,809	\$4,304	\$4,691	\$4,973	\$10,490	175.4%
Social Work	\$6,960	\$7,865	\$8,573	\$9,088	\$12,041	73.0%
Colorado School of Mines						
Resident	\$12,585	\$13,590	\$14,400	\$14,790	\$15,225	21.0%

NOTE:

Gray shading denotes a year in which the stated differential did not exist, but the base or equivalent differential is provided as a proxy for comparison purp
 N/A denotes a year in which the stated tuition differential no longer exists.

¹ FLC began offering graduate courses in FY 2013-14

² UNC graduate degree programs listed are examples

Percent Change in 5 Year History of In-State Graduate & Professional Tuition Differentials (24 Credit Hours per Academic Year)

Institution	% Change FY2010-11 to FY2011-12	% Change FY2011-12 to FY2012-13	% Change FY2012-13 to FY2013-14	% Change FY2013-14 to FY2014-15	% Change FY2014-15 to FY2015-16
University of Colorado - Boulder					
All-Other	5.0%	3.8%	1.8%	3.1%	3.0%
Engineering	4.9%	3.8%	1.8%	3.1%	2.4%
Engineering Prof Masters	N/A	N/A	N/A	N/A	N/A
Media, Communications and Information	5.0%	3.8%	1.8%	3.1%	17.6%
Law - Year 1	7.9%	1.7%	0.0%	N/A	N/A
Law - Year 2	11.6%	8.9%	0.8%	N/A	N/A
Law - Year 3	9.9%	12.7%	7.8%	N/A	N/A
Law- JD	N/A	N/A	N/A	N/A	0.0%
Law Prof Masters	N/A	N/A	N/A	N/A	N/A
Law - LLM	5.1%	0.0%	(8.2%)	0.0%	N/A
Business Prof	N/A	N/A	N/A	N/A	3.0%
Business PhD	N/A	N/A	N/A	N/A	2.5%
MBA	N/A	N/A	N/A	N/A	3.0%
MBA Business Year 1	5.0%	3.8%	1.8%	N/A	N/A
MBA Business Year 2	5.0%	3.7%	2.0%	N/A	N/A
University of Colorado - Colorado Springs					
Communication	7.4%	5.8%	6.2%	3.3%	12.1%
Geography	7.4%	5.8%	6.2%	3.3%	12.1%
History	7.4%	5.8%	6.2%	3.3%	12.1%
Psychology	7.4%	5.8%	6.2%	3.3%	12.1%
Sociology	7.4%	5.8%	6.2%	3.3%	12.1%
Basic Science	7.4%	5.8%	6.2%	3.3%	12.1%
Education	8.5%	4.6%	7.2%	14.9%	(0.2%)
Public Affairs	8.5%	4.6%	7.2%	14.9%	(0.2%)
Business	8.5%	4.6%	7.2%	16.1%	11.5%
Engineering	8.5%	4.6%	7.2%	16.1%	11.5%
Geropsychology	8.5%	4.6%	7.2%	16.1%	11.5%
Beth El Nursing	9.1%	4.0%	6.0%	12.9%	(9.8%)
Health Sciences	9.1%	4.0%	6.0%	12.9%	(9.8%)
University of Colorado - Denver					
Liberal Arts & Sciences	1.8%	3.5%	4.0%	14.9%	4.1%
Architecture & Planning	1.8%	3.5%	4.0%	14.4%	4.7%
Arts & Media	1.8%	3.5%	4.0%	15.1%	4.1%
Education	0.0%	3.5%	4.0%	8.8%	4.5%
Engineering & Applied Science	1.8%	3.5%	4.0%	15.1%	4.1%
Engineering & Applied Science, Bioengineering	N/A	N/A	N/A	N/A	N/A
Public Affairs	1.8%	3.5%	4.0%	14.4%	4.6%
Business & Non-Degree	1.8%	3.5%	3.7%	15.3%	N/A
PhD Engineering	N/A	N/A	N/A	N/A	(0.9%)
Health					
MS in Anesthesiology	N/A	N/A	N/A	42.6%	(7.5%)
MS in Child Health Associate	4.9%	5.0%	0.0%	N/A	N/A
MS in Physician Assistant Studies	N/A	N/A	N/A	N/A	0.0%
MS in Genetic Counseling	5.0%	31.2%	(15.9%)	0.0%	5.0%
MS in Clinical Science	2.9%	14.9%	(41.8%)	168.2%	58.1%
MS in Modern Anatomy	N/A	N/A	N/A	N/A	4.0%
MS in Nursing	3.3%	3.2%	6.1%	7.7%	4.5%
PhD in Nursing	5.9%	3.3%	7.5%	5.0%	4.8%
MS in Public Health	9.0%	6.0%	5.5%	5.0%	3.5%
DRPH in Public Health	N/A	N/A	N/A	N/A	3.6%
MS Biomedical Science and Technology	N/A	N/A	N/A	N/A	N/A
MS in Biostatistics and PhD in Analytical Health Sciences	9.0%	6.1%	5.5%	14.7%	3.5%
PhD in Biostatistics	N/A	N/A	N/A	N/A	3.6%
PhD Basic Science	N/A	N/A	N/A	N/A	N/A
Professional					
Doctor of Physical Therapy	5.0%	5.0%	5.0%	6.1%	3.0%
Doctor of Nursing Practice	3.3%	3.2%	6.1%	7.7%	4.5%
Dentistry - DDS	9.0%	9.0%	7.0%	4.0%	3.8%
Medicine - MD	6.3%	9.0%	3.0%	2.9%	3.0%
Pharmacy - PharmD	7.0%	8.0%	9.0%	4.0%	4.0%
Colorado State University					
Graduate School	7.5%	5.0%	5.0%	3.0%	3.0%
Professional Veterinary Medicine	16.8%	7.2%	4.8%	6.0%	6.0%
Colorado State University - Pueblo					
Base	12.9%	9.5%	0.0%	6.0%	5.7%
Teacher Education	13.0%	9.5%	N/A	16.4%	0.0%
Business	13.0%	9.4%	0.0%	13.2%	5.7%
Computer Information Sciences	13.0%	9.4%	0.0%	13.2%	5.7%
Nursing	13.0%	9.5%	0.0%	28.2%	5.7%
Engineering	13.0%	9.5%	0.0%	28.2%	5.7%
Fort Lewis College					
Resident ¹	N/A	N/A	N/A	6.0%	6.0%
University of Northern Colorado ²					
Masters-Education	14.9%	20.0%	4.0%	2.9%	5.0%
Masters-Biomedical Science	N/A	5.4%	3.0%	2.9%	3.0%
Masters-Liberal Arts & Sciences	20.0%	15.0%	4.1%	3.1%	4.0%
Masters-Science, Accounting & Music	N/A	15.1%	2.9%	3.0%	2.0%
Doctoral-Audiology	15.0%	(8.6%)	4.0%	3.0%	3.9%
Doctoral -Higher Ed and Student Affairs Leadership	14.9%	12.7%	4.1%	3.0%	3.1%
Doctoral-Education & Liberal Arts	14.9%	18.0%	3.9%	3.0%	3.0%
Doctoral-Nursing, Sciences, Music	15.0%	12.0%	3.9%	2.9%	2.0%
Adams State University					
ART	N/A	10.3%	8.4%	0.0%	5.6%
HPPE	N/A	10.3%	8.4%	0.0%	5.6%
Teacher Education	34.1%	5.1%	3.2%	0.0%	0.0%
Colorado Mesa University					
Resident	N/A	N/A	N/A	N/A	N/A
Returning	4.6%	4.4%	5.8%	5.8%	5.5%
Business - Incoming	3.3%	3.2%	5.7%	5.8%	5.5%
Nursing - incoming	3.3%	3.2%	5.7%	5.8%	5.6%
Teacher Education - Incoming	3.5%	3.4%	5.8%	5.8%	5.5%
Metropolitan State University of Denver					
Teacher Education	33.0%	13.0%	9.0%	(0.0%)	25.0%
Accounting	22.6%	13.0%	9.0%	6.0%	111.0%
Social Work	N/A	13.0%	9.0%	6.0%	32.5%
Colorado School of Mines					
Resident	9.0%	8.0%	6.0%	2.7%	2.9%

NOTE:

Gray shading denotes a year in which the stated differential did not exist, but the base or equivalent differential is provided as a proxy for comparison purposes.

N/A denotes a year in which the stated tuition differential no longer exists.

¹ FLC began offering graduate courses in FY 2013-14

² UNC graduate degree programs listed are examples

5 Year History of Out-of-State Graduate & Professional Tuition Differentials (24 Credit Hours per Academic Year)

Institution	FY 2011-12 Out-of-State Tuition (24 CHRS)	FY 2012-13 Out-of-State Tuition (24 CHRS)	FY 2013-14 Out-of-State Tuition (24 CHRS)	FY 2014-15 Out-of-State Tuition (24 CHRS)	FY 2015-16 Out-of-State Tuition (24 CHRS)	5 Year % Increase Out-of-State
University of Colorado - Boulder						
All-Other	\$25,254	\$26,208	\$26,712	\$27,522	\$27,828	10.2%
Business	\$28,368	\$29,448	\$30,006	\$30,552	\$31,464	10.9%
Business PhD	N/A	N/A	N/A	\$30,906	\$31,212	N/A
Engineering	\$27,558	\$28,602	\$29,142	\$30,024	\$30,330	10.1%
Media, Communication and Information	\$25,542	\$26,514	\$27,018	\$27,828	\$29,322	14.8%
Music	N/A	N/A	N/A	N/A	\$28,134	N/A
Law - JD	\$35,622	\$36,504	\$36,504	\$36,504	\$36,504	2.5%
Law - Prof Masters	N/A	N/A	N/A	N/A	\$31,296	N/A
MBA - All	\$28,800	\$29,898	\$30,474	\$30,474	\$32,328	12.3%
University of Colorado - Colorado Springs						
Communication	\$17,820	\$18,360	\$19,100	\$24,812	\$24,216	35.9%
Geography	\$17,820	\$18,360	\$19,100	\$24,812	\$24,216	35.9%
History	\$17,820	\$18,360	\$19,100	\$24,812	\$24,216	35.9%
Psychology	\$17,820	\$18,360	\$19,100	\$24,812	\$24,216	35.9%
Sociology	\$17,820	\$18,360	\$19,100	\$24,812	\$24,216	35.9%
Basic Science	\$17,820	\$18,360	\$19,100	\$24,812	\$24,216	35.9%
Education	\$19,100	\$19,680	\$20,460	\$24,812	\$25,968	36.0%
Public Affairs	\$19,100	\$19,680	\$20,460	\$24,812	\$25,968	36.0%
Business	\$19,100	\$19,680	\$20,460	\$26,492	\$25,968	36.0%
Engineering	\$19,100	\$19,680	\$20,460	\$26,492	\$25,968	36.0%
Geropsychology	\$19,100	\$19,680	\$20,460	\$26,492	\$25,968	36.0%
Beth El Nursing	\$19,100	\$19,680	\$20,460	\$26,492	\$25,968	36.0%
Health Sciences	\$19,100	\$19,680	\$20,460	\$26,492	\$25,968	36.0%
University of Colorado - Denver						
Liberal Arts & Sciences	\$20,982	\$22,038	\$23,892	\$27,408		-100.0%
Architecture & Planning	\$22,404	\$23,526	\$25,492	\$29,256	\$28,968	29.3%
Arts & Media	\$22,404	\$23,526	\$25,492	\$29,256	\$28,968	29.3%
Education	\$22,404	\$23,526	\$25,492	\$29,256	\$28,968	29.3%
Engineering & Applied Science	\$22,404	\$23,526	\$25,492	\$29,256	\$28,968	29.3%
Engineering & Applied Science, Bioengineering	N/A	N/A	N/A	N/A	\$29,616	N/A
Public Affairs	\$22,404	\$23,526	\$25,492	\$29,256	\$28,968	29.3%
Business & Non-Degree	\$22,794	\$23,940	\$25,940	\$29,760	\$29,472	29.3%
PhD Engineering	N/A	N/A	N/A	\$21,792	\$21,576	N/A
Health						
MS Physician Assistant Studies	N/A	N/A	N/A	\$18,552	\$18,552	N/A
MS in Genetic Counseling	\$23,688	\$24,864	\$26,112	\$27,408	\$27,408	15.7%
MS in Clinical Science	\$14,568	\$15,288	\$16,056	\$17,640	\$24,000	64.7%
MS in Modern Anatomy	N/A	N/A	N/A	\$25,584	\$26,616	N/A
MS in Nursing	\$23,760	\$23,760	\$23,760	\$24,480	\$24,480	3.0%
PhD in Nursing	\$23,760	\$23,760	\$23,760	\$24,480	\$24,480	3.0%
MS in Public Health	\$26,088	\$27,648	\$29,160	\$29,160	\$29,160	11.8%
DRPH in Public Health	N/A	N/A	N/A	\$25,632	\$25,632	N/A
MS in Biostatistics and PhD in Analytical Health Science	\$24,288	\$24,288	\$25,632	\$29,160	\$29,160	20.1%
MS in Anesthesiology	N/A	N/A	N/A	\$16,080	\$21,216	N/A
PhD in Biostatistics and PhD in Analytical Health Science	N/A	N/A	N/A	\$25,632	\$25,632	N/A
PhD Basic Science	N/A	N/A	N/A	N/A	\$19,392	N/A
Professional						
Doctor of Physical Therapy	\$20,976	\$22,032	\$23,136	\$25,008	\$24,192	15.3%
Doctor of Nursing Practice	\$23,760	\$23,760	\$23,760	\$24,480	\$24,480	3.0%
Dentistry - DDS	\$59,720	\$65,095	\$69,552	\$72,184	\$72,608	21.6%
Medicine - MD	\$83,290	\$83,290	\$83,290	\$83,290	\$83,290	0.0%
Pharmacy - PharmD	\$34,962	\$37,758	\$38,891	\$39,280	\$39,870	14.0%
Colorado State University						
Graduate School	\$19,592	\$20,572	\$21,600	\$22,248	\$22,916	17.0%
Professional Veterinary Medicine	\$51,264	\$50,263	\$51,269	\$52,807	\$53,335	4.0%
Colorado State University - Pueblo						
Base	\$15,312	\$16,767	\$16,767	\$17,773	\$18,794	22.7%
Teacher Education	\$15,312	\$16,767	\$16,767	\$17,773	\$18,794	22.7%
Business	\$17,316	\$18,951	\$18,951	\$20,653	\$21,840	26.1%
Computer Information Sciences	\$17,316	\$18,951	\$18,951	\$20,653	\$21,840	26.1%
Nursing	\$16,476	\$18,039	\$18,039	\$20,653	\$21,840	32.6%
Engineering	\$16,476	\$18,039	\$18,039	\$20,653	\$21,840	32.6%
Fort Lewis College						
Non-Resident ¹	N/A	N/A	\$20,160	\$20,160	\$20,160	N/A
University of Northern Colorado ²						
Masters-Education	\$21,768	\$23,472	\$23,880	\$24,192	\$24,744	13.7%
Masters-Biomedical Science	\$23,472	\$18,480	\$18,816	\$19,152	\$19,512	-16.9%
Masters-Liberal Arts & Sciences	\$22,632	\$24,096	\$24,552	\$24,912	\$25,392	12.2%
Masters-Science, Accounting & Music	\$23,472	\$25,080	\$25,440	\$25,824	\$26,088	11.1%
Doctoral-Audiology	\$26,184	\$25,704	\$26,136	\$26,472	\$26,928	2.8%
Doctoral-Higher Ed and Student Affairs Leadership	\$25,704	\$27,096	\$27,600	\$27,984	\$28,392	10.5%
Doctoral-Education & Liberal Arts	\$25,704	\$27,672	\$28,176	\$28,584	\$28,992	12.8%
Doctoral-Nursing, Sciences & Music	\$26,184	\$27,624	\$28,152	\$28,560	\$28,848	10.2%
Adams State University						
Art	\$12,504	\$12,984	\$13,416	\$13,416	\$13,416	7.3%
Counselor Education	\$12,504	\$14,784	\$14,784	\$14,784	\$28,200	125.5%
HPPE	\$12,504	\$12,984	\$13,416	\$13,416	\$13,416	7.3%
Teacher Education ³	\$14,304	\$14,784	\$14,784	\$14,784	\$14,784	3.4%
Colorado Mesa University						
Base	\$15,546	\$15,804	\$16,673	\$17,640	\$18,258	17.4%
Business	\$22,080	\$22,338	\$23,567	\$24,933	\$25,806	16.9%
Nursing	\$21,840	\$22,098	\$23,313	\$24,665	\$25,536	16.9%
Teacher Education	\$20,760	\$21,018	\$22,174	\$23,460	\$24,240	16.8%
Metropolitan State University of Denver						
Teacher Education	\$15,827	\$17,885	\$18,779	\$18,779	\$18,779	18.7%
Accounting	\$14,665	\$15,985	\$16,784	\$17,791	\$24,127	64.5%
Social Work	\$15,827	\$17,885	\$18,779	\$19,906	\$21,101	33.3%
Colorado School of Mines						
Non-Resident	\$27,270	\$28,620	\$30,330	\$31,470	\$32,700	19.9%

NOTE:
 Gray shading denotes a year in which the stated differential did not exist, but the base or equivalent differential is provided as a proxy for comparison purposes.
 N/A denotes a year in which the stated tuition differential no longer exists.

¹ FLC began offering graduate courses in FY 2013-14.

² UNC graduate degree programs listed are examples

³ In 2012-13, ASU's Teacher Education program became online only and costs the same amount for residential and non-residential students.

Percent Change in 5 Year History of Out-of-State Graduate & Professional Tuition Differentials (24 Credit Hours per Academic Year)

Institution	% Change FY2010-11 to FY2011-12	% Change FY2011-12 to FY2012-13	% Change FY2012-13 to FY2013-14	% Change FY2013-14 to FY2014-15	% Change FY2014-15 to FY2015-16
University of Colorado - Boulder					
All-Other	5.0%	3.8%	1.9%	3.0%	1.1%
Business	5.0%	3.8%	1.9%	1.8%	3.0%
PhD Business	N/A	N/A	N/A	N/A	1.0%
Engineering	5.0%	3.8%	1.9%	3.0%	1.0%
Media, Communication and Information	5.0%	3.8%	1.9%	3.0%	5.4%
Music	N/A	N/A	N/A	N/A	N/A
Law - JD	5.0%	2.5%	0.0%	0.0%	0.0%
Law - Prof Masters	N/A	N/A	N/A	N/A	N/A
MBA - All	5.0%	3.8%	1.9%	0.0%	6.1%
University of Colorado - Colorado Springs					
Communication	1.9%	3.0%	4.0%	29.9%	(2.4%)
Geography	1.9%	3.0%	4.0%	29.9%	(2.4%)
History	1.9%	3.0%	4.0%	29.9%	(2.4%)
Psychology	1.9%	3.0%	4.0%	29.9%	(2.4%)
Sociology	1.9%	3.0%	4.0%	29.9%	(2.4%)
Basic Science	1.9%	3.0%	4.0%	29.9%	(2.4%)
Education	2.0%	3.0%	4.0%	21.3%	4.7%
Public Affairs	2.0%	3.0%	4.0%	21.3%	4.7%
Business	2.0%	3.0%	4.0%	29.5%	(2.0%)
Engineering	2.0%	3.0%	4.0%	29.5%	(2.0%)
Geropsychology	2.0%	3.0%	4.0%	29.5%	(2.0%)
Beth El Nursing	2.0%	3.0%	4.0%	29.5%	(2.0%)
Health Sciences	2.0%	3.0%	4.0%	29.5%	(2.0%)
University of Colorado - Denver					
Liberal Arts & Sciences	10.5%	5.0%	8.4%	14.7%	(100.0%)
Architecture & Planning	10.5%	5.0%	8.4%	14.8%	(1.0%)
Arts & Media	10.5%	5.0%	8.4%	14.8%	(1.0%)
Education	10.5%	5.0%	8.4%	14.8%	(1.0%)
Engineering & Applied Science	10.5%	5.0%	8.4%	14.8%	(1.0%)
Engineering & Applied Science, Bioengineering	N/A	N/A	N/A	N/A	N/A
Public Affairs	10.5%	5.0%	10.3%	12.8%	(1.0%)
Business & Non-Degree	10.5%	5.0%	8.4%	14.7%	(1.0%)
PhD Engineering	N/A	N/A	N/A	N/A	N/A
Health					
MS in Child Health Associate	5.0%	5.0%	0.0%	N/A	N/A
MS Physician Assistant Studies	N/A	N/A	N/A	N/A	N/A
MS in Genetic Counseling	5.0%	5.0%	5.0%	0.0%	5.0%
MS in Clinical Science	1.0%	4.9%	5.0%	9.9%	36.1%
MS in Modern Anatomy	N/A	N/A	N/A	N/A	N/A
MS in Nursing	1.1%	0.0%	0.0%	3.0%	0.0%
PhD in Nursing	1.1%	0.0%	0.0%	3.0%	0.0%
MS in Public Health	9.0%	6.0%	5.5%	0.0%	0.0%
DRPH in Public Health	N/A	N/A	N/A	N/A	N/A
MS in Biostatistics and PhD in Analytical Health Science	9.1%	0.0%	5.5%	13.8%	0.0%
MS in Anesthesiology	N/A	N/A	N/A	N/A	N/A
PhD in Biostatistics and PhD in Analytical Health Science	N/A	N/A	N/A	N/A	N/A
PhD Basic Science	N/A	N/A	N/A	N/A	N/A
PhD in Pharmaceutical Sciences or PhD in Toxicology	1.0%	34.7%	0.0%	N/A	N/A
Professional					
Doctor of Physical Therapy	5.0%	5.0%	5.0%	8.1%	(3.3%)
Doctor of Nursing Practice	1.1%	0.0%	0.0%	3.0%	0.0%
Dentistry - DDS	9.0%	9.0%	7.0%	3.6%	0.6%
Medicine - MD	1.5%	0.0%	0.0%	0.0%	0.0%
Pharmacy - PharmD	7.0%	8.0%	3.0%	1.0%	1.5%
Colorado State University					
Graduate School	3.0%	5.0%	5.0%	3.0%	3.0%
Professional Veterinary Medicine	4.7%	(2.0%)	2.0%	3.0%	1.0%
Colorado State University - Pueblo					
Base	12.9%	9.5%	0.0%	6.0%	5.7%
Teacher Education	12.9%	9.5%	0.0%	6.0%	5.7%
Business	13.0%	9.4%	0.0%	9.0%	5.7%
Computer Information Sciences	13.0%	9.4%	0.0%	9.0%	5.7%
Nursing	13.0%	9.5%	0.0%	14.5%	5.7%
Engineering	13.0%	9.5%	0.0%	14.5%	5.7%
Fort Lewis College					
Non-Resident ¹	N/A	N/A	N/A	0.0%	0.0%
University of Northern Colorado²					
Masters-Education	15.0%	7.8%	1.7%	1.3%	2.3%
Masters-Biomedical Science	N/A	(21.3%)	1.8%	1.8%	1.9%
Masters-Liberal Arts & Sciences	15.0%	6.5%	1.9%	1.5%	1.9%
Masters-Science, Accounting & Music	N/A	6.9%	1.4%	1.5%	1.0%
Doctoral-Audiology	10.0%	(1.8%)	1.7%	1.3%	1.7%
Doctoral-Higher Ed and Student Affairs Leadership	12.0%	5.4%	1.9%	1.4%	1.5%
Doctoral-Education & Liberal Arts	12.0%	7.7%	1.8%	1.4%	1.4%
Doctoral-Nursing, Sciences & Music	10.0%	5.5%	1.9%	1.4%	1.0%
Adams State University					
Art	0.0%	3.8%	3.3%	0.0%	0.0%
Counselor Education	0.0%	18.2%	0.0%	0.0%	90.7%
HPPE	0.0%	3.8%	3.3%	0.0%	0.0%
Teacher Education ³	14.4%	3.4%	0.0%	0.0%	0.0%
Colorado Mesa University					
Non-Resident	N/A	N/A	N/A	N/A	N/A
Returning	1.6%	1.7%	5.5%	5.8%	3.5%
Business - Incoming	1.1%	1.2%	5.5%	5.8%	3.5%
Nursing - Incoming	1.1%	1.2%	5.5%	5.8%	3.5%
Teacher Education - Incoming	1.2%	1.2%	5.5%	5.8%	3.3%
Metropolitan State University of Denver					
Teacher Education	9.0%	13.0%	5.0%	(0.0%)	0.0%
Accounting	9.0%	9.0%	5.0%	6.0%	35.6%
Social Work	N/A	13.0%	5.0%	6.0%	6.0%
Colorado School of Mines					
Non-Resident	5.0%	5.0%	6.0%	3.8%	3.9%

NOTE:
 Gray shading denotes a year in which the stated differential did not exist, but the base or equivalent differential is provided as a proxy for comparison purposes.
 N/A denotes a year in which the stated tuition differential no longer exists.
¹FLC began offering graduate courses in FY 2013-14.
²UNC graduate degree programs listed are examples
³In 2012-13, ASU's Teacher Education program became online only and costs the same amount for residential and non-residential students.

5 Year History of Graduate & Professional Mandatory Fees (24 Credit Hours per Academic Year)

* Includes mandatory fees paid by all students. Institutions may utilize course or program specific fees or charges-for-service which are not listed.

Institution	FY 2011-12 Student Fees	FY 2012-13 Student Fees	FY 2013-14 Student Fees	FY 2014-15 Student Fees	FY 2015-16 Student Fees	5 Year % Increase Fees
University of Colorado Boulder Mandatory Fees	\$1,489	\$1,426	\$1,596	\$1,750	\$1,790	20.2%
University of Colorado - Colorado Springs Mandatory Fees	\$1,036	\$1,189	\$1,048	\$1,433	\$1,448	39.7%
University of Colorado - Denver Mandatory Fees - Downtown Campus	\$818	\$853	\$898	\$1,078	\$1,138	39.1%
Mandatory Fees - Anschutz Medical	\$267	\$287	\$287	\$297	\$297	11.2%
Colorado State University Mandatory Fees	\$1,645	\$1,684	\$1,729	\$2,029	\$2,133	29.7%
Colorado State University Pueblo Mandatory Fees	\$1,340	\$1,466	\$1,466	\$2,010	\$1,698	26.7%
Fort Lewis College Mandatory Fees ¹	N/A	N/A	\$1,352	\$1,367	\$1,745	N/A
University of Northern Colorado Mandatory	\$1,266	\$1,316	\$1,363	\$1,650	\$1,733	36.9%
Adams State University Mandatory Fees	\$2,315	\$2,632	\$2,577	\$2,855	\$3,126	35.0%
Colorado Mesa University Mandatory Fees	\$615	\$615	\$615	\$650	\$658	7.0%
Metropolitan State University of Denver Mandatory Fees ²	\$1,025	\$1,037	\$1,053	\$1,097	\$1,198	16.9%
Colorado School of Mines Mandatory Fees	\$1,869	\$2,064	\$2,085	\$2,128	\$2,128	13.9%
NOTE: ¹ FLC began offering graduate courses in FY 2013-14						

Percent Change in 5 Year History of Graduate & Professional Mandatory Fees (24 Credit Hours per Academic Year)

Institution	% Change FY2010-11 to FY2011-12	% Change FY2011-12 to FY2012-	% Change FY2012-13 to FY2013-	% Change FY2013-14 to FY2014-15	% Change FY2014-15 to FY2015-
University of Colorado Boulder Mandatory Fees	0.9%	4.4%	11.9%	9.6%	2.3%
University of Colorado - Colorado Springs Mandatory Fees	2.4%	14.7%	(11.9%)	36.7%	1.0%
University of Colorado - Denver Mandatory Fees - Downtown Campus	5.0%	4.2%	5.3%	20.0%	5.6%
Mandatory Fees - Anschutz Medical Campus	4.3%	7.5%	0.0%	3.5%	0.0%
Colorado State University Mandatory Fees	0.4%	2.4%	2.7%	17.4%	5.1%
Colorado State University - Pueblo Mandatory Fees	8.3%	9.4%	0.0%	37.1%	(15.5%)
Fort Lewis College Mandatory Fees ¹	N/A	N/A	N/A	1.1%	27.6%
University of Northern Colorado Mandatory Fees	0.4%	3.9%	3.6%	21.1%	5.0%
Adams State University Mandatory Fees	4.6%	13.7%	(2.1%)	10.8%	9.5%
Colorado Mesa University Mandatory Fees	0.1%	0.0%	0.0%	5.7%	1.2%
Metropolitan State University of Denver Mandatory Fees	3.9%	1.2%	1.6%	4.2%	9.2%
Colorado School of Mines Mandatory Fees	0.8%	10.4%	1.0%	2.1%	0.0%

NOTE:

¹ FLC began offering graduate courses in FY 2013-14

Appendix F



COLORADO

Colorado Commission on
Higher Education

Department of Higher Education

Report on the Development of New Tuition Policies

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2723

LT. GOVERNOR JOSEPH GARCIA, EXECUTIVE DIRECTOR

A-16

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Introduction

In Colorado and across the nation, the rising cost of college tuition is receiving considerable public attention. At the same time, the importance of having a postsecondary credential has never been more important. The postsecondary credential a student earns can provide substantial returns on investment in the form of higher income and greater employment opportunities. Equally important, Colorado's Master Plan calls for increasing the attainment of high quality postsecondary credentials to meet anticipated workforce demands by 2025. However, Colorado's decade-long shift from a funding model, largely supported by state appropriations, to one primarily dependent on tuition revenues has challenged institutions' ability to balance operational realities with the need to provide affordable access to higher education for Colorado families.

HB 14-1319 directed the Colorado Commission on Higher Education (the Commission, CCHE) to submit to the General Assembly by November 1, 2015, new tuition policies that ensure both accessible and affordable higher education for Colorado residents, while reflecting the level of state funding for institutions, and the need of each institution to enhance its financial position and sustainability. In addition, the Commission is statutorily required to provide a tuition policy recommendation with the annual budget request.

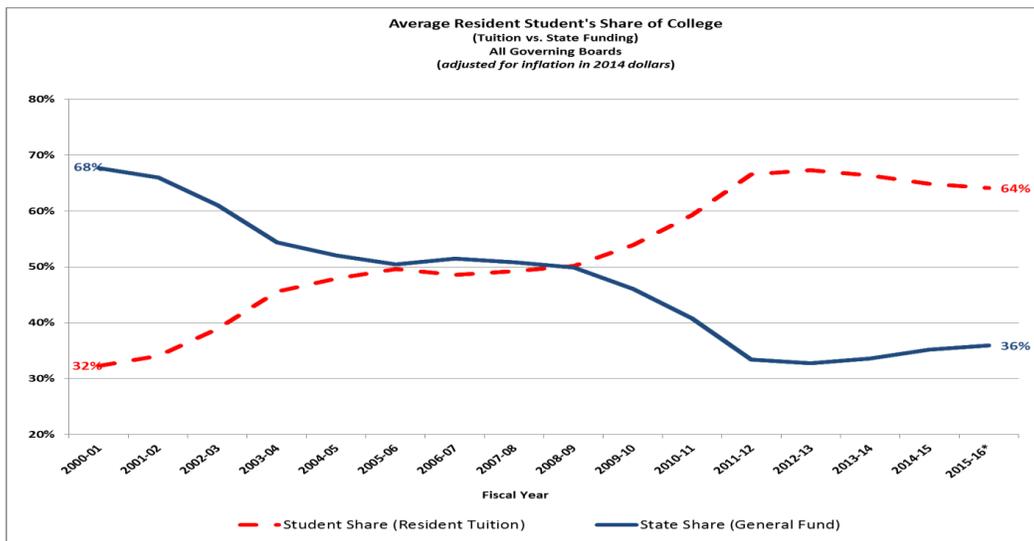
Last fall, the Department of Higher Education (the Department, DHE) conducted a statewide public education and outreach process to gather input about higher education, and one of the top priorities identified was affordability. Concurrently, as part of the implementation plan for HB 14-1319, the Department established a Cost Driver and Analysis Expert Team to provide the Commission with a thorough analysis of what is driving costs of higher education in Colorado. The results of this analysis found that Colorado's public institutions, of all types, have fewer resources with which to support basic operations than do similar institutions in nearly all other states.

The last 15 years have witnessed a marked reversal in who bears the burden of higher education costs. As General Fund support is reduced, tuition increases make up the difference - resulting in higher costs for students and families. As illustrated below, in FY 2000-01, the state supplied 68 percent of the cost of college, while students and families paid 32 percent. By FY 2011-12, those numbers had reversed: students and families were covering two-thirds of the costs and the state was paying for a third.

The Charge

Pursuant to HB 14-1319, by November 1, 2015, CCHE shall submit to the Legislature tuition policies that ensure both accessible and affordable higher education for residents.

- Tuition policies must also reflect:
 - Level of state funding needed for institutions
 - The need of each institution to enhance the quality of programs and offerings to strengthen their financial position
- Tuition policy recommendations must be developed in consultation with governing boards and interested parties using an inclusive and transparent process.



In fiscal years 2014-15 and 2015-16, Colorado's public institutions witnessed their smallest year-over-year percent increase in tuition rates in more than a decade. This was largely the result of increases in General Fund support for higher education.

Finding the right balance between the seemingly opposing ideas of affordability for families and strengthening the financial position of institutions, is at the core of the Commission's tuition policy process and recommendation. Also of critical importance is the understanding that state appropriations are the fundamental incentive that will keep tuition low while also enhancing the quality of Colorado's public institutions of higher education.

This report brings forth recommendations that represent a comprehensive analysis of tuition policies, which can be used in Colorado to promote greater affordability, operational stability and funding flexibility at the state public postsecondary institutions. Most importantly, the Commission's new tuition policy signals a paradigm shift from the historic method of limiting tuition increases in footnote of the Long Bill, or through special legislation, to a cost-driven approach, which makes a persuasive case for additional state funding.

Process for Developing New Tuition Policies

The charge to develop new tuition policies comes at a time when the rising cost of tuition is receiving considerable public attention nationwide; this holds true in Colorado, as well. The Colorado Commission on Higher Education and the Department of Higher Education, in consultation with the governing boards and other interested parties, conducted a comprehensive analysis of higher education costs and tuition policies that could be used to promote greater affordability, operational stability and funding flexibility at the state public postsecondary education institutions.

The Department contracted with the National Center for Higher Education Management Systems (NCHEMS) to analyze higher education costs in Colorado, and how these compared to national costs (*Why Higher Education Costs are What They Are* and *Tuition-Setting Practices in Colorado's Public Colleges and Universities*). In addition, the Department established a Cost Driver and Analysis Expert Team—comprised of individuals from Colorado's 10 governing boards, the Colorado Commission on Higher Education and the Office of State Planning and Budgeting—to advise, provide

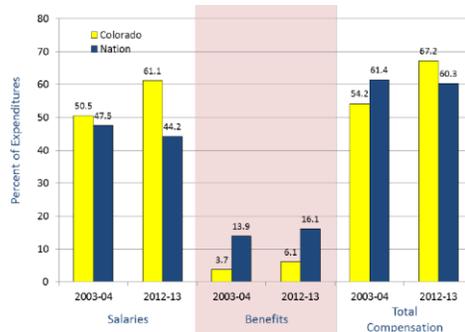
feedback, review and work with NCHEMS throughout their analysis process. The hard work and insight provided by the Cost Driver team members was a valuable and essential component of the tuition policy process.

Higher education is fundamentally a personnel-heavy, knowledge-based business. According to the NCHEMS report, the majority of costs at Colorado public institutions of higher education are a direct result of faculty and staff compensation. Remaining costs include supplies, interest, depreciation and operating expenses (utilities, insurance, office and laboratory supplies, maintenance of plant etc.). The report also found that:

- Colorado institutions have fewer resources to expend on activities designed to fulfill their missions than do other similar institutions elsewhere in the country.
- Colorado institutions are spending an increasing share of their resources on faculty and staff.
- Colorado institutions are more reliant on part-time faculty as a cost cutting measure than their national counterparts.
- Since such a large portion of institutional revenue comes from tuition, setting tuition rates is a high stakes endeavor, which is strongly impacted by changes in state funding. Despite all of this, Colorado is doing a better job, as compared to other states, of providing opportunities to the lowest income students and families.

Compensation Represents a Majority of Institutions' Core Base Costs

Figure 5. Compensation as a Percent of Expenditures, 2003-04 Compared to 2012-13, Public 4-year

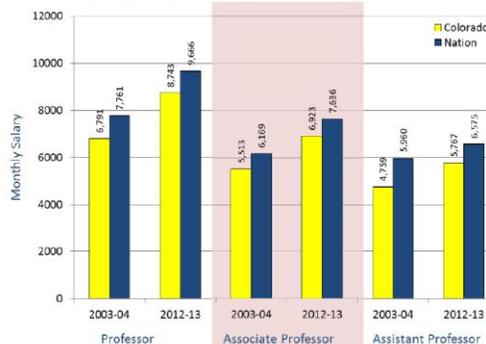


Source: NCES, IPEDS 2003-04 Finance Files; f0304_f1a and f0304_f2 Final Release Data Files. NCES, IPEDS 2012-13 Finance Files; f1213_f1a and f1213_f2 Final Release Data Files.

- About 1 in 4 of the state's classified employees work at public institutions of higher education.
- 56% of total state employees work at public institutions.
- Colorado has focused their limited resources on employees more than other states.

Colorado Institutions' Compensation is Lower than National Average

Figure 15. Monthly Salary Comparisons, 2003-04 Compared to 2012-13, Public 4-Year



Source: NCES, IPEDS 2003-04 Faculty Salary File; sal2003_a Final Release Data File. NCES, IPEDS 2012-13 Faculty Salary File; sal2012_is Provisional Release Data File.

- Individual employee's compensation at Colorado's public institutions is lower than the national average for all public institutions.

Department staff, NCHEMS representatives and the Cost Driver Analysis Team collected, analyzed, and synthesized vast quantities of data over the course of fall 2014 through spring 2015. This significant undertaking culminated in the summer of 2015, bringing together commissioners, subject matter experts and

other stakeholders at the CCHE retreat to establish new tuition policies.

Developing a Framework

As the Commission, the governing boards, and other interested parties worked cooperatively to structure an ongoing tuition policy for the state, it was determined that articulating a set of values would be helpful in finding the right balance between affordability for students and sustainability of the institutions, especially in light of the current, somewhat challenging, state budget environment.

Value 1: State Investment in Higher Education

All of Colorado's public institutions of higher education have fewer resources to support basic operations than do similar institutions in other states. This low level of funding means that Colorado institutions are less able to absorb revenue shortfalls through productivity enhancements. State appropriations are the key incentive to keeping tuition low and play the biggest role in determining the actual tuition rate charged to students. The extent to which state funding increases or decreases is directly linked to the extent tuition increases can be limited.

Value 2: Tuition Impact on Students and Families

Incorporating student and family-focused measures of affordability is an important and evolving value. This is especially relevant as students and families bear more and more of the support cost for public postsecondary education in Colorado. Substantial reductions in state support have shifted the majority funding burden of higher education to students and families. As illustrated above by, in fiscal year 2001, the state covered 68 percent of the cost of postsecondary education, while students and families paid the remaining 32 percent. Despite increases in state investment in the last two years, the state's share is only 36 percent, while students and families are paying 64 percent.

Throughout the tuition policy development process, there was great deal of discussion surrounding the concept of affordability and the difficulty in defining affordability. Many believed it would be useful to have an acceptable Colorado-specific measure of affordability. Department staff explored whether there was a readily available measure that might be easily incorporated into the tuition recommendation for fiscal year (FY) 2016-2017, but did not find an acceptable approach. As part of the proposed ongoing process, a significant undertaking of the Commission will be to pursue, along with the governing boards and interested parties, development of some Colorado-specific measure(s) of affordability (e.g. change in median family income).

At public institutions, successful tuition policy will likely be linked to state appropriations. Because so many institutions rely on appropriations and tuition as primary sources of revenue, a decline in one revenue source means the other one must increase or costs must decrease.

-National Conference of State Legislatures, September 2015

Value 3: Flexibility for Institutions

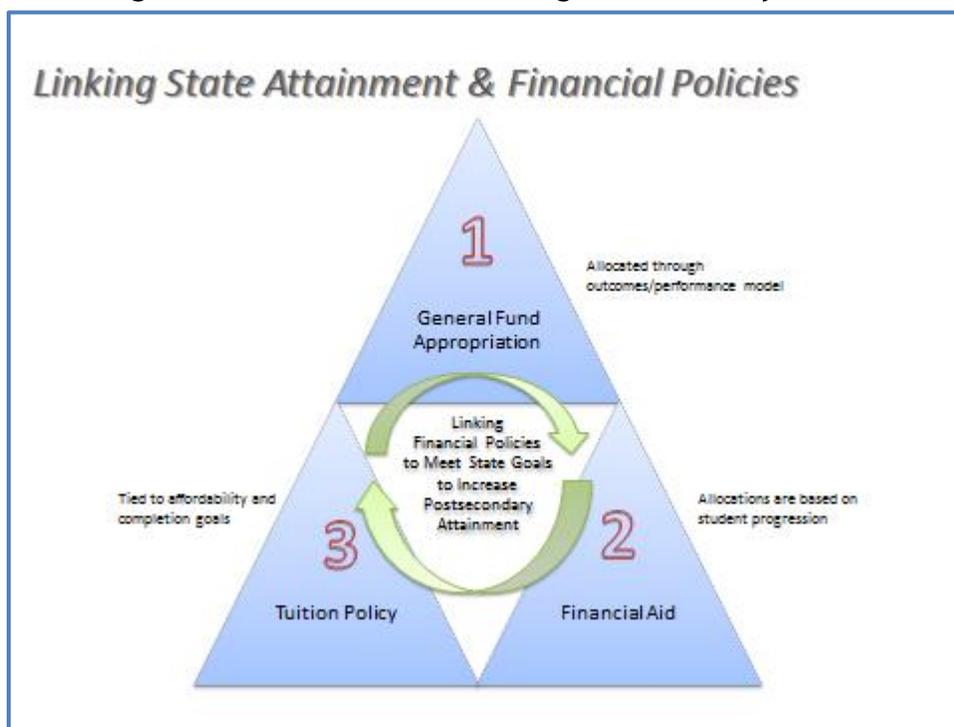
In Colorado, governing boards have constitutionally granted responsibility and authority over the financial management of their institutions; a major component of sound financial management is the setting of tuition. Members of governing boards are appointed by the Governor and confirmed by the Senate (except for the Regents of the University of Colorado, who are elected). This value affirms that governing boards are best equipped to set tuition and hold fiduciary duty to their

respective institutions. Value 3 reinforces the role of the governing boards in setting tuition within their fiduciary duty to institutions, while simultaneously recognizing the need for a mechanism whereby a governing board could request an exception/waiver from a tuition increase limit.

Value 4: Accountability and Meeting Completion Goals

The Commission, among other duties, is charged with preparing a statewide master plan pursuant to the requirements set forth by the Legislature, in addition to coordinating with governing boards to implement statewide policies. Value 4 acknowledges the Commission's commitment to Colorado's Master Plan goals while also recognizing the importance of accountability when a governing board has requested to exceed the tuition increase limit through a Tuition Accountability Plan.

This value-based framework adopted by the Commission links statewide attainment goals and ensures that the major elements of higher education financing policy - appropriations, tuition, and financial aid - are aligned in order to address college affordability and student access and success.



New Tuition Policy Process

Pursuant to C.R.S §23-5-129 (6)(c) and C.R.S §23-1-108 (12)(b), beginning in FY 2016-17 and each year thereafter, the Commission shall be required to include in the annual budget request tuition recommendations for resident undergraduate students for each state institution of higher education. The Commission and the Department recommend keeping this portion of statute. As part of this request, it is critical that tuition revenues are not appropriated and remain an informational item in the Long Bill.

Roles & Responsibilities

Governing boards have the responsibility and authority for the financial management of their institutions. A major component of sound financial management is the setting of tuition. Since

institutions have unique roles and missions and differing student needs, governing boards are best equipped to set tuition and hold a fiduciary duty to their respective institutions. The Commission has a responsibility to exercise oversight and to ensure that educational quality and student access are maintained.

Business Cycle Approach to Determine the Tuition Policy Recommendation

The Commission, in consultation with the governing boards and other interested parties, has developed an annual process and methodology for setting tuition increase limits. Such a process takes into consideration the following:

- The condition of the state general fund and state investment levels in higher education;
- The impact of tuition increases on students and families;
- The financial health of institutions and their ability to enhance overall quality; and
- Accountability and progress towards completion goals

Flexibility for Institutions

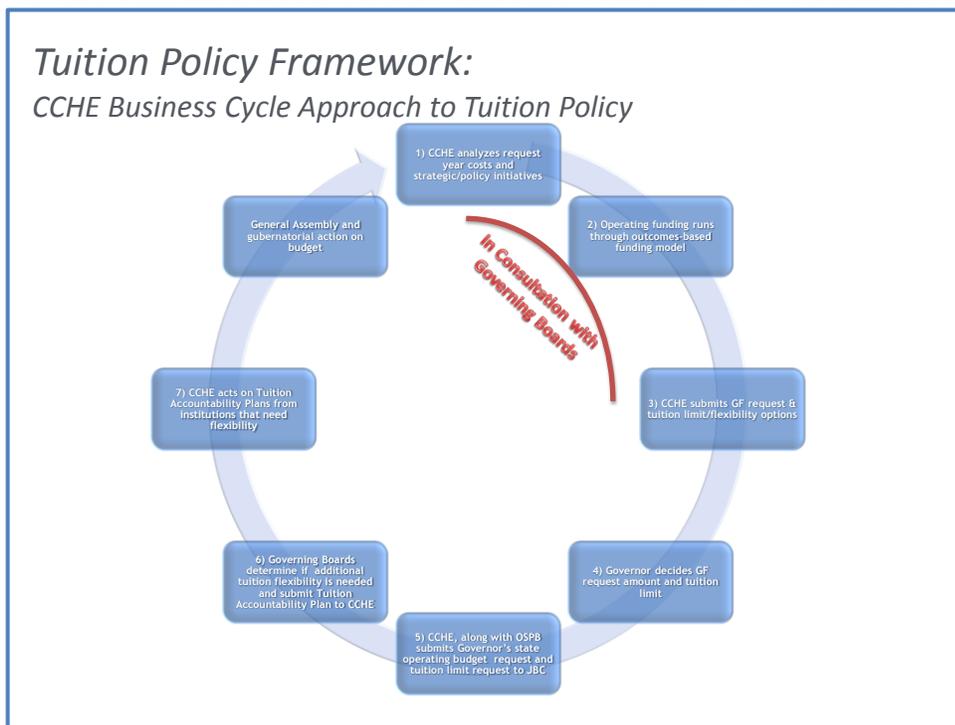
Governing boards will have the ability to request flexibility from the Commission's tuition increase limits through a Tuition Accountability Plan. The content of Tuition Accountability Plans will include:

- Price and tuition strategies including substantiated business case for the increase;
- A demonstration of how the governing board will work to protect resident low and middle income students;
- How tuition increases will help the institution meet the Commission's Master Plan Goals; and
- Evidence that completion goals are being met.

The Commission will review each request for tuition flexibility and either approve or deny the request for tuition increases above the recommended tuition increase limit. If the Commission denies the request, the governing board shall not exceed the undergraduate resident tuition increase limit, if applicable.

Business Cycle Calendar

The following steps mirror the state's budget cycle and integrate the tuition recommendation process with the General Fund appropriation process, while also including a mechanism for the Governing Boards to request additional flexibility above the tuition increase limit through a Tuition Accountability Plan (with the Commission's approval).



1. CCHE works with governing boards to analyze budget request year base costs and the costs of possible strategic improvements (June, July).
2. Operating funding runs through the funding allocation model to determine allocations for the budget year (July, August).
3. CCHE submits to the Governor: the General Fund operating request and tuition limit/flexibility options (Aug, September).
4. Governor determines General Fund operating request and tuition limit/flexibility request (October).
5. CCHE, along with the Office of State Planning and Budgeting, submits Governor's General Fund operating request and tuition limit/flexibility request to Joint Budget Committee (November 1).
6. Governing Boards, based on the Governor's request, determine if additional flexibility is needed and if so, submit Tuition Accountability Plans to CCHE (December, January)
7. Step 7: CCHE acts on Tuition Accountability Plans from governing boards that request additional flexibility (spring)
8. Step 8: General Assembly and Governor's action on the budget (spring)

Tuition Policy Recommendation for FY 2016-17

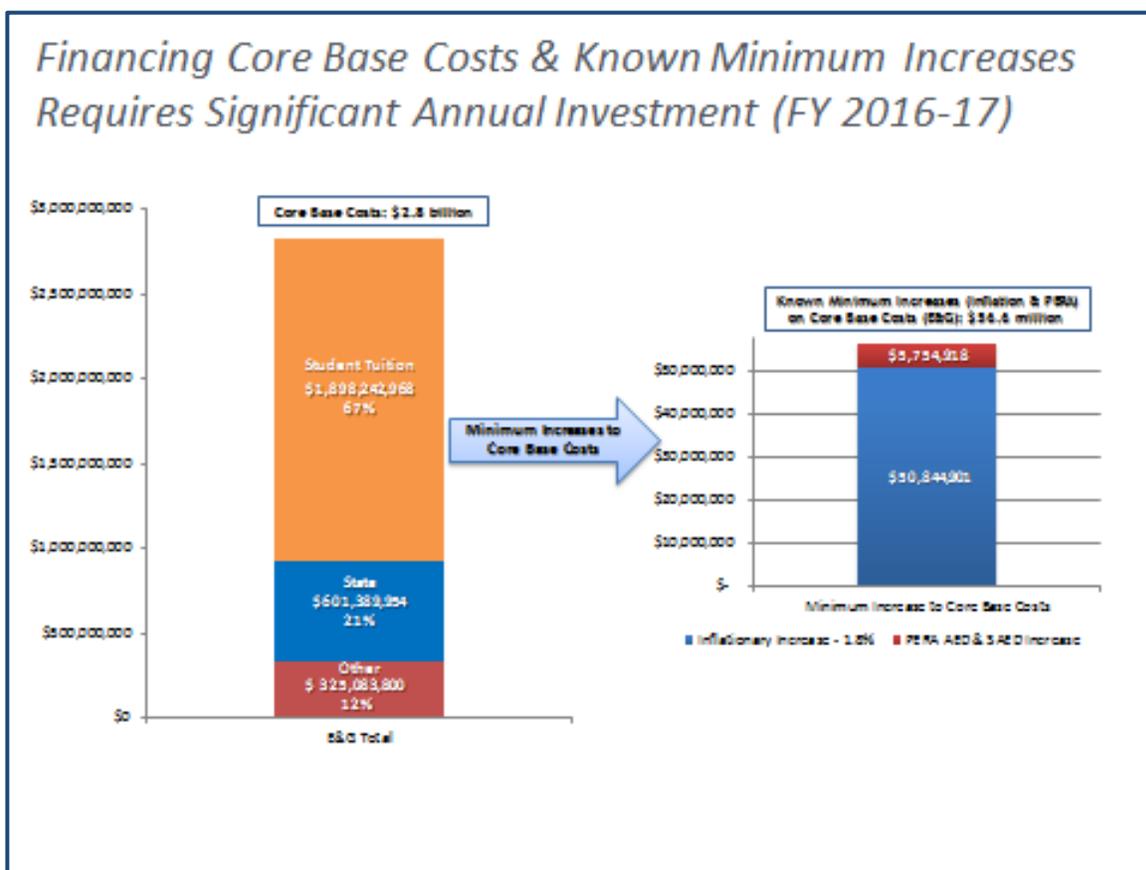
For FY 2016-17, governing boards shall have the authority to raise tuition rates for resident undergraduate students within specified tuition increase limits. The tuition increase limits will be directly linked to the level of General Fund support. In other words, an increase in General Fund investment results in lower tuition increase limits, while a decrease in General Fund investment results in higher tuition increases, and a Commission recommendation of flexibility for governing boards to set tuition.

Analysis

Public institutions of higher education have fixed costs they must meet in order to maintain their institutions. In 2015, the Department of Higher Education performed an evaluation of higher education costs and on the relationship of those costs to tuition. Based on this analysis, the Department conservatively estimates that the base cost increases that institutions must bear is \$56.6 million.

It is important to note that this estimate does not include costs above inflation, additional salary increases, or strategic improvements, including but not limited to maintaining the current quality of educational programs and offerings. The analysis conducted by the Department incorporates these factors not captured in the cost estimate by applying a *Cost plus Policy* basis for analyzing and determining the tuition recommendation. This allows for the recommended tuition limit, if applicable, to capture each institution's own unique niche - reflecting competitive environments, level of state support, and other distinct characteristics.

Utilizing this *Cost plus Policy* approach, if the state meets the entire minimum cost estimate, institutions would require lower tuition rate increases, in order to pay for mandatory cost increases and strategic improvements. As illustrated below, if the state is unable to cover these minimum costs, tuition rate increases are likely to continue rising.

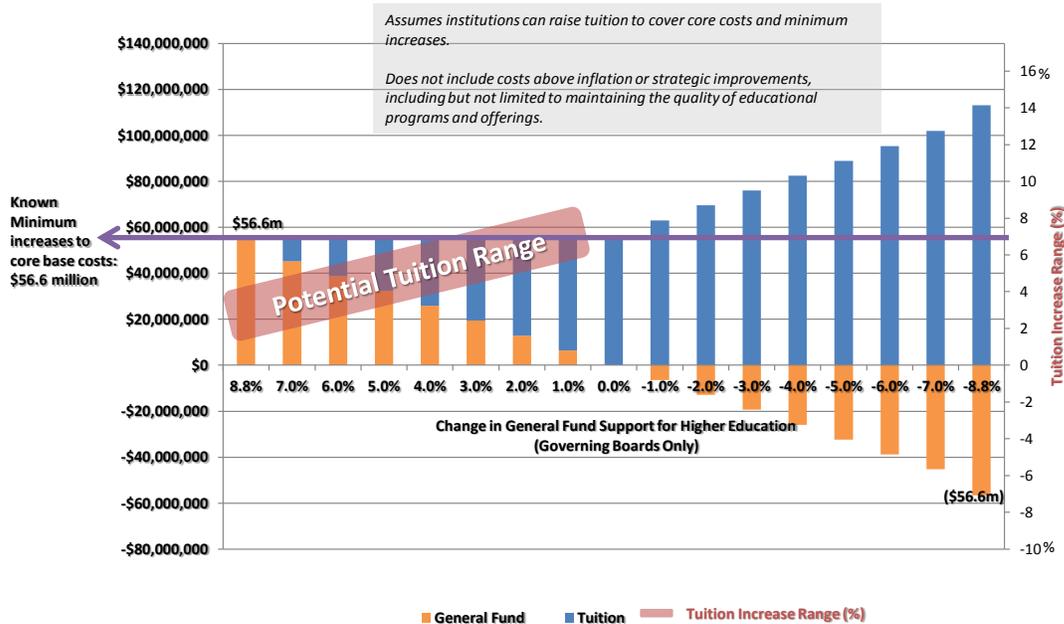


Recommendation

For FY 2016-17, the tuition policy recommendation is as follows:

- If the state General Fund appropriation is flat or falls below the level appropriated in FY 2015-16 (\$672 million), there will be no restrictions on tuition levels set by governing boards.
- If the state General Fund appropriation increases above the level appropriated for FY 2015-16, the tuition increase limit on resident undergraduate tuition is dependent upon the level of state investment. For example, a state General Fund increase of 5 percent will result in a CCHE requested tuition increase limit of 6 percent.
- Because all state general funds are allocated through the higher education allocation funding formula, some governing boards may receive an allocation that is less than the overall percentage growth for higher education. Those governing boards receiving less than the overall percentage growth may increase tuition by one percentage point higher than the tuition recommendation limit (e.g., if the overall increase is 5 percent with a tuition increase limit of 6 percent; a governing board receiving a general fund increase of less than 5 percent would be able to increase tuition up to 7 percent).
- Governing boards will have the ability to request flexibility above CCHE tuition increase limit through a Tuition Accountability Plan.

Linking the General Fund & Tuition: Approach for FY 2016-17



Next Steps

- Amend Commission policies to clearly outline the new processes and the Commission’s role therein. Official Commission policies will also include the development of Tuition Accountability Plan forms, processes and procedures.
- Request technical and clean-up changes to applicable statutes.



**LEGISLATIVE REPORT ON
THE SKILLS FOR JOBS ACT**

SUBMITTED JANUARY 2016

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LT. GOVERNOR JOSEPH GARCIA, EXECUTIVE DIRECTOR

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This report was prepared by the Colorado Department of Higher Education (DHE) pursuant to the requirements of §23-1-130 Colorado Revised Statutes.

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Executive Summary

In accordance with 23-1-130 C.R.S., the Skills for Jobs report was prepared by the Colorado Department of Higher Education. This report explores the state's anticipated workforce needs and the number of postsecondary credentials that are being issued, identifying any workforce needs that may not be met by education and training programs.

In 2014, public institutions in Colorado awarded 56,233 certificates and degrees, a 3.1 percent increase from the year prior. Colorado has a highly educated workforce and experts project that more jobs will continue to demand some level of postsecondary education (Carnevale, Smith & Strohl, 2013). The state unemployment rate is also lower for people who have a postsecondary credential than for those who have a high school degree or less.

In alignment with the Talent Pipeline report, we have isolated a selection of jobs with high projected growth rates and openings, while offering a sustainable living wage. While not exhaustive of occupations that offer opportunities for Coloradans, it provides a glimpse into promising industries in our state overall and can help guide our efforts in developing our state's workforce talent in various sectors. Jobs on this list are concentrated in skilled trades, healthcare, business/finance, and information technology (IT) occupation clusters. See the complete list in [Appendix A](#). While not exhaustive of all skills gaps, when analyzing related completions to average annual openings by occupation group, data show that we are potentially not meeting job openings for a number of skilled trades, mid-level and bachelor's level IT, bachelor's level finance, and graduate/professional level healthcare practitioner positions.

Recommendations include continuing efforts to,

- Use and improve state data sets and data alignment across agencies so as to better understand aggregate trends and use data to address policy questions;
- Develop effective career pathways, prioritizing a focus on fields that are in high demand and offer good employment opportunities for Coloradans;
- Closely examine and address supply-demand relationships in high demand areas such as healthcare, IT and skilled trades;
- Build strong industry-institution partnerships;
- Find ways to increase postsecondary success for our fastest growing demographic groups; and
- Provide students and families with the tools and knowledge to make informed educational decisions.

Introduction

As Colorado continues to grow and evolve, it is important for our state to have a nuanced understanding of economic and educational forces, and to be able to develop the educational and training opportunities that meet the needs of individual workers and the demands of the economy. In light of the Great Recession, the increasing cost of postsecondary education for the consumer, and a decade of wage stagnation for the majority of workers, the public and policy makers alike want to make informed decisions regarding the roles of postsecondary training and education in their lives and communities. While this report relies on recent postsecondary education and workforce patterns, it also ties in labor market projections to estimate where we may or may not be meeting industry demand for educated and trained workers. In turn, we hope this report sheds light as to where our anticipated high demand and high growth fields are, and whether credentials are being awarded that align with the economic needs of our state.

Pursuant to statute (23-1-130 C.R.S.), the Colorado Department of Higher Education (DHE) is required to submit a report concerning the state workforce need projections and credential production. In fulfillment of this requirement, this report identifies trends in the state's anticipated workforce needs and the number of degrees and certificates that have been produced. This report will be submitted to the Education Committees of the Senate and House of Representatives, the Economic and Business Development Committee of the House of Representatives, the Business, Labor, and Technology Committee of the Senate, and the Governor. Additionally, it will be sent to every public postsecondary governing board and be made available through the Department of Education to the state's public, private, and charter schools and districts, as well as be publicly available on the DHE website.

Highlights from this report include:

- An overview of national trends regarding postsecondary education and workforce needs, alongside Colorado-specific facts and figures; and
- Analysis of the state's anticipated workforce needs by occupation type and education levels, alongside the number of related certificates and degrees that Colorado postsecondary institutions issue.

Certainly, a report such as this has its limitations in scope. While we do orient this report as a statewide analysis, we recognize that unique regional trends exist. As part of our state's efforts to provide relevant information to interested stakeholders, we would like to recognize two other informational tools that are also available on related topics. The Colorado Workforce Development Council, in collaboration with the Colorado Department of Higher Education, the Colorado Department of Labor and Employment, the Colorado Department of Education, the Office of Economic Development and International Trade, the Office of State Planning and Budgeting and the State Demography Office at the Department of Local Affairs, released the second

annual [Talent Pipeline Report](#) in October 2015. In the spring of 2015, the [EdPays website](#) was launched in collaboration with College Measures and the Lumina Foundation, which provides information on median earnings trends in Colorado for postsecondary graduates one, five and ten years following graduation.

National Trends

In recent years there has been a surge of research, reports and media attention surrounding postsecondary education and employment, as both the educational and economic landscapes of our country have shifted considerably in recent history. Nationwide, it has been projected that by 2020, 65 percent of all jobs will require postsecondary education or training (Carnevale, Smith & Strohl, 2013). Colorado's projected workforce requirements even exceed the national average with 74 percent of all jobs requiring some level of postsecondary education by 2020. By these numbers, Colorado ranks third nationally in terms of our anticipated postsecondary training needs (Carnevale et al., 2013).

The national and Colorado-based conversations on workforce readiness and fulfilling employers' workforce needs have begun to shift perspectives on long held assumptions and biases toward different kinds of postsecondary education, and the alignment of pathways to supporting the success of youth and adults alike. According to research from Georgetown University's Center on Education and the Workforce on nationwide trends, when the projected postsecondary credential requirements for jobs in 2020 are more specifically defined, 36 percent of jobs will demand a baccalaureate degree or higher (or 42 percent of jobs in Colorado), while 30 percent will require a lesser degree of postsecondary training, such as an associate degree or certificate award (or 32 percent for Colorado) (Carnevale et al., 2013).

Ultimately, at the individual and state level, we all benefit from a well-educated workforce. Education supports an individual's employability and economic security. That individual can then afford to engage in the local economy through purchasing goods and services and paying taxes. Furthermore, during economic downturns, those with lower levels of educational attainment experience the most significant declines in employment and greater wage deterioration (Grusky, Red Bird, Rodrigues & Wimer, 2013), indicating one such way that a postsecondary education can often serve as an economic shield.

Colorado's Supply and Demand for Educated and Trained Workers

Colorado's economy is one of the strongest in the nation, with an unemployment rate of 3.6 percent as of November 2015 (Colorado Department of Labor and Employment, 2015). Data show that unemployment rates are lower for people with a postsecondary credential as compared to those without any postsecondary educational experience (Current Population Survey, 2015). Unemployment in 2015 in Colorado hovers at 3.8

percent for people with some college or an associate degree and at 2.1 percent for an adult with a bachelor’s degree or higher—lower than the unemployment rate for high school graduates (4.8 percent) and for those with less than a high school education (6.4 percent), although all rates of unemployment have declined since the previous Skills for Jobs Report was released. Median earnings continue to be higher for those with higher levels of education (U.S. Census Bureau, 2014).

Table 1: Colorado Unemployment and Earnings by Education Level

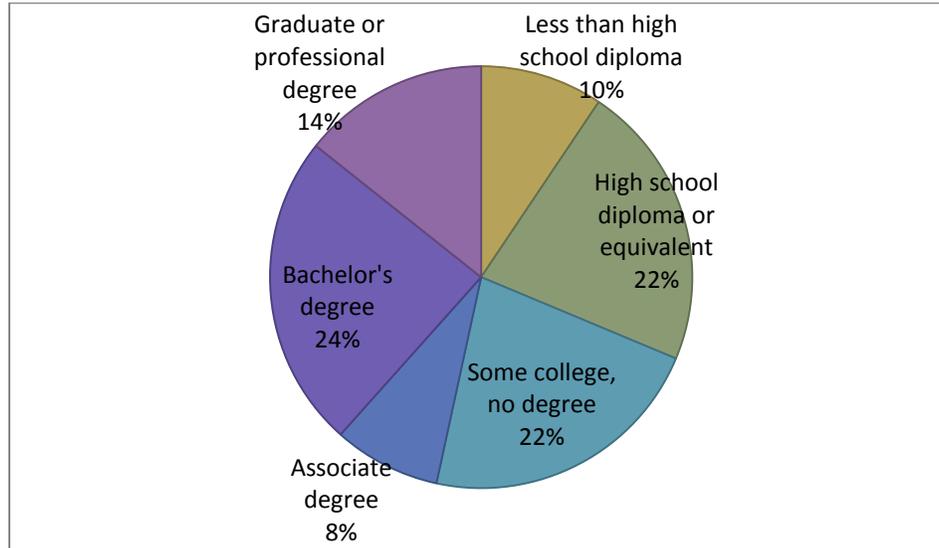
Educational Attainment	Unemployment Rate	Median Earnings
Less than high school graduate	6.4%	\$23,004
High School graduate	4.8%	\$30,568
Some college or associate degree	3.8%	\$35,329
Bachelor’s degree	2.1%	\$48,818
Graduate or professional degree		\$64,861

Source: U.S. Census Bureau, 2014 American Community Survey, 1-year estimates; Current Population Survey, 2015

In addition, Colorado has a workforce with one of the highest proportions of non-routine analytical and interpersonal skills—that is, skills such as critical thinking, social perceptiveness and creativity that are engaged in by educated and highly adept workers. Economies with high proportions of workers who typically use high-level analytical and interpersonal skills are positioned for better performance in the present and future as technologies evolve ([Colorado Office of State Planning and Budgeting](#), 2014). Maintaining a high share of workers with these types of non-routine skills will help sustain Colorado’s economic performance.

Overall, Colorado has a highly educated population relative to the rest of the nation, with nearly 47 percent of adults holding an associate degree or higher, and an additional 22 percent having some college experience or a certificate (Figure 1)—yet we also have an economy that demands a highly educated workforce. Experts project that by 2020, 74 percent of jobs in Colorado will require some level of postsecondary education or training (Carnevale et al., 2013). Along with the national goals for credential attainment, the Colorado Department of Higher Education has also been targeting a 66 percent postsecondary certificate or degree attainment level for Coloradans ages 25 to 34 by 2025 (for more information, see the Colorado Commission on Higher Education [Master Plan](#)). Colorado’s educational attainment goals are higher than most states, due to current education levels of our workforce and the composition of jobs in our state’s economy.

Figure 1: Colorado Educational Attainment, Adults 25 Years and Older



Source: U.S. Census Bureau; 2014 American Community Survey, 1-year estimates

While Colorado’s adult population overall has a high educational attainment level, there are significant disparities in educational attainment levels by race/ethnicity. Exemplifying this gap is the difference in educational attainment for our non-Hispanic white and Hispanic population in Colorado: 20 percent of Hispanic adults have a college degree whereas 53 percent of non-Hispanic white adults have a degree (U.S. Census Bureau, 2014). It is important to consider that by 2040 the non-white share of our primary working adult population (ages 25 to 64) is projected to be 43 percent (in 2010 it was 26 percent) (State Demography Office, 2013). Our state’s diversifying racial/ethnic composition will also mean more layers of support will likely be needed for students, especially those from underserved populations who tend to have lower educational attainment rates, in order to achieve higher levels of academic success. These factors may impact the long-term sustainability of our educated workforce and the development of our state economy.

Initial analysis from the Colorado State Demographer’s Office also shows that if Colorado does *not* continue to experience gains in educational attainment by race/ethnicity, then we can expect to see declines in the share of the population with a bachelor’s degree or higher and even more significant declines in the share of the population with a graduate or professional degree. The share of the population with less than a high school education would also increase given the expected changes in our demographic structure. If Colorado continues to experience similar increases that it has in recent years for attainment levels of high school diplomas and above by race/ethnicity, Colorado will see increases in the share of the population with a bachelor’s degree or higher, as well as increases in the share of the population with some college or an associate degree.

One variable that complicates analysis of a state’s workforce supply are migration patterns across state lines. On average, three-quarters of Colorado residents graduating from a public postsecondary institution are found in our workforce within the year following graduation. However, entry into our state’s workforce varies based on residency status, program major and degree level (for more information, see [Appendix C](#)). Some graduates will continue their education and delay entry into the workforce, some will pursue opportunities out-of-state, and some will leave and then return to the state for employment years later. Typically, people with higher levels of education tend to have higher levels of geographic mobility, so while we may lose a portion of our educated Coloradans to out-of-state opportunities, our state still attracts a large share of highly educated people. While we have consistently been able to attract qualified talent from outside of Colorado, we must also anticipate an increase in national and global competition for these workers as older skilled workers continue to retire in large numbers.

Completion figures show a 3.1 percent growth rate for credentials issued by a public institution from the previous academic year. While nearly half of these credentials issued are bachelor’s level degrees, the growth rate for less-than-one year certificates in particular (10 percent from academic year 2012/13 to 2013/14) exceeds that of all other credentials.

Table 2: Postsecondary Credentials Awarded (2013-14)

Credential Type	Public		Private
	Growth rate from year prior	AY 2013-14	AY 2013-14
Total	3.1%	56,233	32,388
Certificates	7.2%	13,797	6,466
Associate	-2.0%	8,337	5,506
Bachelor	4.0%	25,145	9,016
Graduate	0.0%	8,954	8,839

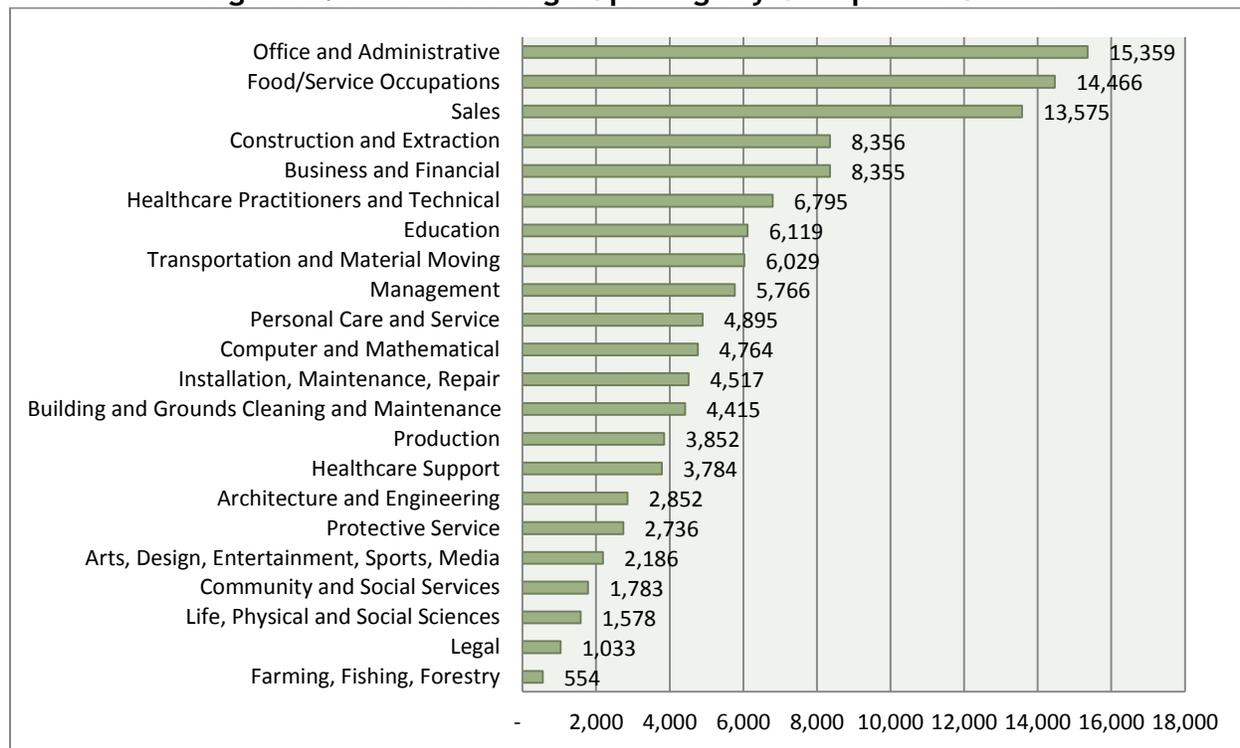
Source: IPEDS

Despite potential challenges we may face in terms of future degree production, we do have one of the most highly educated workforces in the country, and an economy that continues to attract an educated workforce and motivates many to acquire additional education. As we increase our credential production, it is also important to look beneath the surface of degree levels awarded and examine the structural nuances of our degrees and credentials earned to assess if we have any gaps in certain areas of training. The state is actively engaging in strategies, such as supporting sector partnerships and developing industry-led career pathways, to ensure we are training Coloradans for the jobs of today and tomorrow. A career pathway is a series of connected education and training programs, work experiences and student support services that enable individuals to secure a job or advance in an industry or occupation. The vehicle for creating such pathways is sector partnerships— regional,

industry-led partnerships of private and public partners, in a specific region, for a specific industry. The goal of sector partnerships is for private and public partners to coordinate and collaborate around the opportunities and requirements for the industry to grow in their region. Active sector partnerships have the ability to help drive the development of career pathways with education partners, so as to better meet their workforce needs. In 2015, legislation was passed to prioritize the development of healthcare, technology and skilled trades career pathways.

When we look forward to what we can anticipate for the jobs of tomorrow, Colorado’s ten year labor market projections estimate over 123,000 average annual openings due to the replacement of workers and economic growth; Figure 2 depicts where annual openings are dispersed by occupation group. In the following sections we provide additional analysis related to high growth occupations and credential completions alongside projected openings for occupation groups. A complete list of occupation groups can be found [here](#).

Figure 2: Annual Average Openings by Occupation Cluster



Source: Analysis of Colorado Labor Market Information

Colorado's Top Jobs: Supply and Demand

To pinpoint “top jobs” in our state, this report uses labor market data from Colorado’s Office of Labor Market Information to identify jobs that meet three criteria: above average growth rates, projected high annual openings, and typically offer a living wage for a family of three with one working adult. This is not an exhaustive list of occupations that offer opportunities for Coloradans; rather, it offers a glimpse into some promising fields in our state overall and can help guide our efforts in developing our state’s workforce talent in various sectors.

Many occupations that do not exist today may be in high demand in the near future, so we look to this list to provide us with fields where we can anticipate burgeoning opportunity. We’ve delineated the occupations by typical education requirements for entry. Table 3 shows mid-level occupations that are classified as requiring some college, an associate degree or extensive postsecondary training (such as an apprenticeship) for employment; Table 4 shows occupations that typically require a bachelor’s or graduate degree for employment.

These tables includes related completions (per 2014 Integrated Postsecondary Education Data System data) alongside projected annual openings by occupation, when available, as some occupations do not have specific educational/training pathways or some training program types are not recorded in the IPEDS data set (such as some apprenticeships or industry certificates). While regional differences do exist in terms of completions and occupation demand, for the purposes of this report we focus on a statewide perspective. Depending on your interests in a specific specialized skill, program or region, further examination of a potential supply-demand gap is recommended to better understand talent development strategies that should be implemented.

Based on current Colorado labor market data, occupations on the Top Jobs list are highly concentrated in construction and extraction, healthcare, business and finance, and IT occupations (Figure 3). Eighty-eight percent of job openings on this list are for occupations that typically require some level of postsecondary education or training for entry, whether it is an employer-sponsored formal training program, apprenticeship, certificate or degree (Figure 4).

Figure 3: Share of Openings in Top Jobs List by Occupation Cluster

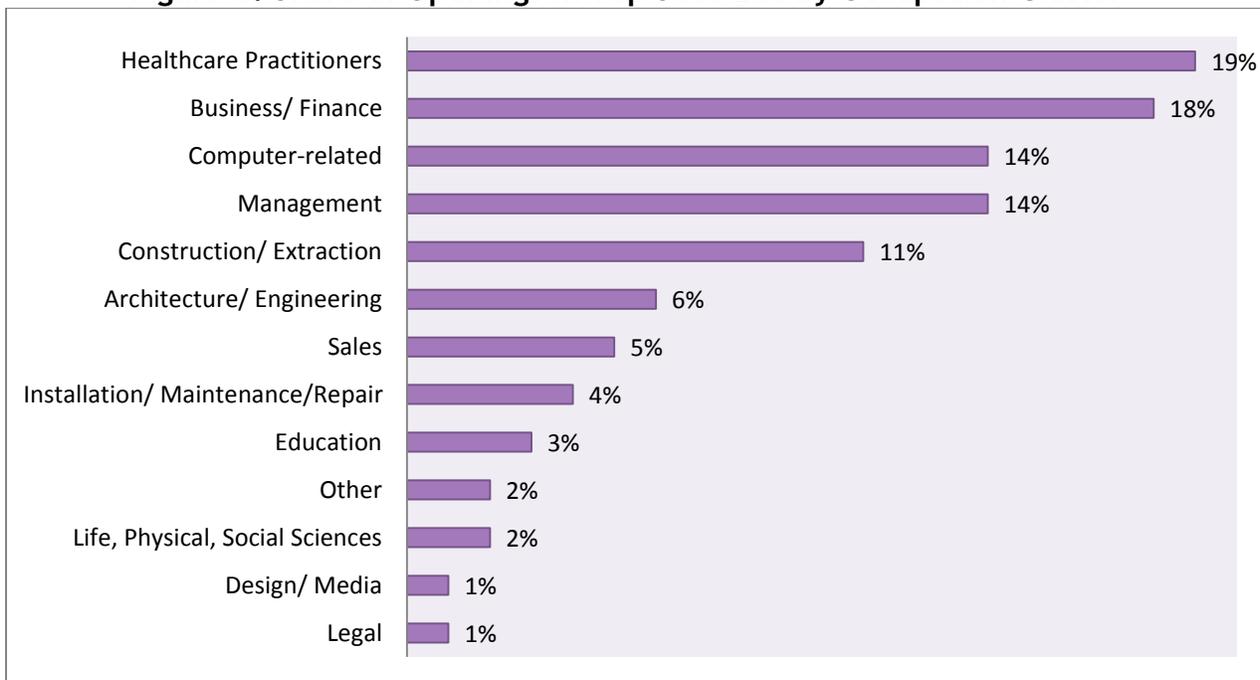
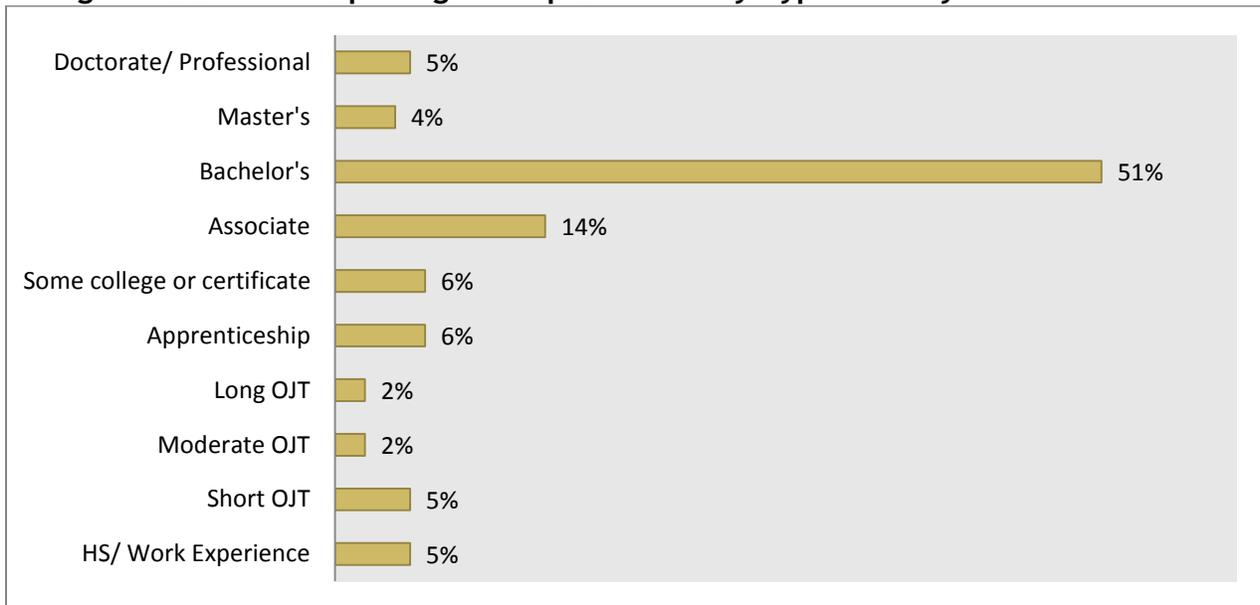
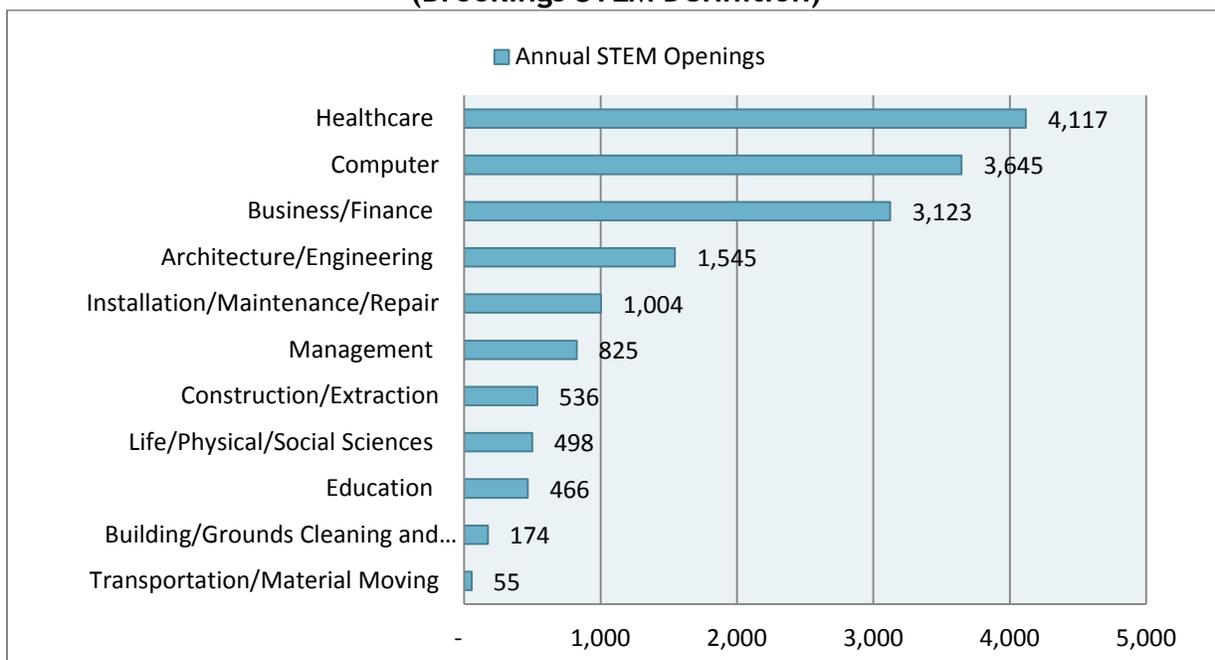


Figure 4: Share of Openings in Top Jobs List by Typical Entry Level Education



For the purposes of this analysis, we expanded our definition of STEM occupations and programs beyond that of the more limited occupation codes for IT, math, engineering and science professionals (e.g., jobs that largely require a bachelor’s degree or higher) to align with the Brookings Institution definition, which is based on actual skill levels in the areas of science, technology/computers, engineering and/or mathematics as typically required to perform an occupation.¹ Sixty-two percent of the job openings on this list are considered STEM per the Brookings Institution definition of STEM occupations, while about 20 percent of jobs across the state’s workforce are considered STEM by this definition. According to the Bureau of Labor Statistics’ definition of STEM occupations, 45 percent of jobs in this list are STEM, while out of all occupations in Colorado, about 14 percent are STEM by this definition. Brookings defined STEM jobs that are represented on this list are highly concentrated in IT, healthcare and finance occupations (Figure 5).

Figure 5: Top Jobs: Number of Annual STEM Job Openings by Occupation Cluster (Brookings STEM Definition)



The following two tables include occupations that are part of the Top Jobs list, with columns showing median earnings, projected change, related completions, and typically expected education and training. The complete list of top jobs can be found in [Appendix A](#).

¹ Brookings has conducted analysis of all occupations using O*NET skills scores, and has defined STEM occupations as those that require above average skill/knowledge levels in science, technology, engineering and/or mathematics areas. This definition includes not only occupations in the science, computer, math and engineering job clusters, but includes jobs in other fields such as healthcare, skilled trades and finance occupations.

Table 3: Mid-Level Top Jobs

^a Designates completions at community or technical colleges and is not necessarily comprehensive of all related training (i.e., apprenticeship completions, employer-sponsored training programs).

* Indicates an inadequate number of shared completions across multiple related occupations.

(N/A) Indicates specific programs do not crosswalk to this occupation code, it is difficult to ascertain which completers would enter this occupation or there are no related programs at a Colorado-based institution.

Occupation Code	Occupation	Median Annual Earnings	Total % Change 2014-2024	Avg. Annual Openings	Related Completions (2014)	Entry Education Level	Additional Training Level
15-1134	Web Developers	\$55,227	38.0	212	*	Associate degree	None
15-1151	Computer User Support Specialists	\$50,910	34.6	695	*	Some college, no degree	Moderate-term OJT
19-4041	Geological and Petroleum Technicians	\$58,105	34.3	47	20	Associate degree	Moderate-term OJT
23-2011	Paralegals and Legal Assistants	\$49,202	31.2	269	250	Associate degree	None
29-1126	Respiratory Therapists	\$57,724	32.9	84	108	Associate degree	None
29-1141	Registered Nurses	\$68,295	33.0	2,351	2,665	Associate degree	None
29-2021	Dental Hygienists	\$81,091	37.6	254	92	Associate degree	None
29-2032	Diagnostic Medical Sonographers	\$77,684	60.8	60	44	Associate degree	None
29-2034	Radiologic Technologists and Technicians	\$58,986	32.7	139	232	Associate degree	None
29-2055	Surgical Technologists	\$50,274	45.0	82	61	Postsecondary non-degree award	None
29-2061	Licensed Practical and Licensed Vocational Nurses	\$45,843	31.4	315	300	Postsecondary non-degree award	None
31-2021	Physical Therapist Assistants	\$50,203	46.0	68	110	Associate degree	None
47-2021	Brickmasons and Blockmasons	\$44,582	64.2	123	8a	HS diploma or equiv.	Apprenticeship
47-2111	Electricians	\$46,847	45.4	1,006	859a	HS diploma or equiv.	Apprenticeship
47-2152	Plumbers, Pipefitters, and Steamfitters	\$46,143	45.0	536	389a	HS diploma or equiv.	Apprenticeship
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	\$47,625	26.8	163	N/A	HS diploma or equiv.	Long-term OJT
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$48,760	43.5	341	245a	Postsecondary non-	Long-term OJT

						degree award	
49-9041	Industrial Machinery Mechanics	\$52,710	39.1	415	N/A	HS diploma or equiv.	Long-term OJT
49-9062	Medical Equipment Repairers	\$48,736	42.4	85	9	Associate degree	Moderate-term OJT

Table 4: Bachelor's and Graduate Degree Level Top Jobs

* Indicates an inadequate number of shared completions across multiple related occupations.

(N/A) Indicates specific programs do not crosswalk to this SOC, it is difficult to ascertain which completers would enter this occupation or there are no related programs at a Colorado-based institution.

Occupation Code	Occupation	Median Annual Earnings	Total % Change 2014-2024	Avg. Annual Openings	Related Completions (2014)	Entry Education Level	Additional Training Level
11-1021	General and Operations Managers	\$100,247	25.2	1,809	N/A	Bachelor's degree	None
11-2021	Marketing Managers	\$133,308	25.0	127	N/A	Bachelor's degree	None
11-3021	Computer and Information Systems Managers	\$140,037	26.6	253	N/A	Bachelor's degree	None
11-3121	Human Resources Managers	\$122,692	30.4	84	N/A	Bachelor's degree	None
11-9021	Construction Managers	\$83,436	28.1	572	N/A	Bachelor's degree	Moderate-term OJT
11-9033	Education Administrators, Postsecondary	\$77,162	27.0	133	N/A	Master's degree	None
11-9111	Medical and Health Services Managers	\$101,250	34.3	241	N/A	Bachelor's degree	None
11-9151	Social and Community Service Managers	\$68,578	26.8	85	N/A	Bachelor's degree	None
13-1051	Cost Estimators	\$60,095	43.4	419	N/A	Bachelor's degree	None
13-1081	Logisticians	\$74,114	43.1	161	N/A	Bachelor's degree	None
13-1111	Management Analysts	\$80,445	33.4	509	N/A	Bachelor's degree	None
13-1151	Training and Development Specialists	\$61,866	26.5	230	N/A	Bachelor's degree	None
13-1161	Market Research Analysts and Marketing Specialists	\$66,975	46.3	818	338	Bachelor's degree	None
13-2011	Accountants and Auditors	\$67,473	27.0	2,044	1,218*	Bachelor's degree	None
13-2051	Financial Analysts	\$74,924	36.9	231	406*	Bachelor's degree	None
13-2052	Personal Financial Advisors	\$76,751	41.5	268	377*	Bachelor's degree	None
15-1121	Computer Systems Analysts	\$86,663	37.3	552	*	Bachelor's degree	None
15-1122	Information Security Analysts	\$92,559	53.1	104	*	Bachelor's degree	None

Occupation Code	Occupation	Median Annual Earnings	Total % Change 2014-2024	Avg. Annual Openings	Related Completions (2014)	Entry Education Level	Additional Training Level
15-1132	Software Developers, Applications	\$98,909	34.9	1,109	*	Bachelor's degree	None
15-1133	Software Developers, Systems Software	\$104,685	39.1	605	*	Bachelor's degree	None
15-1141	Database Administrators	\$96,561	28.9	127	*	Bachelor's degree	None
15-1143	Computer Network Architects	\$101,632	26.5	185	*	Bachelor's degree	None
15-2031	Operations Research Analysts	\$80,252	41.3	56	179	Bachelor's degree	None
17-1011	Architects, Except Landscape and Naval	\$70,533	31.3	197	N/A	Bachelor's degree	Internship /residency
17-2011	Aerospace Engineers	\$118,977	36.8	147	260	Bachelor's degree	None
17-2051	Civil Engineers	\$79,764	32.5	418	469	Bachelor's degree	None
17-2061	Computer Hardware Engineers	\$107,450	25.5	186	82	Bachelor's degree	None
17-2071	Electrical Engineers	\$93,307	25.6	184	424	Bachelor's degree	None
17-2081	Environmental Engineers	\$84,033	36.5	130	104	Bachelor's degree	None
17-2112	Industrial Engineers	\$88,025	24.5	151	27	Bachelor's degree	None
17-2171	Petroleum Engineers	\$134,949	41.7	132	170	Bachelor's degree	None
19-2021	Atmospheric and Space Scientists	\$92,177	30.8	97	55	Bachelor's degree	None
19-2041	Environmental Scientists and Specialists, Including Health	\$74,018	27.5	179	210	Bachelor's degree	None
19-2042	Geoscientists, Except Hydrologists and Geographers	\$100,521	34.2	175	220	Bachelor's degree	None
21-1022	Healthcare Social Workers	\$52,132	36.5	125	N/A	Master's degree	None
21-1091	Health Educators	\$51,457	31.3	41	N/A	Bachelor's degree	None
25-1011	Business Teachers, Postsecondary	\$72,178	26.9	67	N/A	Doctoral or professional degree	None
25-1042	Biological Science Teachers, Postsecondary	\$55,623	31.4	44	N/A	Doctoral or professional degree	None
25-1071	Health Specialties Teachers, Postsecondary	\$102,273	51.0	269	N/A	Doctoral or professional degree	None
25-1072	Nursing Instructors and Teachers, Postsecondary	\$61,391	50.2	86	N/A	Master's degree	None
25-1081	Education Teachers, Postsecondary	\$51,880	26.9	51	N/A	Doctoral or professional degree	None
25-1121	Art, Drama, and Music Teachers, Postsecondary	\$51,005	28.3	107	N/A	Master's degree	None

Occupation Code	Occupation	Median Annual Earnings	Total % Change 2014-2024	Avg. Annual Openings	Related Completions (2014)	Entry Education Level	Additional Training Level
27-1025	Interior Designers	\$46,373	26.9	85	115	Bachelor's degree	None
27-3042	Technical Writers	\$65,703	26.3	83	99	Bachelor's degree	Short-term OJT
27-3091	Interpreters and Translators	\$48,108	67.7	117	N/A	Bachelor's degree	Short-term OJT
29-1031	Dietitians and Nutritionists	\$56,997	30.5	44	274	Bachelor's degree	Internship/residency
29-1041	Optometrists	\$106,802	31.1	50	N/A	Doctoral or professional degree	None
29-1051	Pharmacists	\$121,108	28.5	257	273	Doctoral or professional degree	None
29-1067	Surgeons	\$192,958	30.6	67	*	Doctoral or professional degree	Internship/residency
29-1069	Physicians and Surgeons, All Other	\$192,942	24.5	131	*	Doctoral or professional degree	Internship/residency
29-1071	Physician Assistants	\$92,160	50.5	145	71	Master's degree	None
29-1122	Occupational Therapists	\$80,850	36.6	141	44	Master's degree	None
29-1123	Physical Therapists	\$74,520	45.9	324	176	Doctoral or professional degree	None
29-1131	Veterinarians	\$77,789	24.9	135	157	Doctoral or professional degree	None
29-1171	Nurse Practitioners	\$97,940	42.7	130	138	Master's degree	None
29-1199	Health Diagnosing and Treating Practitioners, All Other	\$44,652	36.5	69	156	Master's degree	None
29-2011	Medical and Clinical Laboratory Technologists	\$62,126	26.1	131	21	Bachelor's degree	None

Occupational Demand by Credential Level

This section presents an overview of where potential gaps exist in certain occupation areas by credential level based on a snapshot of current completion levels alongside current projected openings. Projections of job openings are certainly not a guarantee that such demand will arise, but we are using them in this report to help guide our attention in prioritizing further exploration of various fields. Here we examine projected openings for occupation clusters as defined by Standard Occupational Codes (SOC) by level of postsecondary education. We use three education levels: *mid-level* (e.g., certificates, associate degrees), *bachelor's level* and *graduate level*. Limitations to this analysis are outlined in [Appendix B](#), along with additional information and data tables.

Mid-level

Mid-level completions correspond to jobs that typically require more than a high school education, but less than a bachelor's degree (such as associate degrees or certificates and credentials acquired at community and technical colleges). Fields with notable gaps are consistent with last year's findings. While there may be unique discrepancies in supply and demand at individual occupation levels, there appear to be inadequate completions for *IT* occupations (e.g., computer user support specialists),² various *skilled trades* (e.g., industrial machinery mechanics) and *science technicians* (e.g., geological and petroleum technicians), in particular.

Per the Brookings Institution definition of STEM occupations (i.e., jobs that typically require above average skill/knowledge levels in science, technology, engineering and/or mathematics), all of the IT and 96 percent of science technician openings are for STEM jobs. For job openings in the construction trades, and installation, maintenance and repair occupation groups, STEM job openings hover around 50 percent of jobs in these categories.

Production occupations (such as plant operators and machinists) have particularly high aged workforces, so it is important to train the next generation of skilled workers. In September 2012, the U.S. Department of Labor awarded a \$25 million grant to a consortium of Colorado community colleges to develop advanced manufacturing programs; in addition, HB 13-1165 was passed in 2013, authorizing the creation of Manufacturing Career Pathways. There are currently four active manufacturing sector partnerships, along with statewide organizations, such as Manufacturer's Edge and the Colorado Advanced Manufacturing Alliance, that are collaborating around a variety of resources to build out regional and statewide career pathways.

² For IT occupations, additional analysis of specific technical skills that are in high demand by industry is also important. Some coding languages are currently seen in job postings at higher rates than others, and the demand for these languages change over time, as well.

Bachelor's and Graduate Level

At the baccalaureate and graduate level there are a number of occupation groups that showed potential insufficient completions to related industry demand. Because the highly educated workforce is quite mobile, many of these graduates have the option to pursue opportunities in other states. Consistent with last year's findings, data show we are likely not producing enough graduates trained to enter *financial* occupations (e.g., accountants, financial analysts), *computer-related* occupations (e.g., programmers, computer systems analysts), *healthcare* occupations (e.g., physicians, occupational therapists), or *air transportation* (pilots). The number of completers from college/university educator preparation programs in Colorado have declined by 22.7 percent over the past five years. Certain areas of specialization for *K-12 teachers* (e.g., math, science, special education) continue to be in high demand and rural districts continue to report challenges in retaining a teaching workforce. In response, the Colorado Department of Education and DHE have targeted initiatives in place to develop a stronger educator pipeline to the rural areas in the state.

While data show that overall engineering degree completions meet projected related job openings, engineers in particular are often recruited out-of-state, and this may impact how many graduates we are able to retain in-state for our own workforce needs. There may certainly be supply deficits by certain areas of specialization that this type of occupation cluster analysis does not provide. For example, per the 2016 Colorado Business Economic Outlook, with several extensive transportation projects being conducted in the state, engineers with specific skills such as highway and bridge design are hard to source locally.

Based on current credential production, we may also risk maintaining current graduate-level educational attainment levels of workers in financial and IT occupations. Of additional note, many of these occupation areas that have highly educated workers and education requirements—such as finance, engineering, architecture and healthcare professionals—are occupation clusters that tend to be more skewed to older age workers. This is important to consider as we plan and implement talent development strategies, especially as we continue to gain distance from the last recession, and as baby boomers continue to retire.

Examination of potential deficits in completions for the graduate/professional level group of healthcare practitioners is complicated by the fact that many of these jobs could require upwards of ten years of schooling, and the healthcare industry will continue to evolve in staffing structures as practices and technology change. However, there are also many variables that impact these completion figures for physicians in particular, such as the limited number of residency positions nationwide and current funding structures. This is then compounded by the impending baby boomer population that will face increasing healthcare needs, as well as by that of the potential increase in practitioner demand as a result of more insured patients under the Affordable Care Act. Colorado is currently participating in a National Governor's Association policy academy to support mechanisms for the more targeted

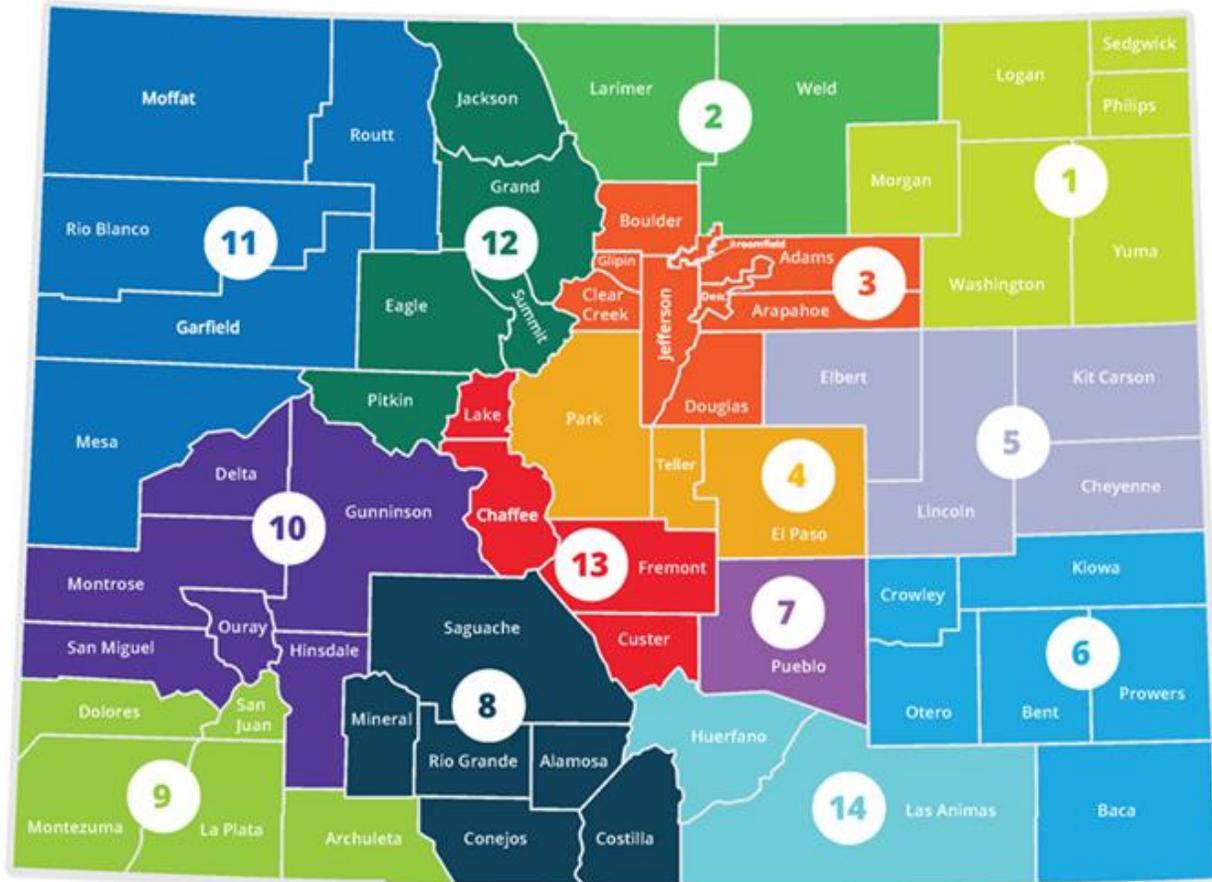
development of our state's healthcare workforce, and there are nine active or emerging healthcare sector partnerships and most have identified workforce as a critical issue on which to focus.

Per the Brookings definition of STEM occupations, the majority of job openings in these occupation groups (finance, IT, healthcare, air transportation [pilots]) with potential supply-demand gaps are considered STEM occupations. Ninety percent of bachelor's level finance occupations and 87 percent of graduate level healthcare occupation openings are defined as STEM. All bachelor's level IT and air transportation occupations are defined as STEM. While national conversation circles around low representation of females employed in computer science occupations, women also complete related computer and information science degrees at far lower numbers than men. Of the 2014 computer and information science degrees awarded, 16 percent were earned by females; 23 percent of workers in an IT occupation are female. Similar gender ratios can be found for completions for aviation programs (15 percent female graduates).

Two and Four Year Public Institution Profiles

Per additional evaluation as proposed by the Colorado Commission on Higher Education Master Plan, this report also includes the roles and missions, locations and service areas of public colleges and universities. Colorado is a state with diverse regions and regional economies and, as such, many Colorado state agencies use a common planning and management regional guideline, dividing the state into 14 regions. The first map below (Figure 6) orients us to main and satellite campus locations of two and four year institutions overlaying Colorado's planning and management regions. The second map (Figure 7) shows sector partnerships by region, demonstrating where current and emerging industries exist across our state. Alongside supply-demand analysis, these maps provide a reference for potential institution-industry partnerships by regional need. [Appendix D](#) includes a table outlining each institution's location, role and mission. While of course there is inter-regional activity, whether it be economic, educational or otherwise, all of our regions have one or more public postsecondary institutions that can play a role in serving region-specific demands. Seven regions have both community college and four year institution campuses (regions 2, 3, 4, 7, 8, 9, 11), one region has only a four year institution (region 10) and five regions have only main and/or satellite community college campuses (regions 1, 5, 6, 12, 13, 14).

Figure 7: Map of Sector Partnerships by Region



1 Exploring: Energy & Natural Resources

2 Active: Health & Wellness
Active: Advanced Manufacturing
Exploring: Energy & Natural Resources

3 Active: Health & Wellness
Active: Advanced Manufacturing
Emerging: Landscape Architecture
Emerging: Technology & Information
Exploring: Construction & Development

4 Emerging: Advanced Manufacturing
Emerging: Health & Wellness

5 Emerging: Health & Wellness

6 Active: Advanced Manufacturing
Exploring: Health & Wellness

7 Active: Advanced Manufacturing
Active: Health & Wellness

8 Exploring: Health & Wellness

9 Emerging: Energy & Natural Resources

10 Emerging: Health & Wellness

11 Emerging: Health & Wellness (Mesa, Delta, Montrose Counties)
Emerging: Health & Wellness (Garfield, Rio Blanco, Routt Counties)
Emerging: Advanced Manufacturing (Mesa County)

12 Emerging: Health & Wellness

13 Active: Health & Wellness
Emerging: Tourism & Outdoor Recreation

14 Exploring: Health & Wellness



Recommendations

The state of Colorado has an interest and commitment to educating its residents for meaningful and instrumental roles in its growing economy. While this report looks toward the future and, based on current data and information, makes inferences regarding prospects for Colorado, there is certainly room for a change of course in this fast evolving world. We conclude this report with various recommendations of issues and concerns that should be in our line of sight as we participate in, design and develop our state's economies and educational networks. Recommendations remain consistent with the previously issued Skills for Jobs Report.

In considering means to implement these recommendations it is important to consider the work Colorado has done over the last four years toward alignment of education, workforce development and economic development to meet industry needs. According to Executive Order B2010-012, the Colorado Workforce Development Council (CWDC) is responsible for ensuring effective alignment of workforce development, education and economic development initiatives related to talent development for Colorado's businesses.

The Colorado Blueprint laid the foundation for an aggressive economic development plan for the State of Colorado, including Core Objective V, Educate and Train the Workforce of the Future, which is led by the Colorado Workforce Development Council (CWDC), the state's Workforce Investment Board. This is a collaborative approach of many partners including (but not limited to) CDHE, Colorado Department of Education, Colorado Department of Labor & Employment, Colorado Department of Human Services, Colorado Department of Corrections, Colorado Community College System and Career & Technical Education, and the Office of Economic Development and International Trade, as well as local and regional partners of each of these state agencies. Through this structure, CWDC is convening leaders and subject matter experts to develop aligned solutions, leverage resources and utilize data and industry input to ensure effective outcomes.

Analysis should be based on state-level or regional data rather than national-level data when available

Coloradans, in general, are better educated than people from other states, but that does not mean we are better prepared to meet our specific workforce needs. The job openings that need to be filled in Colorado both now and in the next decade are more likely to require postsecondary credentials than in most other states. We must focus on Colorado-specific data or we are at risk of failing to plan adequately, potentially producing an excess of graduates with certain skills and a shortage of graduates with much needed skills.

Strengthen data sharing relationships between Colorado’s Department of Labor and Employment, Department of Education and Department of Higher Education

Each of the Colorado Departments, Labor and Employment, Education and Higher Education, gather and store vast quantities of data that would facilitate greater planning and coordination among institutions and employers so that workforce needs will be met and graduates will have full employment opportunities. Current information may need to be supplemented, however, with more detail about specific regional market needs and important distinctions within broad occupation categories. These agencies have been and continue to work toward connecting K-12, postsecondary education and labor data to better understand aggregate trends and address policy questions and measure effectiveness of initiatives.

Develop effective career pathways

We are producing an increasing number of postsecondary graduates every year, yet are still not graduating enough students in certain program areas to meet the demands of our state’s economy. Research has shown that countries with higher levels of educational attainment offer diverse pathways, as well as connect employers to the educational process to prepare students for certain careers (Symonds, Schwartz & Ferguson, 2011). Our state does have various industry-led career pathways in place and is planning to formally implement more. It is important to highlight the significance of this work and the essential continued support of it if we are to educate Coloradans and support their success in our state. As our state develops various career pathway tracks, we should bear in mind that places for entry and re-entry can be helpful for those who initially enter a field at a lower educational level and later desire to obtain additional credentials to enhance career opportunities (such as, one may have an accounting technician credential, but eventually pursues a bachelor’s degree in finance/business, or a licensed vocational/practical nurse completed a one or two year program initially, but eventually pursues a registered nursing degree, etc.).

In addition to the creation of specific career paths in demand by industry, focus should be put on the current effort of state and local partners that are working to create a statewide tapestry of career pathways including all high demand occupations and opportunities for all Coloradans. This statewide Career Pathway System is currently receiving technical assistance from the U.S. Department of Adult and Vocational Education and has potential for integrating the various career paths, as well as the work of all education and workforce development partners.

Continue to closely examine and address the supply-demand relationships in high growth/high demand areas such as healthcare, IT, skilled trades and finance

This report has highlighted various areas where there may be gaps in the supply of graduates that correlate with specific occupations or occupation clusters. Various types of healthcare practitioners, IT professionals, financial specialists and skilled

trades workers have appeared in both the list of jobs with projected high growth rates and openings, as well as in general fields with potential supply-demand gaps.

Currently, Colorado has five active healthcare sector partnerships, five active manufacturing sector partnerships and additional emerging partnerships in progress. For example, existing sector partnerships (industry-specific regional partnerships) are addressing the supply-demand relationship and manufacturing workforce shortages in the state. The NoCo Manufacturing Sector Partnership has been implementing and developing strategies to address skills gaps for critical occupations, relying on collaboration between northern Colorado's manufacturing employers and education partners. Their recent report on developing manufacturing talent can be found at: http://www.nocomfg.com/uploads/5/6/5/4/56547587/noco_manufacturing_talent_report_october_2015.pdf

Continue to build strong industry-institution partnerships

When we look globally to best practices in cultivating an educated workforce that fulfill economic demand, strong industry-institution partnerships and earn-and-learn models continue to stand out as effective strategies for many kinds of career pathways. Often, we think of these models as connected to the skilled trades, and as we develop additional programs in advanced manufacturing, we should be aware of educational models that encourage completion rates and smooth transitions into employment. It is worthwhile to look towards innovative and adaptable business concepts that are particularly oriented towards real world skills that specific employers and fields want.

Colorado is recognized nationally as a leader in bringing industry together with education, workforce development and economic development to address these issues. Colorado's Sector Strategies, which support regional Sector Partnerships (see map on page 22), integrate the work of economic development and the needs of industry with education and workforce partners and efforts. The resulting outcomes are comprehensive career pathways that include all levels of education, training, applied learning, connections to work experience opportunities and placement in jobs.

Find ways to increase postsecondary success for Colorado's fastest growing demographic groups

As Colorado faces an increasing demand for well-educated and credentialed graduates of postsecondary institutions to meet the workforce demands of the future, it also faces a rapidly changing demographic in its K-12 primary and secondary pipeline. An increasing percentage of those students are members of minority groups and face other risk factors, such as being low-income and coming from families where they will be the first to pursue higher education. In the past, those groups have not found postsecondary success at the same rate as their white peers. Colorado will not meet the workforce needs of the future unless it can improve the rate at which members of

those underserved groups graduate from high school are ready to enroll in college-level classes, enroll in and persist through certificate or degree completion, and enter the workforce. For that to happen, Colorado must be prepared to invest resources not only into high quality academic programs, but also toward financial aid, controlling college costs so as to maintain reasonable tuition and fees and providing academic support systems to help students successfully complete their chosen programs of study.

Provide students and families with the tools and knowledge to make informed decisions

It is crucial to provide students and their families with the tools and information to support them through their decision-making processes regarding postsecondary education. By providing accessible information regarding completion rates, the job market, potential earnings information, unemployment rates and the like to interested stakeholders, there is the opportunity for completions and economic demands to better align. Ultimately, if we can help students and jobseekers know where opportunities likely exist, then we can help them spend their education dollars wisely.

Conclusion

It is critical that our colleges and universities across Colorado focus on delivering high-quality graduates so that Colorado employers continue to respect and seek out the credentials of Colorado-educated graduates. Further developing partnerships between Colorado's postsecondary institutions and Colorado's employers is critical to the advancement of our state's economy and maintaining our competitive edge.

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Appendix A: Colorado's Top Jobs List

^a Designates completions at community or technical colleges and is not necessarily comprehensive of all related training (i.e., apprenticeship completions, employer-sponsored training programs).

* Indicates an inadequate number of shared completions across multiple related occupations.

(N/A) Indicates specific programs do not crosswalk to this SOC, it is difficult to ascertain which completers would enter this occupation *or* there are no related programs at a Colorado-based institution.

Occupation Code	Occupation	Median Annual Earnings	Total Percent Change 2014-2024	Avg. Annual Openings	Related Completions (2014)	Entry Education Level	Additional Training Level
11-1021	General and Operations Managers	\$100,247	25.2	1,809	N/A	Bachelor's degree	None
11-2021	Marketing Managers	\$133,308	25.0	127	N/A	Bachelor's degree	None
11-3021	Computer and Information Systems Managers	\$140,037	26.6	253	N/A	Bachelor's degree	None
11-3121	Human Resources Managers	\$122,692	30.4	84	N/A	Bachelor's degree	None
11-9021	Construction Managers	\$83,436	28.1	572	N/A	Bachelor's degree	Moderate-term OJT
11-9033	Education Administrators, Postsecondary	\$77,162	27.0	133	N/A	Master's degree	None
11-9111	Medical and Health Services Managers	\$101,250	34.3	241	N/A	Bachelor's degree	None
11-9141	Property, Real Estate, and Community Association Managers	\$64,938	25.9	194	N/A	HS diploma or equivalent	None
11-9151	Social and Community Service Managers	\$68,578	26.8	85	N/A	Bachelor's degree	None
13-1051	Cost Estimators	\$60,095	43.4	419	N/A	Bachelor's degree	None
13-1081	Logisticians	\$74,114	43.1	161	N/A	Bachelor's degree	None
13-1111	Management Analysts	\$80,445	33.4	509	N/A	Bachelor's degree	None
13-1151	Training and Development Specialists	\$61,866	26.5	230	N/A	Bachelor's degree	None
13-1161	Market Research Analysts and Marketing Specialists	\$66,975	46.3	818	338	Bachelor's degree	None
13-2011	Accountants and Auditors	\$67,473	27.0	2044	1,218*	Bachelor's degree	None
13-2051	Financial Analysts	\$74,924	36.9	231	406*	Bachelor's degree	None
13-2052	Personal Financial Advisors	\$76,751	41.5	268	377*	Bachelor's degree	None
15-1121	Computer Systems Analysts	\$86,663	37.3	552	*	Bachelor's degree	None
15-1122	Information Security Analysts	\$92,559	53.1	104	*	Bachelor's degree	None
15-1132	Software Developers, Applications	\$98,909	34.9	1,109	*	Bachelor's degree	None
15-1133	Software Developers, Systems Software	\$104,685	39.1	605	*	Bachelor's degree	None
15-1134	Web Developers	\$55,227	38.0	212	*	Associate degree	None
15-1141	Database Administrators	\$96,561	28.9	127	*	Bachelor's degree	None
15-1143	Computer Network Architects	\$101,632	26.5	185	*	Bachelor's degree	None

Occupation Code	Occupation	Median Annual Earnings	Total Percent Change 2014-2024	Avg. Annual Openings	Related Completions (2014)	Entry Education Level	Additional Training Level
15-1151	Computer User Support Specialists	\$50,910	34.6	695	*	Some college, no degree	Moderate-term OJT
15-2031	Operations Research Analysts	\$80,252	41.3	56	179	Bachelor's degree	None
17-1011	Architects, Except Landscape and Naval	\$70,533	31.3	197	N/A	Bachelor's degree	Internship/residency
17-2011	Aerospace Engineers	\$118,977	36.8	147	260	Bachelor's degree	None
17-2051	Civil Engineers	\$79,764	32.5	418	469	Bachelor's degree	None
17-2061	Computer Hardware Engineers	\$107,450	25.5	186	82	Bachelor's degree	None
17-2071	Electrical Engineers	\$93,307	25.6	184	424	Bachelor's degree	None
17-2081	Environmental Engineers	\$84,033	36.5	130	104	Bachelor's degree	None
17-2112	Industrial Engineers	\$88,025	24.5	151	27	Bachelor's degree	None
17-2171	Petroleum Engineers	\$134,949	41.7	132	170	Bachelor's degree	None
19-2021	Atmospheric and Space Scientists	\$92,177	30.8	97	55	Bachelor's degree	None
19-2041	Environmental Scientists and Specialists, Including Health	\$74,018	27.5	179	210	Bachelor's degree	None
19-2042	Geoscientists, Except Hydrologists and Geographers	\$100,521	34.2	175	220	Bachelor's degree	None
19-4041	Geological and Petroleum Technicians	\$58,105	34.3	47	20	Associate degree	Moderate-term OJT
21-1022	Healthcare Social Workers	\$52,132	36.5	125	N/A	Master's degree	None
21-1091	Health Educators	\$51,457	31.3	41	N/A	Bachelor's degree	None
23-2011	Paralegals and Legal Assistants	\$49,202	31.2	269	250	Associate degree	None
25-1011	Business Teachers, Postsecondary	\$72,178	26.9	67	N/A	Doctoral or professional degree	None
25-1042	Biological Science Teachers, Postsecondary	\$55,623	31.4	44	N/A	Doctoral or professional degree	None
25-1071	Health Specialties Teachers, Postsecondary	\$102,273	51.0	269	N/A	Doctoral or professional degree	None
25-1072	Nursing Instructors and Teachers, Postsecondary	\$61,391	50.2	86	N/A	Master's degree	None
25-1081	Education Teachers, Postsecondary	\$51,880	26.9	51	N/A	Doctoral or professional degree	None
25-1121	Art, Drama, and Music Teachers, Postsecondary	\$51,005	28.3	107	N/A	Master's degree	None
27-1025	Interior Designers	\$46,373	26.9	85	115	Bachelor's degree	None
27-3042	Technical Writers	\$65,703	26.3	83	99	Bachelor's degree	Short-term OJT
27-3091	Interpreters and Translators	\$48,108	67.7	117	N/A	Bachelor's degree	Short-term OJT
29-1031	Dietitians and Nutritionists	\$56,997	30.5	44	274	Bachelor's degree	Internship/residency

Occupation Code	Occupation	Median Annual Earnings	Total Percent Change 2014-2024	Avg. Annual Openings	Related Completions (2014)	Entry Education Level	Additional Training Level
29-1041	Optometrists	\$106,802	31.1	50	N/A	Doctoral or professional degree	None
29-1051	Pharmacists	\$121,108	28.5	257	273	Doctoral or professional degree	None
29-1067	Surgeons	\$192,958	30.6	67	*	Doctoral or professional degree	Internship/residency
29-1069	Physicians and Surgeons, All Other	\$192,942	24.5	131	*	Doctoral or professional degree	Internship/residency
29-1071	Physician Assistants	\$92,160	50.5	145	71	Master's degree	None
29-1122	Occupational Therapists	\$80,850	36.6	141	44	Master's degree	None
29-1123	Physical Therapists	\$74,520	45.9	324	176	Doctoral or professional degree	None
29-1126	Respiratory Therapists	\$57,724	32.9	84	108	Associate degree	None
29-1131	Veterinarians	\$77,789	24.9	135	157	Doctoral or professional degree	None
29-1141	Registered Nurses	\$68,295	33.0	2,351	2,665	Associate degree	None
29-1171	Nurse Practitioners	\$97,940	42.7	130	138	Master's degree	None
29-1199	Health Diagnosing and Treating Practitioners, All Other	\$44,652	36.5	69	156	Master's degree	None
29-2011	Medical and Clinical Laboratory Technologists	\$62,126	26.1	131	21	Bachelor's degree	None
29-2021	Dental Hygienists	\$81,091	37.6	254	92	Associate degree	None
29-2032	Diagnostic Medical Sonographers	\$77,684	60.8	60	44	Associate degree	None
29-2034	Radiologic Technologists and Technicians	\$58,986	32.7	139	232	Associate degree	None
29-2055	Surgical Technologists	\$50,274	45.0	82	61	Postsecondary non-degree award	None
29-2061	Licensed Practical and Licensed Vocational Nurses	\$45,843	31.4	315	300	Postsecondary non-degree award	None
31-2021	Physical Therapist Assistants	\$50,203	46.0	68	110	Associate degree	None
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeep	\$48,403	25.2	174	N/A	HS diploma or equivalent	None
41-3099	Sales Representatives, Services, All Other	\$51,915	27.3	1,219	N/A	HS diploma or equivalent	Short-term OJT
41-9021	Real Estate Brokers	\$63,430	25.0	94	96a	HS diploma or equivalent	None
47-1011	First-Line Supervisors of Construction Trades and Extraction Work	\$62,668	38.4	721	N/A	HS diploma or equivalent	None

Occupation Code	Occupation	Median Annual Earnings	Total Percent Change 2014-2024	Avg. Annual Openings	Related Completions (2014)	Entry Education Level	Additional Training Level
47-2021	Brickmasons and Blockmasons	\$44,582	64.2	123	8a	HS diploma or equivalent	Apprenticeship
47-2111	Electricians	\$46,847	45.4	1,006	859a	HS diploma or equivalent	Apprenticeship
47-2152	Plumbers, Pipefitters, and Steamfitters	\$46,143	45.0	536	389a	HS diploma or equivalent	Apprenticeship
47-5012	Rotary Drill Operators, Oil and Gas	\$51,702	26.7	53	N/A	Less than high school	Moderate-term OJT
47-5013	Service Unit Operators, Oil, Gas, and Mining	\$44,897	29.3	310	N/A	Less than high school	Moderate-term OJT
47-5021	Earth Drillers, Except Oil and Gas	\$45,240	43.8	48	N/A	HS diploma or equivalent	Moderate-term OJT
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	\$47,625	26.8	163	N/A	HS diploma or equivalent	Long-term OJT
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$48,760	43.5	341	245a	Postsecondary non-degree award	Long-term OJT
49-9041	Industrial Machinery Mechanics	\$52,710	39.1	415	N/A	HS diploma or equivalent	Long-term OJT
49-9062	Medical Equipment Repairers	\$48,736	42.4	85	9	Associate degree	Moderate-term OJT
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	\$46,792	25.5	61	N/A	HS diploma or equivalent	Moderate-term OJT
53-7021	Crane and Tower Operators	\$48,641	42.4	42	14a	HS diploma or equivalent	Moderate-term OJT
53-7073	Wellhead Pumpers	\$55,006	27.7	55	N/A	Less than high school	Moderate-term OJT

Appendix B: Technical Information

Calculations

To create the Top Jobs list, we isolated occupations from Colorado's Office of Labor Market Information (LMI) 2014 to 2024 projections that met three criteria: above average projected growth (23.74 percent), average annual openings of 40 or above and offers a median hourly wage of \$21.18 or higher (meeting the threshold of sustainable living wage averaged across the state for a family of three with one working adult). Related completions are from Integrated Postsecondary Educational Data System (IPEDS) and program completions are crosswalked to related occupations based on the National Center for Education Statistics (NCES) SOC-CIP crosswalk.

To develop our analysis of occupational demand by credential level, we had to take into account both the entry education level requirements and the actual educational attainment levels of those employed in the occupation (what we denote as the competitive education level) so as to provide a more accurate present day education level expectation. Colorado LMI projections and BLS data reflecting educational attainment percentages by Standard Occupational Classification (SOC) code were primarily used to reach our figures.

To analyze by credential level demand we first isolated occupations by SOC occupation group and sub-groups. For example, for the SOC major group 13 (business and financial operations occupations), greater specificity in the supply-demand relationship was yielded by conducting analysis separately for the two sub-groups (business operations specialists and financial specialists). Conducting analysis by SOC groups allows us to better account for CIP codes that align with more than one SOC code and to avoid duplicate counts as much as possible.

For each instance, we first isolated occupations by SOC group. We then calculated projected annual openings by typical educational level clusters (mid-level, bachelor's level and graduate level). We then crosswalked SOC codes to the associated CIP codes and established completion figures by credential/degree level. This provides the supply (or completions) by credential level, as well as the projection by entry education level. To establish the competitive education figures, we calculated education attainment levels by percent for the group of SOC codes being analyzed and then translated the SOC group's total annual openings into absolute numbers by education level based on these education attainment percentages. Supply and demand figures are rounded in recognition of potential error inherent in data and projections.

Limitations

In reviewing the tables and figures in this report, these limitations should be considered:

- While data depict program completions as they are aligned to occupation codes by the National Center for Education Statistics (NCES) crosswalk, not all completers enter into the specific occupation to which the education program typically aligns, and some occupation codes simply do not seamlessly link to a specific program code, or link to multiple program codes. When possible, we try to avoid or we acknowledge such redundancy. Completions are only inclusive of institutions that report to the Integrated Postsecondary Educational Data System (IPEDS); there are a number of private occupational schools or apprenticeship programs that are not recorded in this data collection.
- This section examines general trends within large occupation clusters and there may be deficits or excesses in completions for individual occupations within larger occupation groups. The list of top jobs focuses on supply and demand for a number of individual occupations.
- Some completers do not enter Colorado's workforce immediately following graduation for various reasons, such as continuing education or pursuing opportunities out-of-state. Some graduates are already members of the workforce and are perhaps pursuing an additional credential for professional development, to increase compensation potential and the like. This analysis does not isolate the exchange of workers across state and country borders, both with our Colorado-educated workers leaving the state and out-of-state educated workers entering Colorado. We do not account for the number of existing residents with specific skill sets/training levels who are currently available to fill openings and are seeking work in Colorado.
- Currently we are unable to produce a quality projection of anticipated postsecondary credential completions through 2020 as an additional piece of information.
- This type of analysis tends to focus on technical-oriented degrees and occupations, as it is difficult to directly link a specific occupation with a liberal arts completer (who would also presumably embody a number of skill sets in high demand by employers, such as critical thinking, speaking and writing skills).
- We can only base projections upon what we know today, accounting for occupations and industries that exist today. Projections are derived from algorithms that are based on current regional growth patterns. As exemplified by our most recent recession, our economic trajectory can shift dramatically and surprisingly in a short period of time, tossing aside any number of economic projections and models that are out there. Furthermore, without a crystal ball, we cannot account for new or emerging industries and occupations. Certainly we don't know the full extent of growth in areas such as big data or the renaissance of American manufacturing or whatever next great idea that is down the pike.
- Analysis in this report is state-wide. Individual regions may experience unique supply-demand relationships.

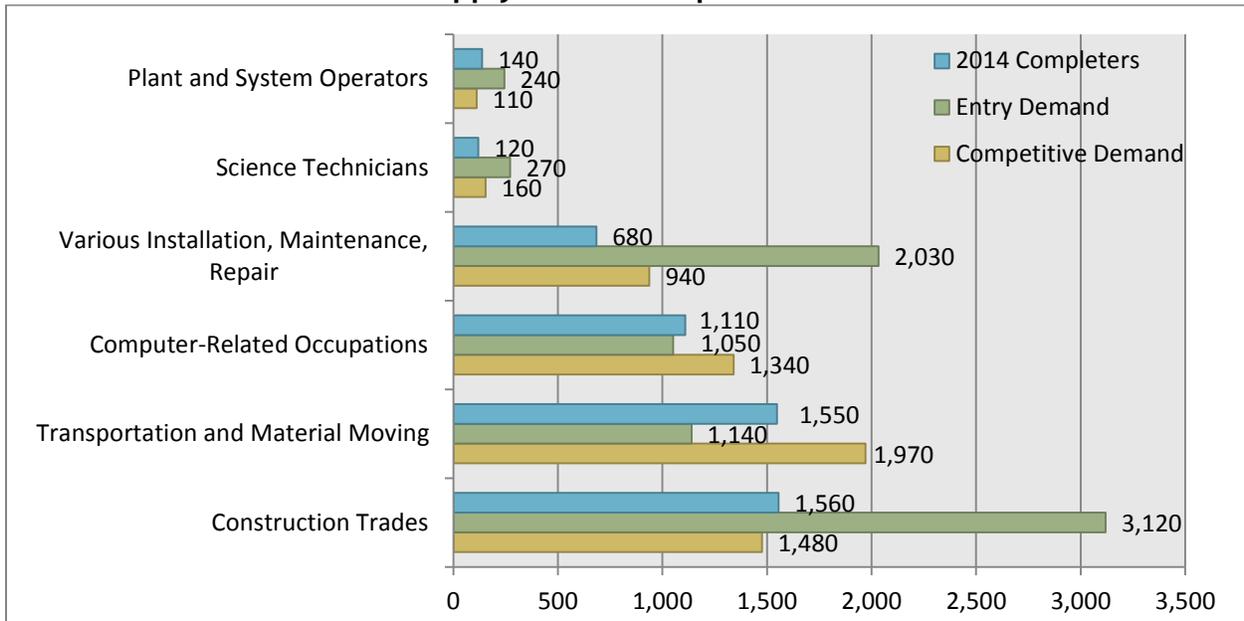
Estimates for Potential Gap Occupations

There are two ways by which we analyze the demand by credential level:

- By education requirements assigned to occupations as typically categorized by the Bureau of Labor Statistics (BLS), which are described as *entry education levels*. This is represented by the green bars in the following graphs.
- By the actual education attainment percentage rates of people employed in these occupations, per American Community Survey (ACS) data. This, in a sense, shows the *competitive level* of education currently experienced in each occupation. This is represented by the yellow bars in the following graphs.

It is especially helpful to consider credential-level supply and demand from both of these angles in our current economy, especially when many employers are hiring candidates with higher levels of education for certain positions than prior to the recession. Essentially, for some occupations, the BLS education level designation presents as an entry level requirement, and may differ from the educational attainment level rates of people current employed in that occupation.

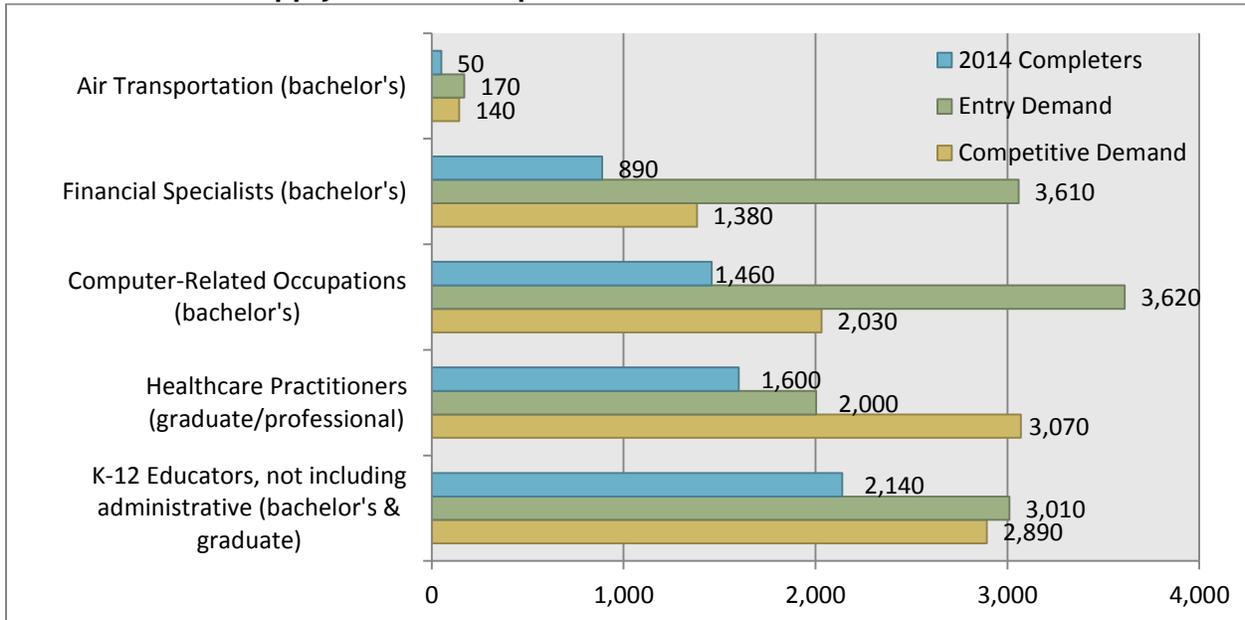
Potential Supply-Demand Gaps at the Mid-Level



Potential Supply-Demand Gaps at the Mid-Level					
Occupation Cluster	Current Completions (2014)			Projected Annual Openings	
	Public Inst.	Private Inst.	Total Completions	Entry Education Level	Competitive Education Level
Plant and System Operators	140	0	140	240	110
Science Technicians	115	5	120	270	160

Installation, Maintenance, Repair	410	270	680	2,030	940
Construction Trades	1,510	50	1,560	3,120	1,480
Computer (IT)	910	200	1,110	1,050	1,340
Transportation and Material Moving	1,550	0	1,550	1,140	1,970

Potential Supply-Demand Gaps at the Bachelor's and/or Graduate Level



Potential Supply-Demand Gaps at the Bachelor's and/or Graduate Level					
Occupation Cluster	Current Completions (2014)			Projected Annual Openings	
	Public Inst.	Private Inst.	Total Completions	Entry Education Level	Competitive Education level
Air Transportation (bachelor's)	50	0	50	170	140
Financial Specialists (bachelor's)	290	600	890	3,060	1,380
Computer (IT) (bachelor's)	720	740	1,460	3,610	2,030
Healthcare (graduate/professional level)	1,190	410	1,600	2,000	3,070
K-12 Educators, not including administrative (bachelor's and graduate)	1,845	295	2,140	3,010	2,890

Appendix C: Variation of College Graduations Entering the State Workforce

While much of the analysis in this report assumes most completers will enter the Colorado workforce the year following program completion, there is variation in the percentage of graduates who typically do, depending on residency status, major and credential level. We hope future analysis can better take into account these extensive complexities. The following depicts some of the variation in the portion of graduates found employed in Colorado within a year following graduation. Keep in mind that a number of factors are impacting how many graduates enter the workforce in Colorado, such as the pursuit of additional education or self-employment, moving out-of-state for work or personal reasons, the influence of industry compositions within and outside of Colorado, and the natural churn in the workforce.

Examples of the Percentage of Graduates Found Working in Colorado
the Year Following Program Completion

Credential Level	Program	Percentage of Completers
Certificate	Industrial Production Technology/Technician	72%
Certificate	Practical, Vocational, Nursing Assistants	80%
Associate Degree	Precision Metalworking	76%
Associate Degree	Computer and Information Sciences	74%
Associate Degree	Registered Nursing	90%
Bachelor's Degree	Petroleum Engineering	24%
Bachelor's Degree	Civil Engineering	63%
Bachelor's Degree	Accounting	81%
Master's Degree	Electrical, Electronics and Communications Engineering	32%
Master's Degree	Social Work	81%
Doctorate	Physics	42%
Doctorate	Law	78%

Appendix D: Public Two and Four Year Postsecondary Institutions in Colorado

Institution	Main Campus, Region	Role/Mission
Adams State University	Alamosa, Region 8	General baccalaureate institution with moderately selective admission standards. Offers undergraduate liberal arts and sciences, teacher preparation, and business degree programs, a limited number of master's level programs, and two-year transfer programs with a community college role and mission. Adams State University does not offer vocational education programs. Adams State University has a significant responsibility to provide access to teacher education in rural Colorado, and serves as a regional education provider. In addition, Adams State University offers programs, when feasible, that preserve and promote the unique history and culture of the region.
Aims Community College	Greeley, Region 2	Two-year local district college with three campuses. Offers courses designed to transfer to four year institutions, and career and technical education programs.
Colorado Mesa University	Grand Junction, Region 11	A general baccalaureate and graduate institution with selective admission standards. Colorado Mesa University offers liberal arts and sciences, professional, and technical degree programs and a limited number of graduate programs. Colorado Mesa University also maintains a community college role and mission, including career and technical education programs, and serves as a regional education provider.
Colorado Mountain College	Glenwood Springs, Region 12	Two-year local district college with 11 campuses serving nine counties in north central Colorado: Chaffee, Eagle, Garfield, Grand, Jackson, Lake, Pitkin, Routt and Summit. Offers select Bachelor's degrees to serve the needs of this region.
Colorado State University	Fort Collins, Region 2	Comprehensive graduate research university with selective admission standards offering a comprehensive array of baccalaureate, master's, and doctoral degree programs. Consistent with the tradition of land grant universities, CSU has exclusive authority to offer graduate and undergraduate programs in agriculture, forestry, natural resources, and veterinary medicine. The Colorado commission on higher education, in consultation with the board of governors of the Colorado state university system, shall designate those graduate level programs that are the primary responsibility of Colorado state university. Colorado state university has the responsibility to provide on a statewide basis, utilizing when possible and appropriate the faculty and facilities of other educational institutions, those graduate level programs.
Colorado State University - Pueblo	Pueblo, Region 7	A regional, comprehensive university, with moderately selective admissions standards. The university offers a broad array of baccalaureate programs with a strong professional focus and a firm grounding in the liberal arts and sciences. The university also offers selected master's-level graduate programs.
Colorado School of Mines	Golden, Region 3	A specialized baccalaureate and graduate research institution with high admission standards. Has a unique mission in energy, mineral, and material science and engineering and associated engineering and science fields. It is the primary institution of higher education offering energy, mineral, and material science and mineral engineering degrees at both the graduate and undergraduate levels.

<i>Community College System</i>		
Arapahoe Community College	Littleton, Region 3	<p>The state board for community colleges and occupational education is charged to develop and establish state policy for occupational education and to govern the state system of community colleges. The board is responsible for the establishment of statewide vocational education policy for all the entities which provide that education and coordinates all aspects of vocational education in the state to assure quality programming and efficient delivery of such education. In its role as the governing authority for the state system of community colleges, the board assures a system of two-year program delivery throughout the state coordinated, where appropriate, with the local district colleges. In order to assist the board in carrying out its responsibilities, the general assembly provides for the establishment of local councils to advise the board on the operation of individual community and junior colleges from a local perspective. The function of the two-year college system is to conduct occupational, technical, and community service programs with no term limitations and general education, including college transfer programs with unrestricted admissions. It is further the intent of this article to develop appropriate occupational education and adult education programs in these and other postsecondary educational institutions, to maintain and expand occupational education programs in the elementary and secondary schools of the state permitting local school districts already having vocational schools to continue to operate them, and to develop work study and on-the-job training programs designed to acquaint youth with the world of work and to train and retrain youth and adults for employment. The general assembly intends that state agencies concerned with occupational education in the public schools shall cooperate with the board in planning and implementing occupational education programs, to the end that the state of Colorado has complete and well-balanced occupational and adult education programs available to the people of Colorado at all educational levels.</p>
Colorado Northwestern Community College	Rangely, Region 11	
Community College of Aurora	Aurora, Region 3	
Community College of Denver	Denver, Region 3	
Front Range Community College	Westminster, Region 3	
Lamar Community College	Lamar, Region 6	
Morgan Community College	Fort Morgan, Region 1	
Northeastern Junior College	Sterling, Region 1	
Otero Junior College	La Junta, Region 6	
Pikes Peak Community College	Colorado Springs, Region 4	
Pueblo Community College	Pueblo, Region 7	
Red Rocks Community College	Lakewood, Region 3	
Trinidad State Junior College	Trinidad, Region 14	
Fort Lewis College	Durango, Region 9	<p>A public liberal arts college, with selective admission standards with a historic and continuing commitment to Native American education. Offers professional programs and a limited number of graduate programs to serve regional needs. The center of southwest studies provides a valuable regional, national, and international resource.</p>

Metropolitan State University of Denver	Denver, Region 3	A comprehensive institution with modified open admission standards at the baccalaureate level; except that nontraditional students at the baccalaureate level who are at least twenty years of age shall only have as an admission requirement a high school diploma, a GED high school equivalency certificate, or the equivalent thereof. Metropolitan State University of Denver shall offer a variety of liberal arts and science, technical, and educational programs. The college offers a limited number of professional programs and master's degree programs that address the needs of its urban service area.
University of Colorado Boulder	Boulder, Region 3	A comprehensive graduate research university with selective admission standards. The Boulder campus offers a comprehensive array of undergraduate, master's, and doctoral degree programs, and has exclusive authority to offer graduate programs in law. The Colorado commission on higher education, in consultation with the board of regents, shall designate those graduate level programs that are the primary responsibility of the Boulder campus of the university of Colorado. The university has the responsibility to provide on a statewide basis, utilizing when possible and appropriate the faculty and facilities of other educational institutions, those graduate level programs. The commission includes in its funding recommendations a level of general fund support for these programs.
University of Colorado Colorado Springs	Colorado Springs, Region 4	A comprehensive baccalaureate university with selective admission standards. The Colorado Springs campus offers liberal arts and sciences, business, engineering, health sciences, and teacher preparation undergraduate degree programs, and a selected number of master's and doctoral degree programs.
University of Colorado Denver	Denver, Region 3	An urban comprehensive undergraduate and graduate research university with selective admission standards. The Denver campus offers baccalaureate, master's, and a limited number of doctoral degree programs, emphasizing those that serve the needs of the Denver metropolitan area. The Denver campus has statewide authority to offer graduate programs in public administration and exclusive authority in architecture and planning.
University of Colorado Health Sciences Campus	Aurora, Region 3	Offers specialized baccalaureate, first-professional, master's, and doctoral degree programs in health-related disciplines and professions. Affiliated with the University of Colorado hospital and other health care facilities that offer settings for education, clinical practice, and basic and applied research. Has exclusive authority in medicine, dentistry, pharmacy, and physical therapy.
University of Northern Colorado	Greeley, Region 2	A comprehensive baccalaureate and specialized graduate research university with selective admission standards. The primary institution for undergraduate and graduate degree programs for educational personnel preparation in the state of Colorado. Offers master's and doctoral programs primarily in the field of education. The university has the responsibility to offer on a statewide basis, utilizing where possible and appropriate the faculty and facilities of other educational institutions, those graduate-level programs needed by professional educators and education administrators. As part of its mission as a graduate research university specializing in programs for educational personnel, the university of northern Colorado includes the education innovation institute.

Western State Colorado University	Gunnison, Region 10	A general baccalaureate institution with moderately selective admission standards. Offers undergraduate liberal arts and sciences, teacher preparation, and business degree programs and a limited number of graduate programs. Serves as a regional education provider.
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TOPIC: 2016 EDUCATOR PREPARATION REPORT

PREPARED BY: DR. ROBERT MITCHELL, ACADEMIC POLICY OFFICER FOR
EDUCATOR PREPARATION

I. SUMMARY

This agenda item contains the 2016 Educator Preparation Report.

II. BACKGROUND

The Commission reports annually to the Joint Education Committee of the General Assembly on enrollment in, graduation (completion) rates from, and effectiveness of the review of educator preparation programs at institutions of higher education and designated agencies. This report fulfills this statutory requirement.

III. STAFF ANALYSIS

Analysis is contained within the attached report.

IV. STAFF RECOMMENDATIONS

This is an information item only; no formal action is required by the Commission.

V. STATUTORY AUTHORITY

23-1-121. Commission directive - approval of educator preparation programs – review

(6) The department shall annually prepare a report concerning the enrollment in, graduation rates from, and effectiveness of the review of educator preparation programs authorized by the commission. In addition the report shall include data on the outcomes of graduates of educator preparation programs pursuant to section 22-2-112 (1) (q), C.R.S. The report shall also state the percentage of educator candidates graduating from each program during the preceding twelve months that applied for and received an initial license pursuant to section 22-60.5-201, C.R.S., and the percentage of the graduates who passed the assessments administered pursuant to section 22-60.5-203, C.R.S. For purposes of completing the report required pursuant to this subsection (6), the department of higher education and the department of education shall share any relevant data that complies with state and federal regulations with the other agency. The department shall provide notice to the education committees of the senate and the house of representatives, or any successor committees, that the report is available to the members of the committees upon request.

ATTACHMENT

A: 2016 Educator Preparation Report



COLORADO

Department of
Higher Education

**2016 LEGISLATIVE REPORT
EDUCATOR PREPARATION REPORT AY2014-2015**

FEBRUARY 2016

1560 Broadway, Suite 1600 • Denver, Colorado 80204 • (303) 866-2723
LT. GOVERNOR JOSEPH GARCIA, EXECUTIVE DIRECTOR

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This report was prepared by the Student Success and Academic Affairs Division at the Colorado Department of Higher Education (CDHE) with the assistance of the Office of Educator Preparation, Licensing and Enforcement at the Colorado Department of Education (CDE) pursuant to the requirements of §23-1-121(6) Colorado Revised Statutes.

For more information please contact:

Robert Mitchell, Academic Policy Officer for Educator Preparation, Colorado Department of Higher Education, 303-862-3006 or robert.mitchell@dhe.state.co.us

Executive Summary

Significant findings described within this report include:

- The total number of individuals completing an educator preparation program at Colorado colleges and universities during the 2014-15 academic declined by 6% from the previous year to 2,529. This is the fifth consecutive year the number of completers has declined.
- The number of individuals completing an alternative licensing program has increased to 816 during 2014-15. This represents a 42% increase from the previous year and represents 24.5% of all the total completers in the state.
- There has been a 22.7% decline in the number of educators completing an educator preparation program at Colorado colleges and universities between the years 2010- 2015.
- Besides a decline in completers, enrollment in educator preparation programs at institutions of higher education also declined by 6.1% during the 2014-15 academic year. Significant declines in elementary education, special education and social studies were noted during 2014-15.
- Rural districts continue to have difficulty in recruiting and retaining teachers in historically hard-to-staff endorsement and licensure areas.

I. Introduction

Pursuant to §23-1-121(6) Colorado Revised Statutes, the Colorado Commission on Higher Education (CCHE) reports annually to the Joint Education Committee of the General Assembly on enrollment in, graduation (completion) rates from, and effectiveness of the review of educator preparation programs at institutions of higher education and designated agencies. This report fulfills this statutory requirement.

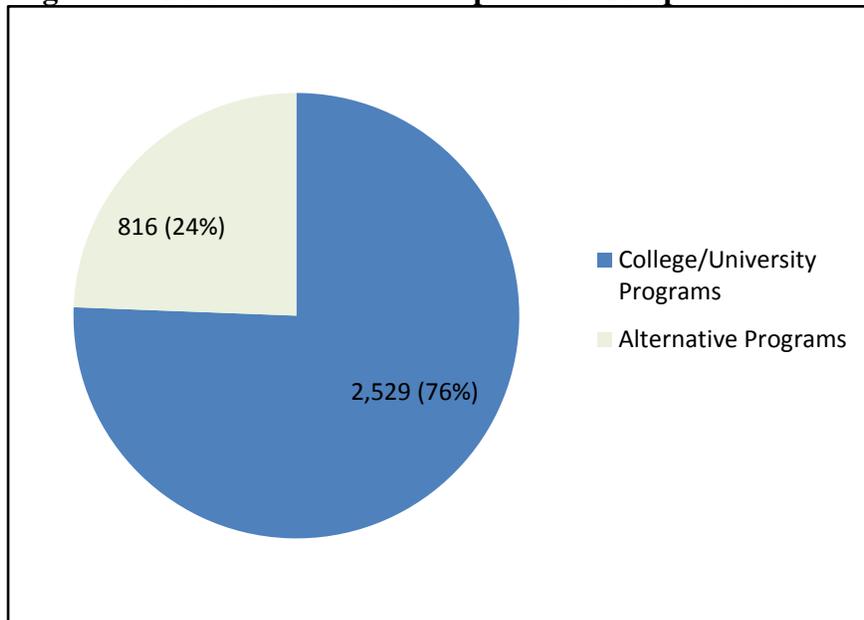
This report was completed by the Colorado Department of Higher Education (CDHE). The materials utilized in this report originate from data submitted annually to the department by the 20 institutions of higher education offering educator preparation. Additional material to supplement the report has been provided by the Colorado Department of Education (CDE) and the Colorado Workforce Development Council.

The report is divided into five sections: an analysis of completers of educator preparation programs, data related to enrollment in educator preparation programs, demographic composition of enrolled populations, a review of reauthorization activities and alignment with national accreditation, and recommendations to meet the projected needs and trends impacting the development of educators.

II. Completers

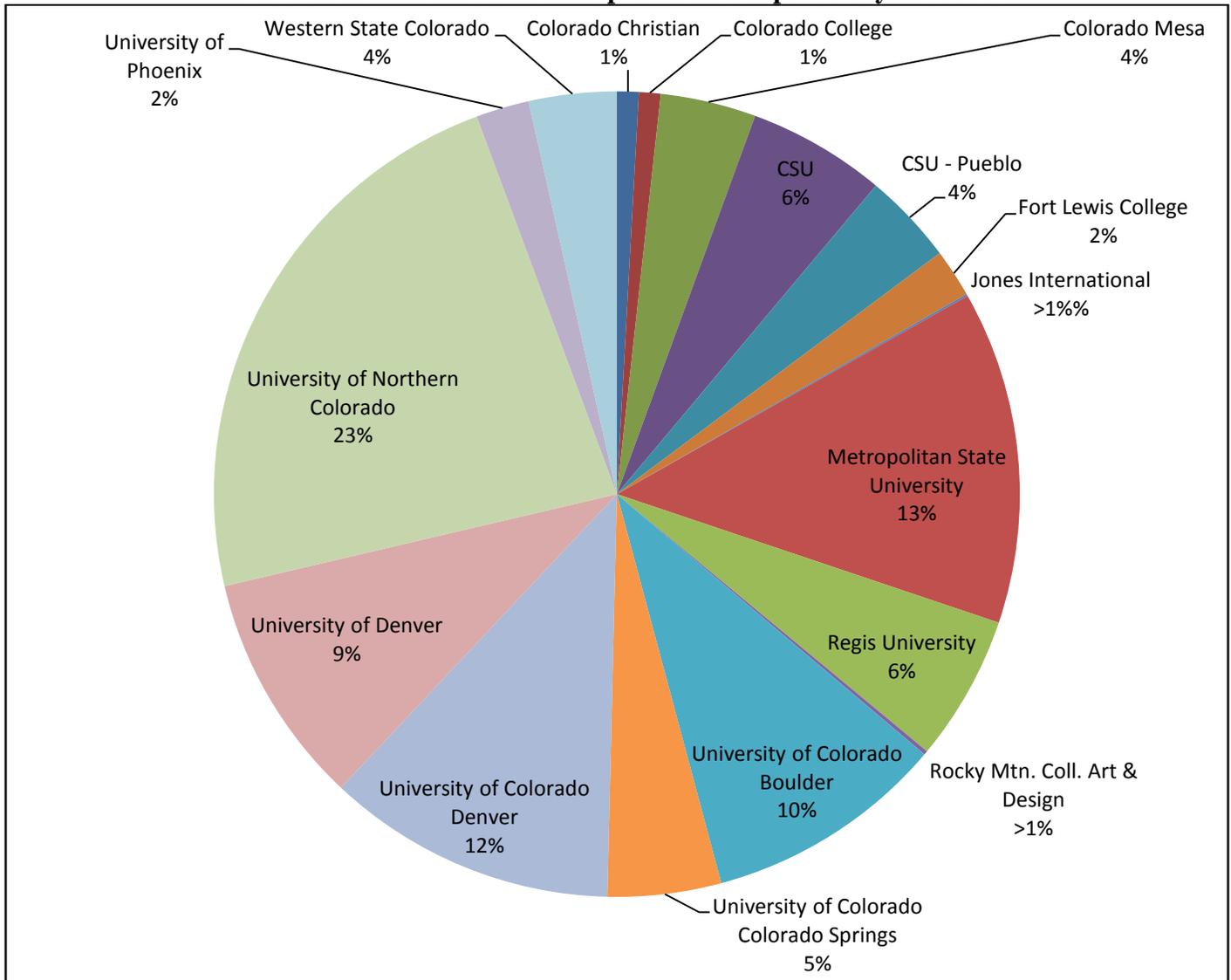
Completer data has become increasingly useful in regards to understanding and forecasting the number of individuals entering the classroom or school as a teacher, administrator or special services provider. The number of completers has a direct correlation to the projected needs of local school districts and has a direct impact on the approximately 870,000 students in Colorado's K12 schools. Figure 1 below shows the number and percent of completers from college- and university-based programs versus alternative providers (also known as designated agencies).

Figure 1 - Colorado Educator Preparation Completers 2014-15



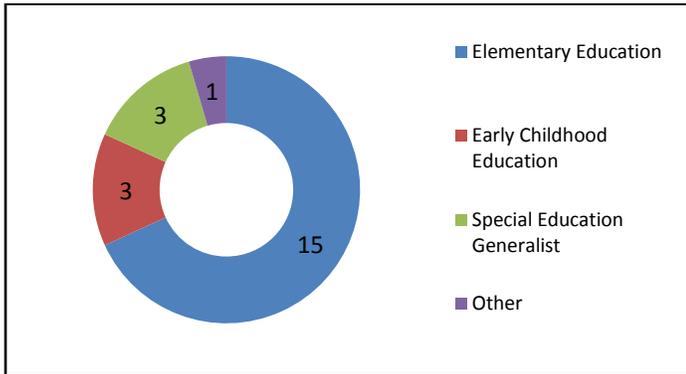
Students completed programs from 18 different institutions of higher education in 2014-15. The University of Northern Colorado had the largest number of completers, 582, encompassing 23% of all completers in the state of Colorado. Chart 1 below provides a percentage breakdown of completers from colleges and universities during the 2014-15 academic year.

Chart 1: 2014-15 Educator Preparation Completers by Institution

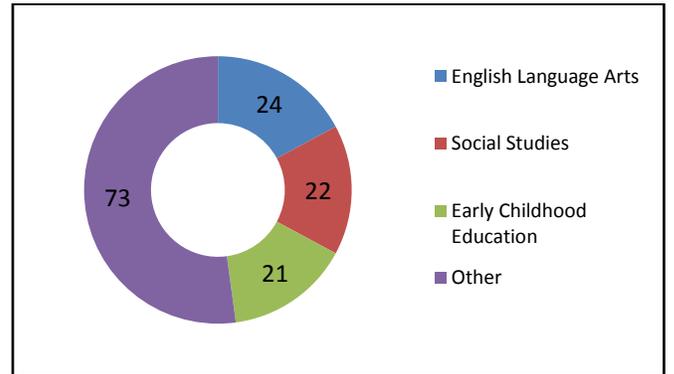


Elementary education programs produce the largest number of completers in the state (836). Chart 2 below provides information regarding the endorsement areas with the largest number of completers at each institution of higher education. Please note that the Rocky Mountain College of Art and Design offers only one program leading to K12 art educator licensure and has been excluded from Chart 2.

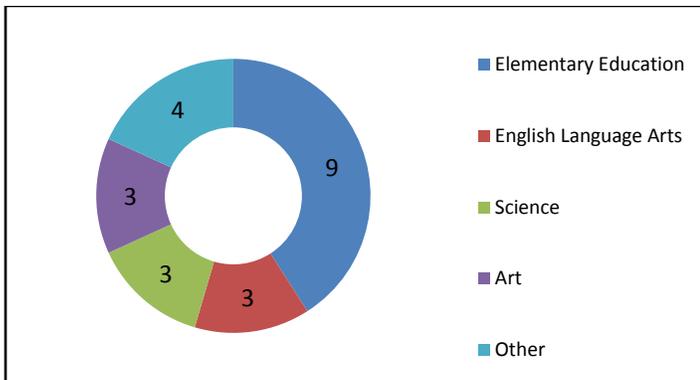
Chart 2: Completers -- Area of Licensure/Endorsement by Institution



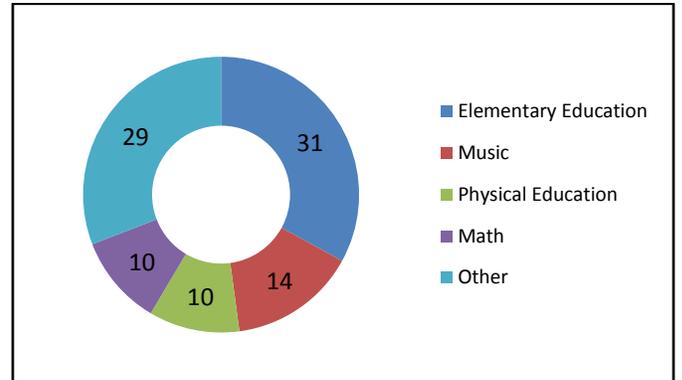
Colorado Christian University



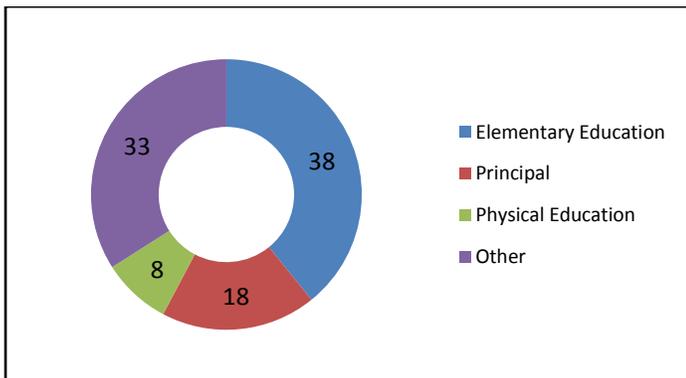
Colorado State University



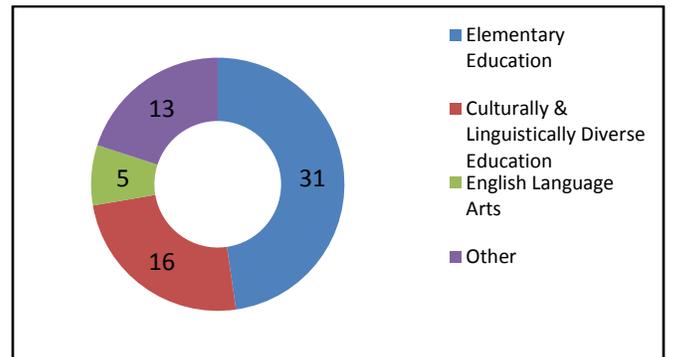
Colorado College



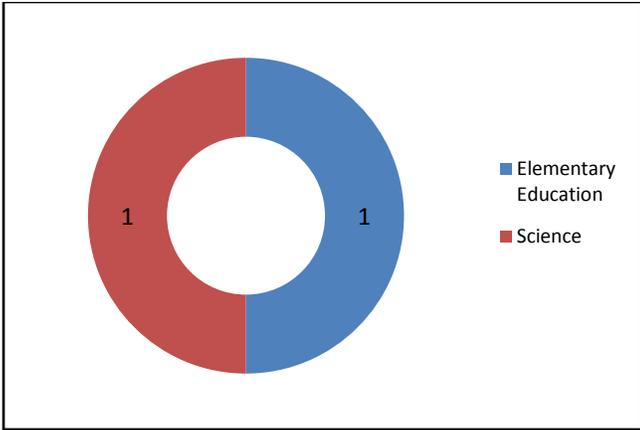
Colorado State University - Pueblo



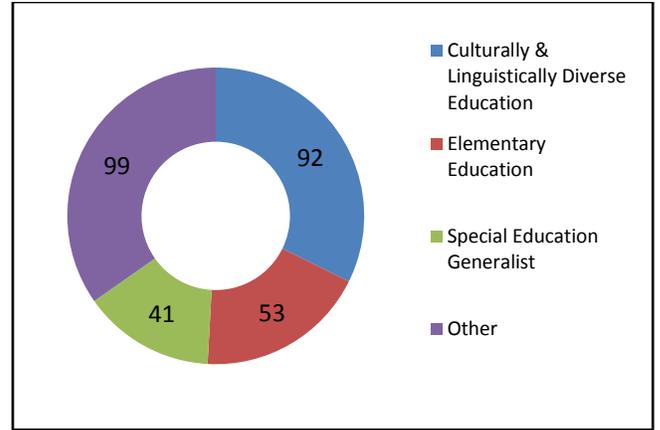
Colorado Mesa University



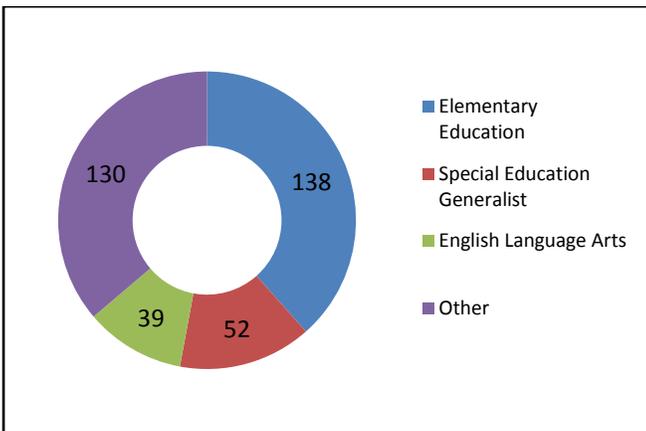
Fort Lewis College



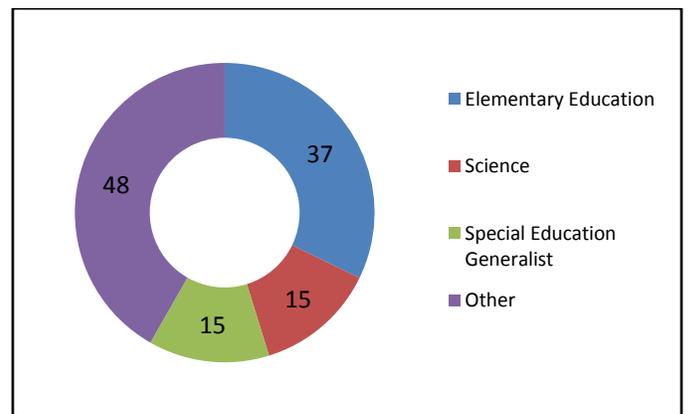
Jones International University



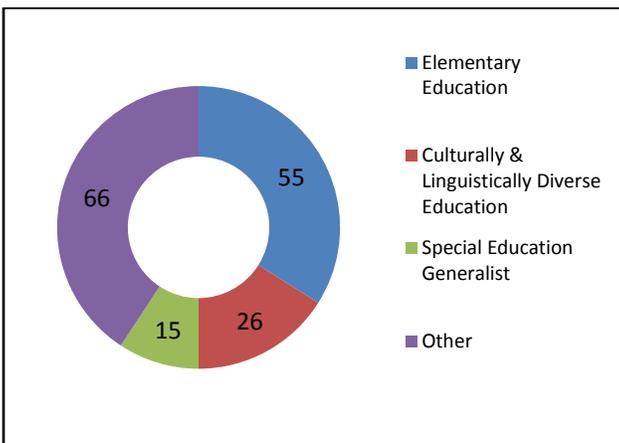
University of Colorado Boulder



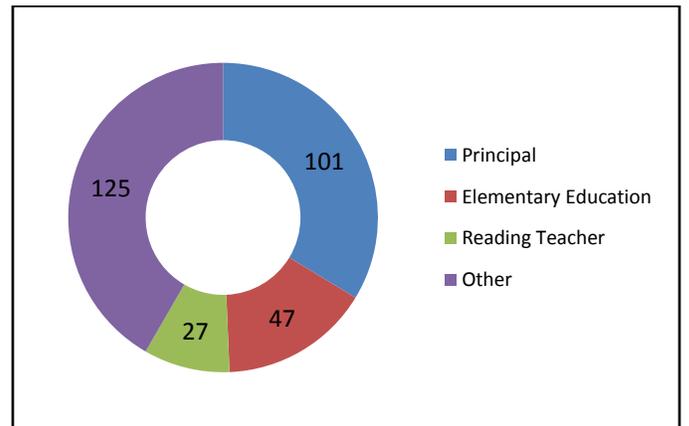
Metropolitan State University of Denver



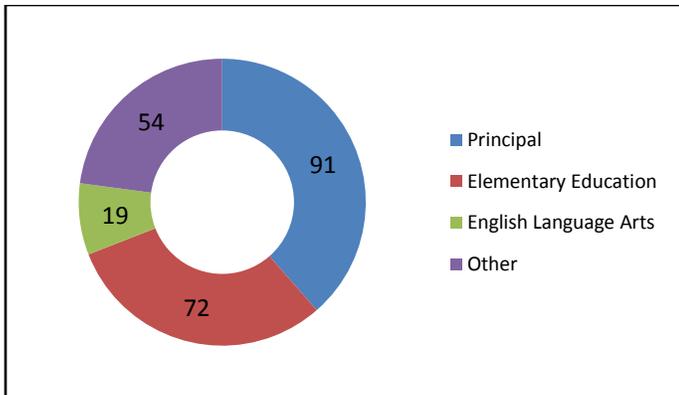
University of Colorado Colorado Springs



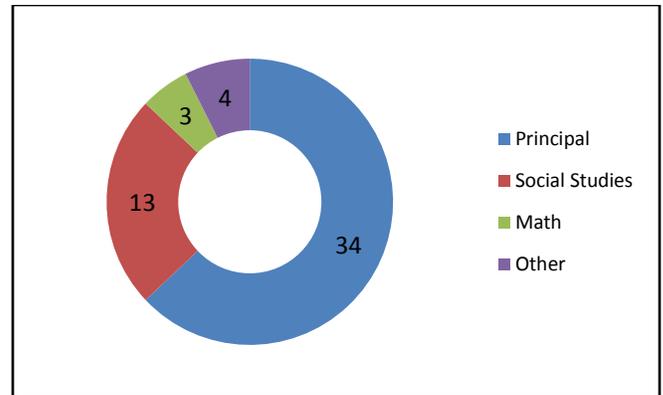
Regis University



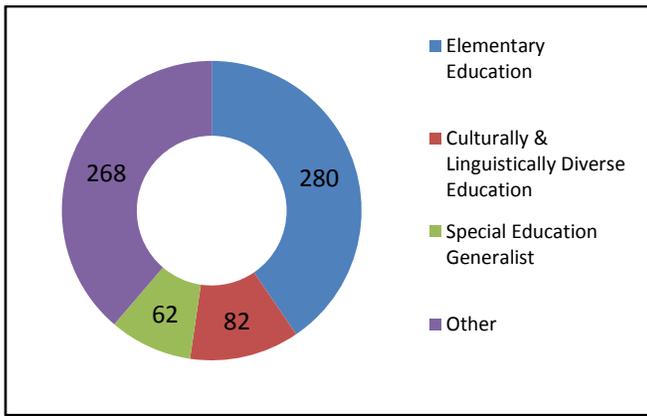
University of Colorado Denver



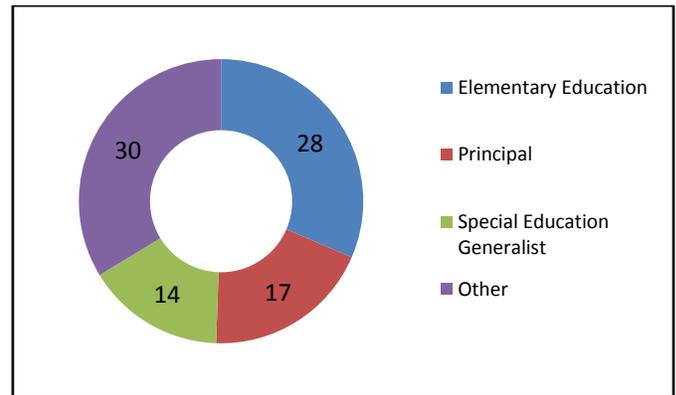
University of Denver



University of Phoenix



University of Northern Colorado



Western State Colorado University

Individuals completed programs in 33 licensure areas at Colorado colleges and universities during the 2015-16 academic year. Of particular note is the 102 completers in secondary mathematics, marking the third consecutive year more than 100 individuals completed the high demand program. A complete breakdown of completers by endorsement/licensure areas is included in Table 1 below. A list of institutions' abbreviations can be found in Appendix A.

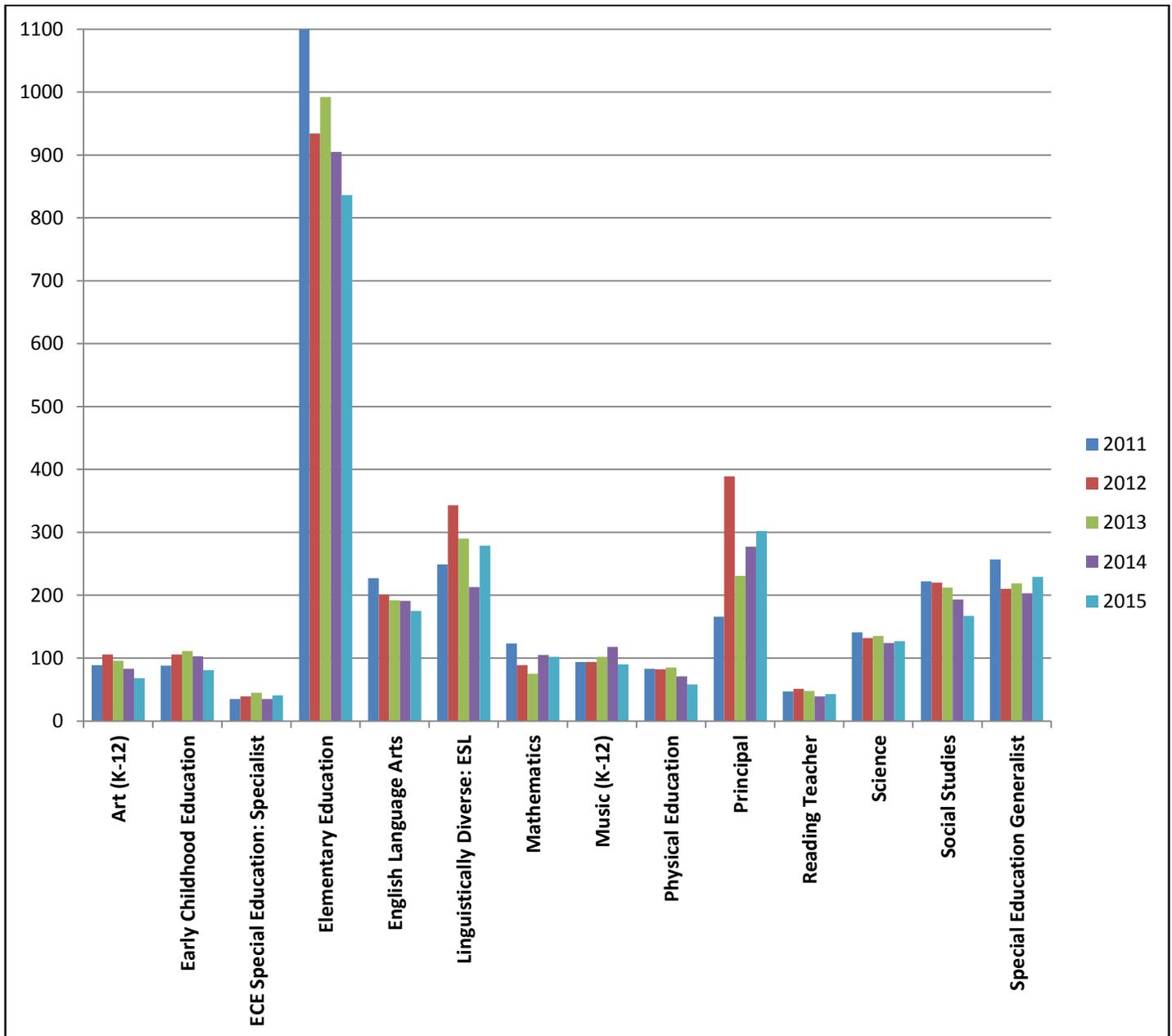
Table 1: Institution of Higher Education Educator Preparation Program Completers by Endorsement/Licensure Areas

Endorsement/Licensure Area	AY 15-16 Completers	Completers by Institution
Administrator	11	UCD 10; RU 1
Agriculture and Renewable Natural Resources	5	CSU 5
Art (K-12)	68	CC 3; CMU 5; CSU 9; CSUP 2; FLC: 2; MSUD 18; RU 1; RMCAD 4; DU 8; UNC 15; WSCU 1
Business and Marketing Education	2	CSU 1; UP 1
Business Education	3	CSU 1; RU 1
CLDE Specialist: Bilingual Education	1	UCB 1
Culturally and Linguistically Diverse Education	279	CMU 2; CSUP 2, FLC 16; MSUD 24; RU 26; UCB 92; UCCS 4; UCD 26; UNC 82; WSCU 3

Endorsement/Licensure Area	AY 15-16 Completers	Completers by Institution
Drama	15	UNC 15
Early Childhood Education	81	CCU 3; CSU 21; RU 6; UCCS 1; UNC 50
ECE Special Education	23	RU 6; UNC 17
ECE Special Education: Specialist	41	RU 2; UCD 20; DU; 2; UNC 17
Elementary Education	836	CCU 15; CC 9; CMU 38; CSUP 31; FLC 31; JIU 1; MSUD 138; RU 55; UCB 53; UCCS 37; UCD 47; DU 72; UNC 280; UP 1; WSCU 28
English Language Arts	175	CC 3; CMU 5; CSU 24; CSUP 7; FLC 5; UCB 24; UCCS 8; UCD 13; DU 19; UNC 15; UP 2; WSCU 6
Family and Consumer Studies	6	CSU 6
Foreign Language	29	CC 1; CMU 1; CSU 3; CSUP 2; MSUD 4; RU 1; UCB 2; UCD 2; DU 2; UNC 8; WSCU 3
Gifted Education Specialist	4	UCCS 1; UNC 3
Instructional Technology Specialist	6	UCD 6
Instructional Technology Teacher	1	CSUP 1
Mathematics	102	CCU 1; CMU 2; CSU 18; CSUP 10; FLC 3; MSUD 4; RU 2; UCB 14; UCCS 4; UCD 7; DU 10; UNC 22; UP 3; WSCU 2
Music (K-12)	90	CC 2; CMU 5; CSU 5; CSUP 14; FLC 1; MSUD 14; UCB 19; DU 5; UNC 24; WSCU 1
Physical Education	58	CMU 8; CSUP 10; FLC 2; MSUD 18; UNC 16; WSCU 4
Principal	302	CMU 18; RU 7; UCCS 14; UCD 101; DU 91; UNC 20; UP 34; WSCU 17
Reading Specialist	10	RU 6; UCCS 4
Reading Teacher	43	RU 6; UCB 10; UCD 27
School Librarian	9	UCD 2; DU 7
Science	127	CC 3; CMU 3; CSU 20; CSUP 2; FLC 2; JIU 1; MSUD 16; RU 7; UCB 15; UCCS 15; UCD 12; DU 11; UNC 13; WSCU 7
Social Studies	167	CC 1; CMU 4; CSU 22; CSUP 6; FLC 3; MSUD 32; RU 10; UCB 14; UCCS 12; UCD 11; DU 9; UNC 27; UP 13; WSCU 3
Special Education Director	2	UNC 2
Special Education Generalist	229	CCU 3; CMU 4; CSUP 7; MSUD 52; RU 15; UCB 41; UCCS 15; UCD 16; UNC 62; WSCU 14
Special Ed. Specialist: Deaf/Hard of Hearing	2	UNC 2
Special Ed. Specialist: Visually Impaired	2	UNC 2
Speech	1	CSU 1
Technology Education (previously Industrial Arts)	3	CSU 3
Undeclared or Unknown	5	RU 5
Grand Total	2529	

Specific teaching and administrative areas show variability in terms of the numbers of completers during the last three years. Elementary education remains the most consistently popular endorsement area (33.1% of all completers), as the total numbers of completers in other endorsement areas continue to fluctuate. Significant numbers of educators continue to complete programs leading to principal licensure (302 in 2014-15) and culturally and linguistically diverse (CLD) endorsements (279). Simultaneously, relatively low numbers of completers can be found in the world languages (29), math (102), science (127) and early childhood education (81) domains – all of which continue to be areas of high demand for school districts due to the limited number of licensed educators in these fields. Chart 4 below highlights this variance.

Chart 4 – Institution of Higher Education Completers by Area (minimum 30 completers in 2014-15 AY)



In contrast to declining completer numbers at traditional educator preparation programs at colleges and universities, alternative teacher licensure programs saw an increase of 42% from the previous year. During the 2014-15 academic year, 816 individuals completed an alternative licensure program from one of the 27 designated agencies authorized to provide alternative teacher preparation. Of those, 37% completed programs in elementary education and 36% in the identified high-needs areas of special education, mathematics, science and foreign/world language combined. Table 2 lists the number of alternative program completers by designated agency during the 2014-15 academic year.

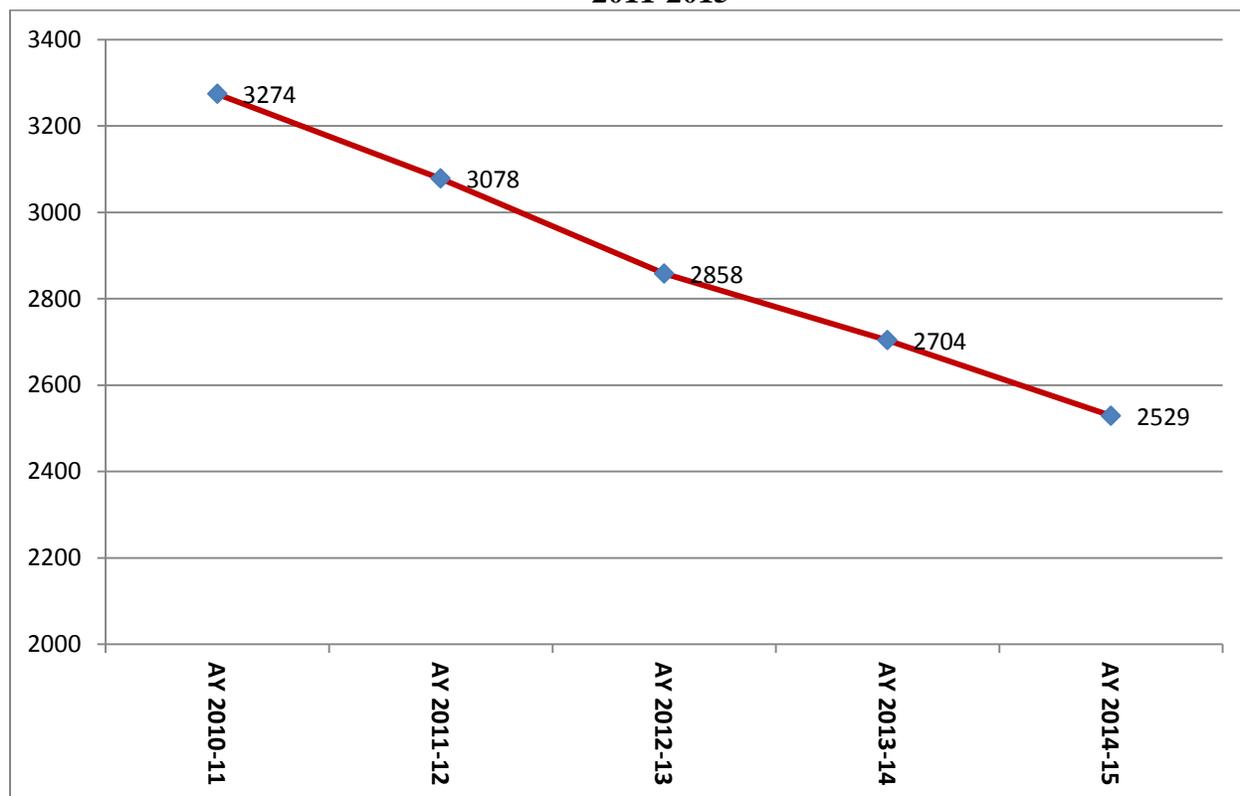
**Table 2: Alternative Teacher Licensure Program Completers by Designated Agency
2014-15**

Designated agency	# of completers	% of total completers
Archdiocese of Denver	16	2%
ASPIRE: University of Colorado Denver	185	23%
Boulder Journey School	30	4%
Centennial BOCES	39	5%
Colorado Christian University	31	4%
Colorado State University - Pueblo	11	1%
Denver Public Schools	83	10%
Douglas County School District	7	<1%
Eagle Rock School and Professional Development	6	<1%
East Central BOCES	7	<1%
Friends' School	32	4%
Metropolitan State University of Denver	103	13%
Mountain BOCES	28	3%
Northeast BOCES	20	2%
Northwest BOCES	5	<1%
Public Education & Business Coalition	62	8%
Pikes Peak BOCES	40	5%
San Luis Valley BOCES	11	1%
Southeast BOCES	16	2%
Stanley British Primary School	48	6%
University of Colorado - Colorado Springs	13	2%
West Central Licensing Program	4	<1%
Western State Colorado University	19	2%
TOTAL	816	100%

Completer Analysis and Trends

During the 2014-15 academic year, 2,529 students completed traditional educator preparation programs at colleges/universities, versus 2704 completers in 2013-2014, which is a 6% reduction and marks the fifth consecutive year the number of completers from university/college-based educator preparation programs has declined. From 2010 to 2015, there is a decrease of 22.7% in the total number of completers from traditional educator preparation programs at colleges/universities, as illustrated in Chart 3 below.

**Chart 3 – Colorado Educator Preparation Institution of Higher Education Completers
2011-2015**



This downward trend in completer numbers mirrors national patterns (USDOE, 2013). Fortunately, the increasing numbers of completers from alternative teacher preparation programs have offset this downturn in numbers from the higher education institutions. CDHE continues to conduct research regarding the decreasing numbers of K12 educators within the labor pool and estimates a shortfall of approximately 300 teachers annually throughout Colorado (DHE, 2015). This shortage is expected to be much more prevalent in rural school districts, which have historically been more difficult to staff. Of additional concern is the projected increase in the number of experienced educators leaving the classroom.

III. Enrollment

Similar to declining numbers of completers, enrollment in educator preparation programs at institutions of higher education also declined by 6.1% in the 2014-15 academic year, continuing a trend of decreased enrollments annually since 2011. These decreased enrollments align with national trends. Table 3 below provides both cumulative enrollment figures and individual enrollments for the 18 colleges/universities that included at least one program completer during the 2014-15 academic years.

Table 3: Program Enrollments by Institution, 2010-15

<i>Institution</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>Change 2014- 2015</i>
Adams State University ¹	486	473	378	314	246	175	-28.9%
Colorado Christian University	227	245	214	209	195	165	-15.4%
Colorado College	62	59	55	42	43	37	-14.0%
Colorado Mesa University	364	219	257	260	200	217	+8.5%
Colorado State University	772	879	795	576	868	892	+2.8%
Colorado State University - Pueblo	387	411	367	325	280	282	+0.7%
Fort Lewis College	219	227	180	170	180	171	-5.0%
Jones International University	121	125	135	79	44	30	-31.8%
Metropolitan State University of Denver ²	1868	1931	2001	1913	1770	1448	-18.2%
Regis University ⁴	907	1139	732	869	706	545	-22.8%
Rocky Mtn. Coll. Art & Design	55	59	47	40	20	39	+95.0%
University of Colorado Boulder	871	694	823	786	712	803	+12.8%
University of Colorado Colorado Springs	426	351	458	713	655	778	+18.8%
University of Colorado Denver	1339	1255	990	866	864	774	-10.4%
University of Denver ⁵	174	213	329	350	239	289	+20.9%
University of Northern Colorado	3770	3986	3689	3498	3222	2900	-10.0%
University of Phoenix ³	782	746	431	289	195	265	+35.9%
Western State Colorado University	140	111	122	88	98	97	-1.0%
Grand Total	12950	13103	11987	11387	10537	9891	-6.1%

¹2013 data includes students enrolled as part of the Colorado Boettcher Teacher Residency Program.

²2013 enrollment data includes student enrollment within the post-baccalaureate ALP program.

³University of Phoenix did not report all Elementary Education enrollees in 2009.

⁴2013 enrollment data includes students within the post-baccalaureate archdiocese education program.

⁵University of Denver 2013 enrollment data includes students enrolled as part of the Denver Teacher Residency Program.

Institution of Higher Education–Based Undergraduate, Post-Baccalaureate, and Graduate Enrollments

Institutions of higher education offer a variety of programs to support the development of educators. While some focus on the undergraduate population, other colleges/universities offer post-baccalaureate and graduate entry points into the education professions. This varied approach is beneficial to both the institutions and the student population, as it provides multiple avenues towards teacher licensure and a career in education. A list of the enrollments at the various levels for each institution is listed in Table 4 below.

Table 4: Program Enrollments for all Endorsement/Licensure Areas by Level by Institution, 2014-15

Institution	Undergraduate	Post-Baccalaureate	Graduate	Grand Total
Adams State University	103	9	76	188
Colorado Christian University	160		5	165
Colorado College	5		32	37
Colorado Mesa University	138	37	42	217
Colorado State University	660	205	27	892
Colorado State University - Pueblo	183	54	50	287
Fort Lewis College	154	18		172
Jones International University			30	30
Metropolitan State University of Denver	954	318	189	1461
Regis University	182	18	348	548
Rocky Mtn. Coll. Art & Design	39			39
University of Colorado Boulder	376	106	336	818
University of Colorado Colorado Springs	553		225	778
University of Colorado Denver	62		712	774
University of Denver		67	230	297
University of Northern Colorado	2193	16	692	2901
University of Phoenix	124		141	265
Western State Colorado University	16		81	97
Grand Total	5902	848	3216	9966
% Grand Total	59.2%	8.5%	32.3%	

Institution of Higher Education–Based Enrollment by Licensure/Endorsement Area over the Last Five Years

Changes in the enrollment population in the various license and endorsement areas continue to have an impact on Colorado’s education environment. In historical areas of high need, enrollments have remained relatively stable with a minor decline in the number of math students enrolled (-6), offset by a minor gain in the number of students enrolled in science education programs (+7). Table 5 below highlights changes in enrollment by endorsement area from 2010 - 2015.

Table 5: College/University-Based Program Enrollments by Endorsement/Licensure Areas, 2010-2015¹

Endorsement/Licensure Area	2010	2011	2012	2013	2014	2015	% change 14-15
Administrator	61	53	20	25	29	30	+3.4%
Agriculture and Renewable Natural Resources	18	24	25	29	53	48	-9.4%
Art (K-12)	389	402	382	338	289	315	+8.9%
Business and Marketing Education	34	15	8	1	4	7	+75.0%
Business Education	30	28	16	21	17	13	-23.5%
CLDE Specialist: Bilingual Education	42	34	36	21	4	7	+75.0%
Culturally and Linguistically Diverse Education	1204	1165	1091	1152	970	1010	+4.1%
Drama	72	59	63	59	70	73	+4.3%
Early Childhood Education	537	662	659	576	590	476	-19.3%
ECE Special Education	91	114	99	106	85	113	-32.9%
ECE Special Education: Specialist	180	198	179	210	191	193	+1.0%
Elementary Education	4213	4072	3801	3533	3254	2886	-11.3%
English Language Arts	931	1001	778	771	726	730	+0.6%
Family and Consumer Studies	34	45	28	23	31	36	+16.1%
Foreign Language	222	234	228	180	169	151	-10.7%
Gifted Education Specialist	59	51	46	35	31	27	-12.9%
Instructional Technology Specialist	26	20	35	36	30	29	-3.3%
Instructional Technology Teacher	28	50	52	26	23	7	-69.6%
Marketing Education	--	--	--	--	1	1	No change
Mathematics	470	505	424	449	428	422	-1.4%
Music (K-12)	430	511	578	571	572	542	-5.2%
Physical Education	398	371	337	281	245	219	-10.6%
Principal	926	768	858	762	819	778	-5.0%
Reading Specialist	--	21	59	90	61	47	-23.0%
Reading Teacher	252	221	170	165	149	162	+8.0%
School Librarian	96	144	34	18	11	25	+127.0%
Science	536	539	498	470	482	489	+1.5%
Social Studies	973	1189	978	859	750	700	-6.7%
Special Education Director	53	58	46	44	44	44	No change
Special Education Generalist	1342	1379	1187	1203	1094	1009	-7.8%
Special Education Specialist	8	8	3	1	4	1	-75.0%
Special Education Specialist: Deaf/Hard of Hearing	36	39	24	22	16	24	+50.0%
Special Education Specialist: Visually Impaired	51	40	7	7	8	6	-25.0%
Speech	10	22	22	14	9	11	+22.2%
Teacher Librarian (requires 1 or more years of teaching experience)	71	51	29	14	9	10	+11.1%
Technology Education (previously Industrial Arts)	4	4	7	9	21	15	-28.6%
Undeclared or Unknown	13	13	1	19	3	36	
Grand Total	12950	13103	11987	11227	11292	10692	-5.3%

¹Enrollment numbers include students enrolled in more than one endorsement/licensure area during the 2013-14 and 2014-15 academic years

IV. Demographics

For students enrolled in educator preparation programs, the demographics of age, race and ethnicity, and gender remains stable. In general, Colorado’s emerging teaching and educational administrative work force tends to be young, female and white/non-Hispanic. One important factor to note, however, is that this demographic data only includes those students enrolled in educator preparation programs at colleges/universities. Demographic data from the alternative certification and licensure programs is not available, and not included.

Gender

As seen in Table 6, more than three-quarters (75.45%) of all students enrolled in an educator preparation program are female. As a percentage, the number of male teachers has increased during the last five years, but the increase has been minimal and, when evaluated with the decrease in the total numbers of students enrolled in educator preparation programs, reflects a decrease of 113 male teachers from the previous academic year.

Table 6: Institution of Higher Education-Based Educator Preparation Program Enrollments For All Endorsement/Licensure Areas by Gender, 2009-2015

Gender	2009	2010	2011	2012	2013	2014	2015
Female	8418 76.10%	9852 76.08%	9992 76.26%	9143 76.27%	8613 76.72%	7946 75.65%	7464 75.45%
Male	2639 23.86%	3087 23.84%	3103 23.68%	2828 23.59%	2601 23.17%	2523 24.02%	2410 24.36%
Unknown	8 0.07%	13 0.10%	12 0.09%	23 0.19%	14 0.12%	35 0.33%	17 .17%
Grand Total	11062	12950	13103	11987	11227	10504	9891

Race and Ethnicity

Racial and ethnic diversity among candidates remained generally static during the 2014-15 academic year. While there was a minor decrease in the numbers of students identifying themselves as multi-racial (non-Hispanic), the majority of the candidates self-identified as white (non-Hispanic). There was a slight increase in the percentage of Native American candidates (0.8%), but – as seen in the majority of ethnic stratifications – these variances were minimal. Table 7 provides additional detail regarding the racial and ethnic composition of candidates.

Table 7: Endorsement/Licensure Areas by Race and Ethnicity, 2011-2015

Federal Race and Ethnicity Categories	2011	2012	2013	2014	2015	Percentage 2015
Asian	204	189	164	160	133	1.3%
Black or African American, non-Hispanic	266	253	224	204	193	2.0%
Hawaiian or Pacific Islander	13	16	12	12	13	0.1%
Hispanic ¹	1261	1315	1329	1218	1226	12.4%
Native American or Alaskan Native	116	106	92	74	76	0.8%
Unknown Ethnicity	1727	1395	1279	1001	862	8.7%
White, non-Hispanic	9384	8538	7924	7575	7145	72.1%
More than one race/ethnicity (non-Hispanic)	128	180	207	227	213	2.2%
Non-Resident Alien	24	30	35	33	40	0.4%
Grand Total	13103	11987	11227	10504	9891	

¹ Under the new federal categories, “Hispanic” is prioritized over other categories. That is, if an individual claims “Hispanic” ethnicity, they cannot claim any other category. Accordingly, “More than one race or ethnicity” is for non-Hispanics only.

Age

The majority (80.3%) of enrolled candidates are under the age of 35. This pattern has been consistent since 2009. Inclusion of demographic data from alternative licensure programs would likely result in an increase in the numbers of students in the 35+ stratum, but this data is not currently available. Table 8 provides detail regarding the age of students enrolled in educator preparation programs in Colorado colleges and universities during the 2014-15 academic year.

Table 8: Institution of Higher Education-Based Educator Preparation Program Enrollments For All Endorsement/Licensure Areas by Age, 2009-2014

Age	2009	2010	2011	2012	2013	2014	2015
24 years or younger	5087 45.99%	5487 42.37%	5887 44.93%	5732 47.82%	5441 48.46%	4989 47.50%	4868 49.22%
25-34 years	3513 31.76%	4358 33.65%	4283 32.69%	3803 31.73%	3499 31.17%	3269 31.12%	3075 31.09%
35+ years	2638 23.85%	3323 25.66%	3163 24.14%	2631 21.95%	2465 21.96%	2246 21.38%	2095 21.18%
Grand Total	11062	12950	13103	11987	11227	10504	9891

Note: Some students are in more than one age bracket because they had birthdays at some point during the academic year that moved them from one age bracket to the next. The Grand Total, however, reflects the number of unduplicated students.

The age demographics of educator preparation differ from the total population of students enrolled at four-year institutions, as educator preparation students tend to be older. For students in all programs within Colorado four-year colleges and universities, 89.22% (140,212 of 155,407) of students are under 35 years of age, compared to 80.3% in educator preparation. Further, educator preparation is comprised of 31.09% of students

in the 25-34 age group, a number approximately 10% higher than the general population of 25-34 year old students enrolled in four year institutions (21.79%) in Colorado.

V. Reauthorization and Programmatic Approval

CDHE and CDE monitor educator preparation providers through periodic and regular programmatic review. As stipulated in 23-1-121(4)(a)(I), C.R.S., the Colorado Commission on Higher Education (CCHE) and CDHE, in conjunction with the State Board of Education (SBoE) and CDE, are required to review all educator preparation providers not more frequently than once every five years to ensure the programs meet the statutory requirements for reauthorization.

In addition to on-campus reauthorization site visits, both CDE and CDHE review all new educator preparation program proposals submitted by institutions of higher education. Upon successful review by CDE and CDHE staff, new program proposals are approved by both the SBoE and CCHE.

Reauthorization

During the 2015 calendar year, the educator preparation providers at the following institutions underwent reauthorization review:

- Colorado State University
- Denver Seminary
- Rocky Mountain College of Art and Design

In all instances, review teams are comprised of academic experts in the field of educator preparation, individuals familiar with the P20 pipeline in Colorado and, when possible, a local K12 practitioner from a partner district associated with the institution. Per statute, each reauthorization visit coincided with accreditation visits from national accreditation agencies to reduce or eliminate duplicative reporting.

Programmatic Approval

During the 2015 calendar year, the following new programs were approved by both the CSBoE and CCHE:

- Culturally and Linguistically Diverse Education Endorsement at Colorado State University – Pueblo
- Culturally and Linguistically Diverse Bilingual Education Endorsement at the University of Colorado Boulder
- Dance Teaching Endorsement at the University of Northern Colorado
- Culturally and Linguistically Diverse Bilingual Education Endorsement at Fort Lewis College
- Science and Mathematics Educator Endorsement Programs at Colorado State University

VI. Areas of Focus and Recommendations

In 2016, CDHE and CDE will embark on various initiatives designed to support educator preparation providers and the educator population throughout Colorado. These ventures center on: modifying and adopting best practices regarding teacher quality and educator preparation program review, supporting the development of

rural educator recruiting and retention throughout Colorado, and supporting existing initiatives such as concurrent enrollment and educator effectiveness.

Areas of Focus

The Professional Services and Educator Licensing division of CDE began the task of analyzing and aligning the current rules established with licensure in 2014. Through collecting and analyzing stakeholder feedback and public commentary, the division is progressing with potential modifications that will result in a more streamlined licensing experience for both new and existing educators. This process will be completed in 2016.

Supporting the recruitment and retention of educators within rural school districts in Colorado will be an area of focus for the Student Success and Academic Affairs division of CDHE in 2016. Through strategic collaboration with local organizations, such as Boards of Cooperative Educational Services (BOCES) and Colorado Association of School Personnel Administrators (CASPA), external grant funds have been allocated to support three specific initiatives for rural teacher recruitment, retention and academic content development. It is expected that more cohesive avenues connecting educators and these rural districts will result in a more robust and stable educator workforce in all regions of the state.

Concurrent enrollment (CE) programs, courses that allow students to earn high school and college/university course credit simultaneously, currently exist within 95% of all school districts in Colorado. Yet, the number of K12 educators meeting the academic requirements to teach CE remains limited and individual qualifications for CE teachers have come under increased scrutiny by regional and national accreditation agencies. These qualification requirements are a significant barrier to the objectives associated with reducing the academic achievement gap for diverse student populations and preparing students to post-secondary academic success. Further, CE programs are linked to the development of a viable pipeline of talented labor as concurrent enrollment is largely seen as “a critical career pathways tool to align education, training and work based learning” (CWDC, 2015).

To increase the number of teachers qualified to facilitate CE courses, CDHE continues to secure external funding to support the development of these educators through collaboration with the Concurrent Enrollment Advisory Board. In 2016, this will include the funding of graduate level instruction to teachers through CSU – Global Campus in both the math and English language arts disciplines and with Adams State University to provide instruction in U.S. History. Through these efforts, it is expected that an additional 30-45 teachers will become CE qualified by the end of 2016.

Recommendations

Developing an understanding regarding the long-term decline of educator numbers in Colorado is a critical component in the process of examining avenues to increase the number of individuals interested in pursuing a career in education. Lines of research should be taken regarding the reasons individuals do not consider a career as a teacher, principal or school service provider, and potential incentives to promote teaching and education as a profession.

Continued collaboration and communication with school district leadership, including Human Resource Directors, will continue to ensure alignment between institutions of higher education and the needs of local districts. Further, additional research regarding out-of-state educator recruitment will continue in an effort to

ascertain why various Colorado districts continue to recruit teaching candidates from outside of Colorado, and how the quality of the candidates emerging from Colorado institutions compare with their peers from other colleges/universities throughout the United States.

Programmatic modification should continue to be reviewed by both CDE and CDHE to align with national trends regarding outcome-based assessments, multi-disciplinary curriculum design and instruction and adherence to district needs regarding culturally and linguistically diverse (CLD) endorsement and other areas of licensure perceived as “high needs.”

References:

Colorado Department of Higher Education (2014). *Annual Report on Concurrent Enrollment*. CDHE: Denver, CO.

Colorado Department of Higher Education (2015). *Legislative Report on The Skills for Jobs Act*. CDHE: Denver, CO.

Colorado Workforce Development Council (2015). *Talent Pipeline Report*. CWDC: Denver, CO.

United States Department of Education (2013). *Title II Report*. USDOE: Washington, DC.

Appendix A: Institutions' Abbreviations

ASU – Adams State University
CCU – Colorado Christian University
CC – Colorado College
CMU – Colorado Mesa University
CSU – Colorado State University
CSUP – Colorado State University Pueblo
FLC – Fort Lewis College
JIU – Jones International University
MSUD – Metropolitan State University of Denver
RU – Regis University
RMCAD – Rocky Mountain College of Art and Design
UCB – University of Colorado Boulder
UCCS – University of Colorado Colorado Springs
UCD – University of Colorado Denver
DU – University of Denver
UNC – University of Northern Colorado
UP – University of Phoenix
WSCU – Western State Colorado University

2015 Annual Report State Advisory Council for Parent Involvement in Education

Submitted to:

**Colorado State Board of Education
Colorado Commission on Higher Education
Colorado House Education Committee
Colorado Senate Education Committee**

By:

**The State Advisory Council for Parent Involvement in Education
Stacey Zis, Chair
Kim Watchorn, Vice Chair**

Prepared by:

Dr. Darcy Hutchins, CDE Family Partnership Director

December 2015

The State Advisory Council for Parent Involvement in Education is staffed by the
Colorado Department of Education.

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COLORADO
Department of Education



The State Advisory Council for Parent Involvement in Education (SACPIE) is a legislated body of diverse stakeholders charged to advise state organizations and school districts on issues related to increasing parent involvement¹ in education. The premise is that by promoting family-school partnerships, this will help to improve the quality of public education and raise the level of students' academic achievement throughout the state (C.R.S. § 22-7-301 and C.R.S. § 22-7-304). This responsibility specifically includes involving families in programs to increase high school and college graduation rates, decrease drop-out rates, and close the achievement and growth gaps between learner groups in the state. A listing of the SACPIE membership and the groups they represent can be viewed in Appendix A.

Pursuant to Senate Bill 13-193, the purpose of this report is to outline SACPIE's progress in promoting family-school partnerships in the state and in fulfilling the duties specified in C.R.S. § 22-7-304 from SB 09-090 and SB 13-193 (Appendix B, Link 1). This report includes a description of SACPIE's structure and membership, as well as a list of advisory duties,² SACPIE's progress on the duties, and next steps.

SACPIE Structure and Membership

SACPIE, a 23 member council plus advisory and CDE support members, meets quarterly. In 2015, SACPIE had an Executive Committee and four working committees: Early Childhood, Elementary, Secondary, and Higher Education. Every member of SACPIE serves on a working committee, based on his or her area of expertise and interest. Each committee has an action plan based on SACPIE's legislated responsibilities. Committee members meet regularly to discuss the identified plan, share progress, and identify needed supports and resources. The committees also report progress to the SACPIE council at quarterly meetings.

Also in 2015, SACPIE voted unanimously to lengthen quarterly Council meetings from two hours to four hours. Longer meetings allow committees time for collaboration and additional planning. This structure will continue in 2016.

Each SACPIE committee has a CDE staff member who serves as a co-chair and represents a different unit/office and. Having CDE representation on every SACPIE committee from across the Department allows for multiple perspectives in discussions, direct department support of committee work, access to relevant resources, alignment of work, and reciprocal communication between CDE and SACPIE.

The Executive Committee, comprised of the SACPIE Chair, Vice-Chair, working committee chairs, and the CDE Family Partnership Director meets six times during the year. The purpose of the Executive Committee is to:

- Lead the SACPIE by planning meetings.
- Review vacancies and recommend new members.
- Review best practices for adherence to the framework.
- Review website contributions and external communication.
- Ensure implementation of procedures/policy recommendations.
- Guide the other committees in their work.

¹ In an effort to align state and national language, based on current research, this report uses the word "family" as opposed to "parent" and "engagement" or "partnering" instead of "involvement." This is done purposefully to be more inclusive and suggest a higher level of collaboration beyond involvement.

² C.R.S. § 22-7-304 outlines 15 recommendations for advisory duties and technical assistance for SACPIE to conduct in Colorado. This report includes the recommendations that SACPIE is currently implementing.

This year, the members of the Executive Committee helped to plan the Family and School Partnership in Education Month, reviewed and revised SACPIE Operating Procedures (including setting parameters for term limits and membership), posted multiple resources on the SACPIE website, and selected new parent and organization representative to serve a three year term on SACPIE. A copy of the SACPIE parent member application can be viewed in Appendix C. This basic application is adapted for other representatives when such vacancies arise on the Council.

In order to build a statewide communication structure, the SACPIE Executive Committee initiated an email stakeholder network. This is a community of people who have shown an interest in SACPIE or family-school partnerships through various venues. Information about SACPIE activities is sent to this list several times a year in order to widen SACPIE's messaging outreach.

The Operating Procedures state that each year, the council will select a Chair and Vice Chair. A CDE representative may serve in only one of these roles at any one time and every effort will be made to have a parent representative serve in one of these roles each year. At the SACPIE meeting on November 17, 2015, the Council reelected Stacey Zis, a parent representative, as Chair and Kim Watchorn, a CDE representative, to be the Vice Chair.

SACPIE Advisory Duties

Advisory Duty: The council shall inform, at a minimum, the early childhood councils and the early childhood care and education councils created pursuant to article 6.5 or title 26 (C.R.S. § 22-7-304(1)).

The Early Childhood Committee is co-chaired by Jennifer García-Rosendo, a representative with expertise in early childhood, and Noemi Aguilar, CDE representative. The purpose of this committee is to identify and communicate with early childhood education councils (ECE) and early childhood leadership networks in Colorado regarding family, school, and community partnerships and resources. In 2015, members of the Early Childhood Committee participated in statewide meetings and committees, including:

- The Early Childhood Leadership Commission.
- The Early Childhood and School Readiness Legislative Commission.
- The Early Childhood Councils Leadership Alliance.

Advisory Duty: Creating and implementing programs to effectively involve parents in improving their children's education and levels of academic achievement. To identify these best practices and strategies, the council shall review the programs implemented in other states and the results of state and national research conducted in this area. (C.R.S. § 22-7-304(1)(a)).

SACPIE is a council driven by research and data. To that end, the Council must align its work with the National Standards for Family-School Partnerships (PTA, 2008, Appendix B, Link 2) and references those standards in its resources and presentations. SACPIE also aligns its work with the Dual Capacity-Building Framework, a document published by the U.S. Department of Education in April 2014 (Appendix B, Link 3). A U.S. Department of Education representative serves on SACPIE as an advisory member and in this role, continuously updates SACPIE with related information. SACPIE's work with the Colorado Department of Education has been honored by the U.S. Department of Education as an "effective practice."



In order to continually stay informed about new research findings and effective partnering programs, a SACPIE representative participates with CDE staff in a monthly national call with other state representatives, facilitated by the Southwest Educational Developmental Laboratory (SEDL). In 2015, the CDE Family Partnership Director shared SACPIE's work on a state leadership panel at the second annual National Family Engagement Conference.

SACPIE has identified resources for practitioners from nationally recognized organizations on its website, including:

- The Center on School, Family, and Community Partnerships at Johns Hopkins University (Appendix B, Link 4).
- The Family Involvement Network of Educators at Harvard University (Appendix B, Link 5).
- The SEDL National Center for Family and Community Connections with Schools (Appendix B, Link 6).
- The Flamboyant Foundation (Appendix B, Link 7).

In October 2015, SACPIE and CDE hosted Dr. Joyce Epstein, Professor and Director of the Center on School, Family, and Community Partnerships. Dr. Epstein shared research and promising practices with Colorado's parent advisory councils, including SACPIE, the Migrant Parent Advisory Council, the Colorado Special Education Advisory Committee, and the Gifted Education State Advisory Committee.

The Resources section on the website (Appendix B, Link 8) also includes research articles and toolkits for family-school collaboration. Wherever possible, resources are provided in both English and Spanish. SACPIE members continually research materials and these are archived under Member Contributions (Appendix B, Link 9).

In 2015, SACPIE worked with CDE to collect Promising Partnership Practices from schools and districts across Colorado (Appendix B, Link 10). Over 50 sites submitted a practice. Each practice is aligned with the National Standards for Family-School Partnerships. Representatives from SACPIE and CDE have shared this new resource with hundreds of school and district leaders at conferences, workshop presentations, site visits, and through social media.

SACPIE also collaborated with the Colorado Department of Education to develop and publish a brochure entitled *Families, Schools and Communities Partnering to Support Student Learning*. The brochure is intended as a resource for all stakeholders about how to partner for student achievement and is distributed statewide at meetings and trainings. The brochure is available in both English and Spanish (Appendix B, Links 11 and 12).

Advisory Duty: Involving parents in programs to raise academic achievement, increase high school graduation rates, decrease student dropout rates, and close the achievement and growth gap. (C.R.S. § 22-7-304(1)(b)).

SACPIE is committed to building capacity in school personnel and families to partner for student achievement. To this end, SACPIE regularly encourages family participation in programs that promote student success. For the fourth year, Governor Hickenlooper declared October as *Family and School Partnership in Education Month*. The Governor's proclamation is available in English and Spanish on the SACPIE website (Appendix B, Links 13 and 14). School districts and organizations across the state shared the proclamation with boards, educators, families, and community members. The U.S. Department of Education published a summary of Colorado's celebrations for the month in its quarterly newsletter.

A kickoff event took place on October 1, 2015 at the Colorado Department of Education. Interim Commissioner Dr. Elliott Asp facilitated the event and speakers included:



- SACPIE Chair Stacey Zis.
- Colorado Migrant Parent Advisory Council member Yolanda Armenta.
- SACPIE Vice Chair Kim Watchorn.
- Cimarron Elementary School Principal Diana Roybal.
- Cimarron Elementary School parent Kim Asamoah.

A recording of the speeches and pictures from the Kickoff are available on the SACPIE website (Appendix B, Link 15).

Representatives from schools and districts who submitted a Promising Partnership Practice shared displays in the State Board of Education conference room (Appendix B, Link 16). SACPIE and CDE also shared displays and partnering resources with attendees.

The SACPIE Vice Chair and the CDE Family Partnership Director participated in a Twitter chat about family-school partnerships, co-hosted by CDE and the Colorado Education Initiative (Appendix B, Link 17). In addition to these events, each week during October, SACPIE highlighted partnership resources in the CDE publication *The Scoop* to support stakeholders as they work together.

Members of SACPIE have also presented at numerous statewide conferences (Appendix D). In 2015, SACPIE representatives presented at trainings, conferences, and meetings to approximately 1,010 participants. Presentations included:

- Plenary addresses.
- Breakout sessions.
- Panel member participation.
- Exhibition tables.

The Elementary Education Committee, co-chaired by Chris Johnson, a parent, and Cindy Dascher, a CDE representative, has worked to support the parent component of the READ Act (H.B. 12-1238). The committee's support of the parent component is designed to make family partnering more effective by providing tools for parents and teachers to communicate about the plan.

In 2015, SACPIE continued its Spotlight program. At each Council meeting, one or two of SACPIE's representatives share information about his or her organization. Spotlights in 2015 included:

- Jan Tanner, Colorado Association of School Boards.
- Blanca Trejo, College in Colorado.
- Diana Huffman, U.S. Department of Education.
- Evie Hudak and Michelle Winzent, Colorado Parent Teacher Association.
- Dr. Terry Croy Lewis, Colorado League of Charter Schools.

Additionally, in order to be informed as to their role in implementing new Colorado reform legislation focusing on improving student achievement, SACPIE members heard presentations and shared feedback at their quarterly meetings on how families should participate in the following:

- Colorado's Elementary and Secondary Education Act (ESEA) Waiver.

- School and District Performance Frameworks.
- The Turnaround Network.
- The Colorado Academic Standards.
- The Multi-Tiered System of Supports (MTSS) Implementation Guide.

Advisory Duty: Involving parents in response to intervention programs in public schools and school districts (C.R.S. § 22-7-304(1)(c)).

SACPIE has inventoried, shared, and built upon existing CDE training and online resources that have been developed by the Office of Learning Supports and Exceptional Student Services Unit (Appendix B, Link 18) to support families partnering throughout the Multi-Tiered System of Supports (MTSS) framework or through Response to Intervention (RtI) processes. Key information that SACPIE uses in enacting its legislated responsibility is as follows:

- In Colorado, Response to Intervention (RtI) is explicitly mentioned in: Rules for the Administration of the Exceptional Children’s Educational Act (ECEA), Colorado Read to Ensure Academic Development Act (Colorado READ Act), and SB 09-090.
- In Colorado, considerations for implementation of RtI are embedded in work from various offices and units within CDE, with primary responsibility housed in the Office of Learning Supports.
- The CDE Office of Learning Supports has identified *Family, School, and Community Partnering* (FSCP) as one of the six Essential Components of a Multi-Tiered System of Supports (MTSS). In every MTSS Overview or Implementation learning experience offered by the Office of Learning Supports, FSCP is featured with consistent reference to SACPIE, its materials, and the Council’s commitment to partnering.
- Beginning in 2009, a core family-school partnering curriculum was developed, and training support has been offered since that time in varied formats (including face-to-face trainings, webinars, webcasts, online courses, an email support network, etc.). Content is intended to support all education stakeholders.
- During 2015, SACPIE has co-presented in numerous face-to-face and online learning opportunities which focus on how families can be effectively included throughout the tiers as partners in decision-making and learning coordination between home and school.
- Alignment between SACPIE and CDE efforts to scale-up MTSS has been deliberate and reciprocal. Information is co-constructed and/or disseminated collaboratively in various venues.

Advisory Duty: Involving parents in programs to raise academic achievement, improve the persistence rate, and improve the on-time graduation rate of students enrolled in institutions of higher education (C.R.S. § 22-7-304(1)(d)).

The purpose of the Higher Education Committee, co-chaired by Dr. Kristine Greer, representative from higher education, and Kim Watchorn, a CDE representative, is to:

- Communicate with the Colorado higher education community regarding family, school, and community partnerships, resources, and measures.

- Support the implementation of SACPIE's 7th Standard—*Providing professional development and pre-service training in partnering with families for administrators and teachers.*³

In 2015, the Higher Education Committee conducted the following initiatives:

- Composed a matrix for construction of a refined list of best practices for partnering in Institutes of Higher Education (IHEs).
- Investigated one traditional state university's websites and materials for families.
- Collected a beginning list of schools in Colorado with family/parenting engagement and involvement courses to potentially ask faculty for syllabi.
- Collaborated on ideas, processes, and plan development for contacting a diverse group of IHE personnel for descriptions of their content related to supporting partnering within curriculum in IHEs.
- Collected 3 syllabi of courses with family/parenting engagement and involvement (for online posting as examples of partnering in course programming in IHEs).
- Attended state-level convenings related to educator preparation (e.g., *Educator Preparation and Licensing Alignment Rules Informational Sessions* and State Board of Education meetings) in support of including partnering in IHE programming.
- Highlighted sections of where family partnering lives in each of the Educator Effectiveness rubrics (postable for Internet).
- Highlighted sections of where family partnering exists in Colorado Academic Standards (postable for Internet).
- Collected posters made by Fort Lewis college pre-service teachers about elementary schools in Southwest Colorado that demonstrated best practices and strategies in family and school relationships during October Family-School Partnership in Education Month.
- Created an annotated bibliography of articles containing parent engagement best practices in higher education.
- Discussed a wider definition of family and how that related to equity issues and opportunity gaps for students and families in higher education.

Advisory Duty: Increasing parent involvement in education-related committees at the local and state levels (C.R.S. § 22-7-304(1)(e)).

The Secondary Education Committee, co-chaired by Joanna Peters, representative of career and college guidance counselors, and Kirsten Carlile, a CDE representative, drafted sample communication language for middle and high school administrators about how to increase family partnerships related to the National Standards for Family-School Partnerships. Many of these opportunities include family partnership opportunities in education-related committees.

Advisory Duty: The council shall work with the department to provide regional training programs for school district accountability committees and school accountability committees. At a minimum, the training programs must address parent leadership and increasing parent engagement with school district accountability committees and school accountability committees, including best practices for parent engagement with school district accountability committees and school accountability committees (C.R.S. § 22-7-304(3)(b)).

³ SACPIE added the 7th Standard for Family-School Partnerships based on the research identifying the need for pre-service and practicing educators to learn more about partnering effectively with all families (Caspe, Lopez, Wu, & Weiss, 2011; Epstein & Sanders, 2006).



In 2014, SACPIE collaborated with CDE's Family Partnership Director to conduct trainings across Colorado about family participation on SACs and DACs. The trainings included information about:

- Basic responsibilities and composition of SACs and DACs.
- How to recruit, prepare, and sustain effective SAC and DAC membership.
- How to collaborate with various stakeholders (i.e. community members, other families, other accountability committees, local boards of education).

Most of the SAC and DAC trainings in 2015 have occurred through special invitations from districts to the CDE Family Partnership Director. In 2016, SACPIE and CDE will complete a SAC and DAC toolkit, as well as an online training module for accountability committee members to learn more about their roles and responsibilities.

Advisory Duty: The council shall work with the department to provide regional training programs for school districts and charter schools concerning best practices and skills for district and school personnel in working with parents (C.R.S. § 22-7-304(3)(c)).

SACPIE and CDE collaborated to plan and implement regional trainings for Family Partnership Liaisons, SACs and DACs, and other interested school and district stakeholders about promising practices and skills in working with families. The overall purpose of the trainings was to help schools and districts implement comprehensive, sustainable structures for student success. The four components of this structure are:

- The Framework of the National Family-School Partnership Standards.
- Distributed Leadership.
- Action Planning.
- Evaluation.

Resources from the SAC and DAC trainings and the promising practice trainings can be found in Appendix B, Link 19.

Advisory Duty: The council, in consultation with the department of education and the department of higher education, shall identify key indicators of successful parent engagement in education and use the indicators to develop recommendations for methods by which the department of education and the department of higher education may measure and monitor the level of parent engagement with elementary and secondary public schools and with institutions of higher education in Colorado (C.R.S. § 22-7-304(4)).

Members of SACPIE continue to work with the CDE Family-School-Community Partnering Community of Practice (Appendix E) and the Department of Higher Education to compile measures of family-school partnership. The CDE Family Partnership Director worked with SACPIE and CDE staff members from the Federal Programs Unit to develop a survey for school staff and families to measure family engagement outreach. The surveys are intended to be a resource for schools and districts. The process for the survey development included:

- Aligning questions from existing surveys (Flamboyant Foundation, Kansas Parent Information and Resource Center, Parent Teacher Association, Indicator 8 Parent Survey, Family-School Partnering Survey for the State Personnel Development Grant) with the National Standards for Family-School Partnership Goals and Indicators.
- Completing an inter-rater reliability of selected survey questions.

- Collecting feedback of survey wording for readability from SACPIE, CDE staff, and national Subject Matter Experts.
- Presenting the preliminary survey instrument to the Educational Data Advisory Committee (EDAC) for approval to complete a pilot study.

In addition to the surveys, SACPIE committees will continue to explore current research to identify indicators that measure successful family partnership strategies.

Next Steps

SACPIE will continue to increase and broaden the implementation of its legislated responsibilities in 2016. These next steps include but are not limited to:

- Continuing to work as committees to address the different educational levels identified in SB 09-090 and SB 13-193, particularly focusing on family-school partnerships in the READ Act, ICAP, truancy, and transitions.
- Using data to guide SACPIE's continued family partnership initiatives.
- Exploring possible grant funding streams to support districts' and schools' family partnership work.
- Implementing trainings about best practices and skills to improve home-school partnering for student achievement in districts and schools in collaboration with CDE.
- Implementing trainings for SACs and DACs about family recruitment, retention, and participation on accountability committees in collaboration with CDE.
- Collecting and publishing promising practices from schools, districts, and organizations across Colorado.
- Aligning and refreshing the SACPIE website using analytic data.
- Working with the Department of Higher Education to increase family partnership in postsecondary and workforce readiness.
- Working with the Department of Human Services to foster effective family-school partnerships.
- Identifying key indicators to measure successful family-school partnership practices and to institute an ongoing, data-based system of continuous improvement throughout the state in collaboration with CDE.
- Seeking opportunities to promote family-school partnership practices in Colorado.



**Appendix A
SACPIE Membership 2015**

SACPIE Membership 2015			
Member Name	SACPIE Role	Organization	Town
Stacey Zis, Chair	Parent Representative		Boulder
Kim Watchorn, Vice Chair	Colorado Department of Education-Office of Learning Supports	Colorado Department of Education	Loveland
Noemi Aguilar	Colorado Department of Education-Office of Migrant Education	Colorado Department of Education	Denver
DJ Anderson	Parent Representative		Fort Collins
Amie Baca-Oehlert	Statewide organization that represents teachers	Colorado Education Association	Thornton
Becky Barnes	Parent Representative serving on a school or district accountability committee		Castle Rock
Dr. Diane Bassett	Representative from higher education	University of Northern Colorado	Denver
Kirsten Carlile	Colorado Department of Education-Federal Programs Unit	Colorado Department of Education	Denver
Terry Croy Lewis	Statewide organization that represents charter schools	Colorado League of Charter Schools	Centennial
Cindy Daisley	Statewide organization of parents and teachers	Colorado Parent Teacher Association	Denver
Cindy Dascher	Colorado Department of Education-Exceptional Student Services Unit	Colorado Department of Education	Thornton
Jennifer García-Rosendo	Expertise in early childhood care and education	Early Learning Ventures	Denver
Dr. Kris Greer	Representative from higher education	Teacher Education Department/Fort Lewis College	Durango
Chris Johnson	Parent Representative serving on a school or district accountability committee		Steamboat Springs
Kevin Leung	Parent Representative		Castle Rock
Leslie Levine	Nonprofit organization that partners with funding providers, state agencies, and service providers to assist organizations in providing services to improve the health and well-being of families and	LiveWell Colorado	Denver



	children		
Joanna Peters	State-based nonprofit organization specializing in promoting the involvement of families of traditionally underserved populations	Colorado Council of High School and College Relations	Colorado Springs
Sandy Ripplinger	Statewide organization that represents school executives	Colorado Association of School Executives	Boulder
Jan Tanner	Statewide organization that represents members of school district boards of education	Colorado Association of School Boards	Colorado Springs
Vacant—New Member Awaiting SBE Approval	State-based nonprofit organization specializing in promoting the involvement of families of traditionally underserved populations		
Vacant—New Member Awaiting SBE Approval	State-based nonprofit organization specializing in promoting the involvement of families of traditionally underserved populations		
Vacant—New Member Awaiting SBE Approval	Nonprofit organization that specializes in promoting the involvement of families of students with disabilities		
Vacant	Colorado Department of Human Services		

SACPIE Advisory Members and CDE Support 2015

Name	Organization
Dr. Darcy Hutchins, SACPIE Staffer	Colorado Department of Education-Improvement Planning Unit
Randy Boyer	Colorado Department of Education-Exceptional Student Services Unit
Pat Chapman	Colorado Department of Education-Federal Programs
Senator Evie Hudak	Former Colorado State Senator
Diana Huffman	United States Department of Education, Region 8
Dr. Cathy Lines	Colorado Department of Education-Exceptional Student Services Unit
Lisa Medler	Colorado Department of Education-Improvement Planning Unit



Appendix B Links Referenced in the Annual Report

Link 1 (SACPIE Advisory Duties): http://www.cde.state.co.us/sacpie/about_advisoryduties

Link 2 (National Standards for Family-School Partnerships):
http://www.cde.state.co.us/sites/default/files/SACPIE_NationalStandardsGoalsIndicators_Family-SchoolPartnerships.pdf

Link 3 (Dual Capacity-Building Framework): <http://www2.ed.gov/documents/family-community/partnership-frameworks.pdf>

Link 4 (The Center on School, Family, and Community Partnerships at Johns Hopkins University):
<http://www.partnershipschoools.org>

Link 5 (The Family Involvement Network of Educators at Harvard University): <http://www.hfrp.org/family-involvement/fine-family-involvement-network-of-educators>

Link 6 (The SEDL National Center for Family and Community Connections with Schools):
<http://www.sedl.org/connections/>

Link 7 (The Flamboyant Foundation): <http://flamboyantfoundation.org/>

Link 8 (SACPIE Resource Page): <http://www.cde.state.co.us/sacpie/resources>

Link 9 (SACPIE Member Contributions): http://www.cde.state.co.us/sacpie/resources_sacpie_member_contrib

Link 10 (Promising Partnership Practices): <http://www.cde.state.co.us/uiip/promising>

Link 11 (Family Partnership Brochure in English): <http://www.cde.state.co.us/sacpie/sacpiebrochure91014>

Link 12 (Family Partnership Brochure in Spanish):
<http://www.cde.state.co.us/sacpie/sacpiebrochurespanish91014>

Link 13 (Family and School Partnership in Education Month Proclamation in English):
http://www.cde.state.co.us/sacpie/fspe_month_2015_proclamation_eng

Link 14 (Family and School Partnership in Education Month Proclamation in Spanish):
http://www.cde.state.co.us/sacpie/fspe_month_2015_proclamation_span

Link 15 (Family and School Partnership in Education Month Kickoff Event): <http://www.cde.state.co.us/SACPIE/>

Link 16 (Promising Partnership Practice Displays): <http://www.cde.state.co.us/uiip/promising>

Link 17 (Family and School Partnership in Education Month Twitter Chat Archive): <https://storify.com/CEI/oct-2015-cei-cde-twitter-chat>



Link 18 (Office of Learning Supports Family Professional Development and Resources):
<http://www.cde.state.co.us/rti/family>

Link 19 (SACPIE and CDE Training Materials): <http://www.cde.state.co.us/uip/trainingmaterials>

Appendix C SACPIE 2015 Parent Membership Application

2015 Application for State Advisory Council for Parent Involvement in Education

Overview of SACPIE

On behalf of the Colorado Board of Education, the State Advisory Council for Parent Involvement in Education (SACPIE) invites applications from candidates to fill three (3) Parent Representative vacancies. Two of these vacancies are for parents who currently serve as the parent representatives on a District Accountability Committee (DAC) or School Accountability Committee (SAC).

In accordance with SB09-090, 22-7-301 C.R.S., the Council has been charged with the task of informing public education entities concerning best practices and strategies, aligned with National Standards for Family-School Partnerships, for increasing parent involvement in public education and promoting family and school partnerships in order to help improve the quality of public education and raise the level of students' academic achievement throughout the state.

As required by State law, parent membership appointments must be filled by parents of children who are:

- 1) Enrolled in a publicly funded preschool program; or
- 2) In any of grades kindergarten through twelve; or
- 3) In a state supported institution of higher education; and
- 4) Who represent student populations that are significantly represented in the state.

As required by State law, the State Board of Education, in appointing members to the Council, shall, to the greatest extent possible, select persons who will reflect the gender balance and ethnic and racial diversity of the state and will provide representation from throughout the state.

Membership appointments will begin in November 2015 and continue for three years, with an opportunity to continue for another term.

SACPIE Responsibilities

Time Commitment. Members are expected to be active participants in the Council and attend at least 75% of monthly meetings in the metro Denver area, or by audio conference call-in. Meetings are currently held

Application Summary

Applications are due November 30, 2015 to Darcy Hutchins (hutchins_d@cde.state.co.us).

Complete applications should include:

- Contact and Background Information Form*
- Statement of Interest*
- Current CV, Resume, or Background Summary*
- Contact for Two References*



quarterly on the third Tuesday of February, May, August, and November from 1:00 p.m. – 3:00 p.m. (although the time and Tuesday may be shifting slightly in 2015).

Members are also expected to serve on one of four committees. Committee meeting dates and times vary at the discretion of committee members and chairs. The four SACPIE committees include:

- Early Childhood: To identify and communicate with Colorado early childhood councils and networks regarding partnerships and resources.
- K-12: To work with CDE in supporting districts to enact accountability, requirements, regional trainings, indicators, and policies.
- Higher Education: To communicate with the Colorado higher education community regarding partnerships, resources, and measures; to support the implementation of SACPIE’s Additional 7th Standard – *Providing professional development and pre-service training for teachers and administrators*.
- Partnerships: To understand, review, update, and publicize relevant programs, trainings, resources, and events; investigate grant funding.

Compensation. SACPIE members can be reimbursed for mileage and meals (related to SACPIE business) and some required activities (e.g., trainings for the field).

Application Process. Completed Applications must be submitted to Darcy Hutchins by November 30, 2015 (hutchins_d@cde.state.co.us; 303-562-8175).

Please see the SACPIE website (<http://www.cde.state.co.us/sacpie>) for more information about the Council.

Application Checklist

	Completed Contact Information/Background Form
	Completed Statement of Interest
	Current Curriculum Vitae, Resume, or Background Summary
	Contact Information for Two References



Contact and Background Information Form

SACPIE Application
(Please Type)

Contact Information

First Name:	
Last Name:	
Preferred Title (Mr., Ms., Mr., Dr.):	
Mailing Address:	
Email Address:	
Phone Number:	
Gender:	
Ethnicity:	
Congressional District of Residence:	
Child's Grade:	
Child's School:	
Congressional District (if known):	

Are you currently serving on a School Accountability Committee (SAC) or District Accountability Committee (DAC)? Yes _____ No _____

Do you plan to do so in the future? Yes _____ No _____

References

Please provide contact information for two references that would be able to speak to skills/tasks needed of SACPIE applicants.

First Name:	
Last Name:	
Current Title:	
Organization:	
Email Address:	
Phone Number:	
Relationship:	



First Name:	
Last Name:	
Current Title:	
Organization:	
Email Address:	
Phone Number:	
Relationship:	

Statement of Interest

SACPIE Application

Provide a brief description of why you are interested in serving on the State Advisory Council for Parent Involvement in Education. The response should not take more than one full typed page. Type your response below:

Return of Applications

Please email applications to Darcy Hutchins at hutchins_d@cde.state.co.us and note in the subject line: "SACPIE Application". Emailed applications are preferred.

To apply by mail, send to:

Darcy Hutchins
Colorado Department of Education
201 E. Colfax, Room 409
Denver, Colorado 80203

All applications and supporting material must be received at the email or U.S. mail address above no later than 5:00 p.m. November 30, 2015. Questions regarding the application process may be directed to Darcy Hutchins at 303.562-8175.

SACPIE will review application materials and recommend candidates for the vacant positions to the State Board of Education by January 4, 2016.



**Appendix D
2015 SACPIE Trainings and Presentations**

Training or Conference	Date	Description	Number of Participants
Family Engagement Promising Practices Trainings in Collaboration with CDE			
Regional Family Engagement Promising Practices Trainings	1.27.15 2.12.15 2.24.15	SACPIE, in collaboration with CDE, presented information at face-to-face full day trainings across Colorado for district and school personnel, families, and community members.	Approximately 150 participants
School and District Accountability Trainings in Collaboration with CDE			
SAC and DAC Trainings by invitation		SACPIE partnered with CDE to present statewide trainings for school and district accountability committees.	Approximately 200 participants
Conference or Meeting Presentations			
Educating Children of Color Summit	1.17.15	SACPIE presented a 60-minute break-out session for parents.	Approximately 15 participants
Colorado Charter Schools Conference	2.26.15	SACPIE was part of a policy panel for charter school educations and parents.	Approximately 55 participants
Colorado Department of Education All Staff Meeting	4.14.15	The Family Partnership Director presented to CDE staff about family partnerships, including SACPIE's work.	Approximately 300 participants
Colorado Parent Teacher Association (PTA) Convention	4.17.15	SACPIE presented a 75-minute break-out session for Convention attendees	Approximately 35 participants
Colorado Association of School Executives (CASE) Education Leadership Conference	7.29.15	SACPIE presented a 75-minute break-out session for district and school administrators.	Approximately 60 participants
Colorado Migrant Education Conference	9.11.15	SACPIE presented a 60-minute break-out session for migrant education teachers	Approximately 25 participants
Colorado Association of Bilingual Educators Conference	9.24.15	SACPIE presented a 75-minute break-out session for bilingual educators	Approximately 75 participants



Family and School Partnership in Education Month Kickoff Event	10.1.14	SACPIE hosted, with CDE, a kickoff celebration for the month of October; SACPIE representatives shared research and the National Standards with attendees, including family and community members, elected officials, and educators.	Approximately 75 participants
Gifted Education State Advisory Committee	12. 4.15	SACPIE presented a 90-minute session for members of the Gifted Education State Advisory Committee	Approximately 20 participants
TOTAL Number of Stakeholders			Approximately 1010 participants



Appendix E
Colorado Department of Education
CDE Family, School, and Community Partnering (FSCP) Community of Practice (CoP)
2015

What: A Colorado Department of Education (CDE) cross-departmental team focused on all facets of family, school, and community partnering within the CDE and throughout the Colorado education community operating under the National Standards for Family-School Partnerships (PTA, 2008)

(<http://www.pta.org/programs/content.cfm?ItemNumber=3126>).

Purpose: To support the CDE's strategic goals through the alignment, development, coordination and support of family, school, and community partnering efforts.

Outcomes:

- Develop shared knowledge across the CDE and build capacity within the Department to effectively engage in the work of family, school, and community partnering.
 - Encourage the CDE and local educational agencies (LEAs) in the collection and use of data so as to continuously improve family, school, and community partnering practices.
- Work collaboratively with the State Advisory Council for Parent Involvement in Education (SACPIE) in supporting statewide alignment of policy, practices, and resources throughout all educational levels and systems.
- Coordinate CDE resources.
 - Leverage resources.
 - Identify opportunities for collaborative work and shared conference presentations.
 - Identify and promote evidence-based and promising practices.
 - Identify exemplars and models of effective family, school, and community partnering in Colorado.
 - Work collaboratively to identify state and federal requirements related to parent, family, and community partnering and ensure that they are met by the Department.

Participating CDE Offices, Programs, or Units:

- Adult Education and Family Literacy
- Colorado State Library
- Dropout Prevention
- Early Learning and School Readiness
- Exceptional Student Services
- Federal Programs
- Health and Wellness
- Improvement Planning
- Language, Culture, and Equity
- Office of Learning Supports (Multi-Tiered System of Supports and Positive Behavioral Interventions and Supports)
- Standards and Instructional Support

References

- Caspe, M., Lopez, M.E., Chu, A., & Weiss, H.B. (2011). *Teaching the teachers: Preparing educators to engage families for student achievement*. Cambridge, MA: Harvard Family Research Project and Alexandria, VA: National PTA. Retrieved from <http://www.hfrp.org/publications-resources/publications-series/pta-and-harvard-family-research-project-issue-briefs-family-engagement-policy-and-practice/teaching-the-teachers-preparing-educators-to-engage-families-for-student-achievement>.
- Epstein, J. L., & Sanders, M. G. (2006). Prospects for change: Preparing educators for school, family, community partnerships. *Peabody Journal of Education*, 81,1-120.

Cited Colorado Laws and/or Rules

- House Bill 12-1238. Colorado Reading to Ensure Academic Development Act or Colorado READ Act. Retrieved from <http://ssl.csg.org/dockets/2014cycle/34Abills/2034a14coearlyliteracy.pdf>
- House Bill 13-1021. Concerning Measures to Ensure that Students Comply with Compulsory School Attendance Requirements. Retrieved from <http://www.colorado.gov/ccjdir/Resources/Resources/Leg/2013/HB13-1021.pdf>
- Rules for the Administration of the Exceptional Children's Educational Act. Retrieved from <http://www.cde.state.co.us/sites/default/files/documents/spedlaw/download/ecearules-march2013.pdf>
- Rules for the Administration of a Statewide System to Evaluate the Effectiveness of Licensed Personnel Employed by School Districts and Boards of Cooperative Services Retrieved from <http://www.cde.state.co.us/sites/default/files/documents/educatoreffectiveness/downloads/rulemaking/1ccr301-87evaluationoflicensedpersonnel11.9.11.pdf>
- Rules Governing Standards for Individual Career and Academic Planning. Retrieved from <http://www.cde.state.co.us/sites/default/files/ICAP%20Rules%202013.pdf>
- Senate Bill 09-090. Measures to Increase Parent Involvement in Public Education. Retrieved from [http://www.leg.state.co.us/clics/clics2009a/csl.nsf/billcontainers/AB811B08F9A2ED0987257537001D221E/\\$FILE/090_enr.pdf](http://www.leg.state.co.us/clics/clics2009a/csl.nsf/billcontainers/AB811B08F9A2ED0987257537001D221E/$FILE/090_enr.pdf).
- Senate Bill 13-193. Increasing Parent Engagement in Public Schools. Retrieved from <http://legiscan.com/CO/text/SB193/id/845136/Colorado-2013-SB193-Enrolled.pdf>



Department of
Higher Education

1560 Broadway, Suite 1600
Denver, CO 80202

John Hickenlooper
Governor

Lieutenant Governor Joseph A. Garcia
Executive Director

*Note, the memo below includes the contents from a January 8th email sent to the Commissioners regarding the FY 2017 JBC Hearings and is being provided as budget update .

Good Afternoon Commissioners,

As the three-day stretch of Higher Education JBC Hearings ended yesterday, I would like to thank Chairman Moses for his participation and support in the CCHE and Department's Hearing on Tuesday, January 5.

To briefly recap, JBC members responded positively to our presentation, as we engaged in a lively Q & A with JBC members. JBC members raised good questions and in many ways I think their questions and concerns were very similar to those raised by Commissioners as you debated, discussed and approved the CCHE recommended General Fund allocations and tuition policy (per HB 14-1319). The overarching concerns raised by JBC members seem to question whether the changes made to the model are the *right* changes and whether the CCHE recommended tuition policy is the *best way* to proceed. In terms of timeline, this is the first, major legislative step. Many more discussions will occur over the next several months. DHE staff will provide an update at each of our CCHE meetings throughout the Session. Typically, we know in March/April a final decision on the level of the General Fund appropriations to Higher Education, the Funding Allocation Formula and Tuition Policy.

The audio recording of the CDHE/CCHE hearing on January 5 is available at the JBC page here: <http://www.leg.state.co.us/clics/cslFrontPages.nsf/Audio?OpenPage>
The Hearing Agenda Documents (Responses to questions raised at Briefing) are available here: http://www.tornado.state.co.us/gov_dir/leg_dir/jbc/2015-16/hedhrg.htm

Institutional leaders also participated in JBC hearings over the course of the three days, and you can access those hearings and materials at this same site.

As always, we are happy to answer any questions commissioners may have regarding the JBC hearing process or any others.

Thank you for your continued service and we look forward to working with you in this new year.

Joe



STATE OF COLORADO

REPRESENTATIVES

Millie Hamner, Chair
Dave Young
Bob Rankin

SENATORS

Kent Lambert, Vice-Chair
Kevin Grantham
Pat Steadman



STAFF DIRECTOR

John Ziegler

JOINT BUDGET COMMITTEE

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LEGISLATIVE SERVICES BUILDING
Denver, CO 80203
Telephone 303-866-2061
www.tornado.state.co.us/gov_dir/leg_dir/jbc/jbchome.htm

DRAFT

January 12, 2016

Executive Director
Colorado Commission on Higher Education
1560 Broadway, Suite 1600
Denver, CO 80202

Dear Lieutenant Governor Garcia:

As you are aware, Colorado Mesa University (CMU) and Metropolitan State University of Denver (MSU) have lodged objections to the proposed higher education funding model “2.0” submitted for FY 2016-17. During its January 6, 2016 budget hearing, CMU also expressed concerns about the Department’s proposed approach to tuition policy. The Joint Budget Committee is interested in further feedback from the Department about these issues.

Funding Allocation Model

We would prefer to receive a consensus funding allocation proposal, and we encourage you to continue to work toward that goal. Whether or not there is consensus, the JBC will consider if we wish to change the model components or settings for FY 2016-17 as part of our higher education figure setting process. To ensure we fully understand the advantages and disadvantages of making such changes, we would appreciate further input from you on the following points. Specifically, *please explain the rationale for the funding model expert team and the Colorado Commission on Higher Education (CCH) decisions on the following points.*

Weighted Credit Hours v. Mission Differentiation Factor: Model version 2.0 removes the role and mission “weighted credit hour” factor and substitutes a new “mission differentiation” factor. This ties most role and mission funding to historic funding patterns, rather than actual services provided by an institution in any given year. CMU and MSU object that this change “locks in roughly 87 percent of the monies allocated to the role and mission category” and does not allow over \$120 million of the total funding allocated to higher education to change based on growth in student populations and courses offered.

Other Role and Mission Components, such as number of campuses: Neither model version 2.0 nor 1.0 built in all of the factors outlined as components of role and mission in H.B. 14-1319. For example, no differential funding is provided related to numbers of campuses. CMU and MSU argue that this should be a factor in role and mission funding. Should numbers of campuses be included? What about other items listed under role and mission funding in the bill?

Prior Year versus Current Year Enrollment Data: Model version 2.0 uses prior year actual enrollment data to determine amounts that will be awarded for College Opportunity Fund (COF) stipends in the model, rather than using current year estimates. For example, FY 2014-15 data is used in the proposed funding allocation for FY 2016-17. CMU and MSU assert that it would be more appropriate to use current year (FY 2015-16) estimates.

Emphasis on Low-Income/Pell: Model version 2.0 provides a 10.0 percent add-on to the COF stipend for Pell-eligible students enrolled in an institution. It also provides a 60.0 percent add-on for graduations/transfers/retention of Pell-eligible students. CMU and MSU argue that the add-on for Pell-eligible student enrollment should be higher.

Tuition Authority

During the hearing, CMU President Foster indicated that the Department's proposed tuition policy approach reflects a new role for CCHE, *i.e.*, as he understands the proposal, CCHE will establish statewide tuition policy—a role that was previously reserved to the governing boards or the General Assembly. Our understanding is that CCHE wishes to submit an annual *proposal* on tuition policy that will be subject to further legislative action. Do you believe your approach reflects a new role for CCHE when compared to CCHE's role prior to S.B. 10-003? What is the same? Different?

Thank you for your assistance. We look forward to your response.

Sincerely,

Representative Millie Hamner
Chair



COLORADO

Department of
Higher Education

1560 Broadway, Suite 1600
Denver, CO 80202

John Hickenlooper
Governor

Lieutenant Governor Joseph A. Garcia
Executive Director

MEMORANDUM

TO: Rep. Millie Hamner, Chair, Joint Budget Committee

FROM: Lt. Governor Joseph A. Garcia, Executive Director, Department of Higher Education.

DATE: January 22, 2016

SUBJECT: Response to Letter dated January 12, 2016

Thank you for your letter dated January 12, 2016 seeking additional information on the higher education funding allocation formula and the Governor's proposed tuition policy.

Funding Allocation Model

The Colorado Commission on Higher Education (CCHÉ) and the Department of Higher Education (CDHE) also **would have preferred to achieve a consensus of the 10 governing boards**, and sought to accomplish that. However, unfortunately, despite the best efforts of all involved parties that proved to be impossible. That said, **the support of 8 out of 10 governing boards is significant**, especially given that they are facing a \$20 million cut in the budget.

Extensive work – 11 representatives, 35 hours over 14 meetings with over 170 model scenarios tested – was undertaken by the Funding Allocation Model Review Team (FAMRT), which comprised ALL 10 governing boards and a representative from OSPB. **Eight governing boards agreed to move forward with Version 2.0.**

The resulting formula is the product of these meetings discussions, and concessions made by the individual team members along the way. The FAMRT achieved a **carefully developed compromise**. The formula **implements the provisions of HB 14-1319 while balancing the stated goals in the legislation** - to distribute funding among governing boards based on the metrics set forth and **ensure the educational quality and financial sustainability of all the state's institutions** of higher education.

Tuition Policy

As for the proposed tuition policy, current law has specifically charged the Colorado Commission on Higher Education (CCHÉ) with the role of establishing tuition policies:

- **SB 10-003; C.R.S. § 23-1-108(12)(b):** CCHÉ shall *“establish tuition policies based on institutional role and mission, and the governing boards shall set tuition consistent with said policies”* beginning in FY 2016-17
- **C.R.S. § 23-5-129(6)(c):** *“While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education”...such institution “shall report to the Colorado commission on higher education its plans for any tuition or other proposed increases for the following fiscal year, using approved forms, for the commission to review and make recommendations to the general assembly during the annual budget process.”*

- **HB 14-1319; C.R.S. § 23-18-306(5):** *“Commission shall submit to the Joint Budget Committee and to the Education Committees”...“tuition policies that ensure both accessible and affordable higher education for Colorado residents.”...“Must also reflect the level of state funding”...“the need of each institution to enhance the quality of education programs and offerings and strengthen the financial position of the institution.”*

CCHE is not requesting additional statutory authority, nor is it intending to limit in any way the General Assembly’s role. Rather, it seeks only to comply with existing statute. CCHE’s tuition policy is largely a continuation of previous state tuition policy practices. However, the primary difference is that, absent legislative change or action by the General Assembly to codify the limit in some manner, any tuition increase limitation for the coming fiscal year is set by CCHE and not in statute. Any potential tuition increase limitation would be based on the Cost Sharing Matrix, which utilizes minimum increased costs and state funding levels to calculate possible tuition increase limits. CCHE would grant full flexibility to the governing boards to set tuition based on their individual circumstances within guidelines of CCHE tuition policy. Beginning with the FY 2017-18 budget development process, the Cost Sharing Matrix will be developed jointly with the Governing Boards.

Over the past five years, the Commission has worked to **align the major elements of higher education financing policy** – appropriations, tuition, and financial aid — **in order to increase postsecondary attainment; promote college affordability; and ensure student access and success.** Too often, these issues have been dealt with individually rather than reflecting the interrelated nature of appropriations, tuition, and financial aid. Through the work of CCHE over the last few years, these three policies have been reviewed and updated to provide greater affordability to students, incent completion, while also providing operational stability and fiscal flexibility for our state’s public postsecondary institutions. The work of the Commission, the Department and the governing boards represents a significant increase in accountability and transparency, as well as additional information and analysis of higher education costs.

For more details on CCHE’s recommended tuition policy, including changes to process and statute, please see the attachment, “Tuition Policy Crosswalk”.

ADDITIONAL INFORMATION

The following pages provide additional information on specific issues outlined in the Committee’s letter.

Funding Allocation Model

The first version of the funding allocation formula was developed in only 7 months. It was clearly understood and agreed upon by the Department, governing boards, and CCHE that additional refinements would be needed following the initial implementation in FY 2015-16 to ensure the sustainability and predictability of the model going forward. The Joint Budget Committee (JBC) provided nine Requests for Information (RFI) related specifically to the funding allocation model and focused primarily on the complexity and lack of intuitiveness of Version 1.0 of the model. The issues raised in the RFIs were also conveyed by the JBC members to the Department in an update to the Committee on June 19, 2015.

The **overarching goals of the review process and subsequent changes** to the allocation formula were to **provide a consistent and predictable model** that implements the legislation and **provides incentives to institutions to meet the state's policy objectives** as outlined in the CCHE's Master Plan. After analysis and lengthy conversations and debates within the FAMRT, Department staff came to the conclusion that (1) a more direct approach to the Role & Mission portion of the model and (2) modifications to the Outcomes/Performance portion were required in order to create a simpler, less volatile model.

Weighted Credit Hours vs. Mission Differentiation

After Version 1.0 of the model was completed and implemented, **the Colorado Department of Higher Education (CDHE) was asked by the JBC and CCHE to analyze the stability of the model.** CDHE conducted analyses based on several different scenarios – 5 percent funding increase, flat funding, and 5 percent funding decrease - to understand how the funding allocation formula would behave in various budgetary conditions.

It became clear through this analysis the initial version of the model created too much volatility given the majority of the formula was based on enrollment-driven factors and metrics. CDHE was especially concerned about the volatility of the model when reviewing funding cut scenarios, as we walked the fine line of keeping all institutions viable while continuing to use an outcomes-based funding allocation model.

While the weighted credit hour option, based mainly on enrollment, has worked well in other states with an outcomes-based funding allocation model, Colorado's higher education funding structure is unique among the states in that it provides funding for enrollment through the **Colorado Opportunity Fund (COF) stipend, which is solely enrollment-driven** and is paid to the institutions on behalf of students. **H.B. 14-1319 changed statute to require the enrollment based COF stipend make up at least 52.5 percent** of the total operating funding for public postsecondary institutions.

If an institution's state funding is based heavily on enrollment, unnecessary volatility in the allocation occurs, thus placing fiscal pressure on the institutions.

In order to mitigate the fiscal pressure and underlying volatility, CDHE captures the role and mission of each governing board (i.e., size, location, selectivity, cost of programs) by eliminating the weighted student credit hours and the "tuition stability" metric and replacing these with "Mission Differentiation", which **captures the unique role and mission of each institution.** The Mission Differentiation metric is based on the outputs from the FY 2015-16 funding allocation model as well as institution type and size. In one metric, **Mission Differentiation is able to offset the costs in providing the programs outlined in statute.**

Other Role and Mission Components, Such as Number of Campuses

Both versions of the funding allocation formula are in compliance with statute. As previously stated, the Mission Differentiation metric offsets the costs for providing the programs outlined in H.B. 14-1319.

The Mission Differentiation metric is calculated on an institutional basis and rolled up to the governing board level. It is important to note that while the number of institutions for which a governing board is responsible is defined in statute, the number of campuses a governing board has is not. Further, there is no clear definition of a “campus” in statute. The size, program offerings, and enrollment levels of campuses vary tremendously by governing board and even within institutions. Using institution level data rather than campus level data mitigates the possibility of institutions gaming the system by creating additional campuses in hopes of receiving additional state funding.

Prior Year versus Current Year Enrollment Data

The Department does not and has not used current year enrollments for *meaningful* budgeting purposes.

Prior to the implementation of HB 14-1319, current year COF enrollments were reported, but no overall increase/decrease occurred to a governing board’s total General Fund allocation. Under the prior allocation method, if current year COF Stipend enrollment increased from the forecasted amount, the amount for Fee for Service contracts decreased to offset that change. If COF stipend enrollment decreased from the forecast, then amount for Fee for Service contracts increased accordingly. There was no overall net change in a governing board’s allocation based on enrollment. Under the requirements of HB 14-1319, enrollment changes are now captured and impact funding levels for the first time since the passage of COF in FY 2005-06.

The FY 2016-17 funding model uses FY 2014-2015 actual enrollments for the COF component of the formula for four primary reasons:

- 1) It was the **preference of the Joint Budget Committee staff** to use actual enrollments, rather than estimates of current year enrollment;
- 2) **A clear majority of the governing boards were in favor** of using actual 2014-2015 enrollments;
- 3) **All other data in the model utilizes FY 2014-15 actuals**; and
- 4) It is **impractical to utilize estimates** of current year enrollments in the funding model, because the funding formula must be finalized by November 1 of each year for the Governor’s budget request and institutions do not submit Fall reconciled actual COF enrollments until January 29th of the following year.

As mentioned previously, the **Department engaged in an inclusive and collaborative process** to discuss the development and implementation of any needed modifications. **Extensive work – 35 hours over 14 meetings and over 170 model scenarios tested** – was undertaken by the Funding Allocation Model Review Team (FAMRT), which comprised of representatives from ALL 10 governing boards and one from OSPB. **Eight governing boards agreed to move forward with Version 2.0.**

Emphasis on Low-Income/Pell Students

Each institution has incentives to argue for different weights/values for any of the metrics in the model, as each metric provides varied benefits to each institution. The model approved by the FAMRT and CCHE represents the best efforts to implement a simple, sustainable and intuitive formula while also providing incentives to institutions to meet State policy objectives as outlined in the CCHE’s Master Plan.

Statute **requires** the funding model to include a Pell-eligible metric within the Role & Mission portion of the model which equals at least 10% of the College Opportunity Fund (COF) stipend per credit hour taken by a Pell eligible student.

In addition, statute **allows** a metric within the Performance portion of the model to provide an

additional bonus for each completion and transfer of a Pell-eligible student. **The funding allocation formula complies with statute and provides a 10% bump on the Role and Mission side and a 60% bump on the Performance side.**

Other states with outcomes based funding models provide a Pell bonus on completions only. In fact, Colorado has the highest Pell bonus for completions in the nation – a 60% premium – while most other states with outcomes based funding models provide only a 40% bonus.

The biggest factor that impacts funding for low-income/Pell students is the overall amount of funding for higher education. The proposed reduction of \$20 million decreases the amount of state funding available for all students and will likely result in increased tuition rates.

Tuition Policy

Pursuant to statute, **CCHE developed a tuition policy** which will **ensure both accessible and affordable higher education** for Colorado residents; **reflect the level of state operating funding**; reflect the **need of each institution to enhance** the quality of education programs and offerings; and strengthen the financial position of the institution.

- **SB 10-003; C.R.S. § 23-1-108(12)(b):** CCHE shall *“establish tuition policies based on institutional role and mission, and the governing boards shall set tuition consistent with said policies”* beginning in FY 2016-17
- **C.R.S. § 23-5-129(6)(c):** *“While operating pursuant to a performance contract negotiated pursuant to this section, the governing board of a state institution of higher education”...such institution “shall report to the Colorado commission on higher education its plans for any tuition or other proposed increases for the following fiscal year, using approved forms, for the commission to review and make recommendations to the general assembly during the annual budget process.”*
- **HB 14-1319; C.R.S. § 23-18-306(5):** *“Commission shall submit to the Joint Budget Committee and to the Education Committees”...“tuition policies that ensure both accessible and affordable higher education for Colorado residents.”...“Must also reflect the level of state funding”...“the need of each institution to enhance the quality of education programs and offerings and strengthen the financial position of the institution.”*

In developing the policy, roles and responsibilities were clearly identified:

- The **General Assembly establishes policy and priorities through statute** to be implemented by CCHE, CDHE and the Governing Boards.
- CCHE has a responsibility **to exercise oversight** and to **ensure that educational quality and student access** are maintained.
- **Governing boards** have the **responsibility and authority for the financial management** of their institutions. A major component of sound financial management is the setting of tuition. Since institutions have unique roles and missions and differing student needs, governing boards are best equipped to set tuition and hold a fiduciary duty to their respective institutions.

In statute, **the authority to set tuition rates continues to remain a power of the governing boards**, which have a responsibility and authority for the financial management of their institutions. This would not change with CCHE’s proposed tuition policy.

While there may have been an expectation for the proposed tuition policy to provide a clear cap or restriction on tuition levels annually, the reality is **state funding for higher education in Colorado is**

volatile and unpredictable. Tuition rates are directly linked to the level of investment or disinvestment the state makes.

Historically, the level of higher education investment has depended on statewide budget balancing. Decisions about the level of state funding for public postsecondary institutions did not have the benefit of a full understanding on the impact state funding for higher education has on the system as a whole and the affordability of a postsecondary education for Colorado residents. Through the Cost Sharing matrix included in the Governor's annual budget package, the Department and CCHE **seek to ensure policymakers have a clear understanding of the implications state budget** decisions around general fund have on undergraduate, resident tuition rates.

The General Assembly is the ultimate decision maker on the level of state funding invested in public postsecondary institutions. **The Department envisions the level of state investment determined by the General Assembly will trigger the corresponding potential tuition limit for that particular fiscal year, based on the Cost Sharing Matrix.** The General Assembly would approve CCHE and the Governor's recommended tuition cap by taking no action (i.e., not running a tuition cap bill).

As always, should the General Assembly choose to, it could convey its annual tuition rate limit expectation – *as expressed by the Cost Sharing Matrix, or a different limit determined by the General Assembly* - in a footnote to the informational tuition line item in the Long Bill, or through the use of other legislative tools, such as a JBC letter or statute. **CDHE's intent with the Cost Sharing Matrix is to provide an analytical tool for the legislature to inform the General Assembly on the intrinsic link between State funding to institutions and tuition rates.**

As stated earlier, statute already requires CCHE to include tuition recommendations for resident undergraduate students in its annual budget request. CCHE's annual tuition limit recommendation will include a clear picture of higher education finance through the Cost Sharing Matrix.

Tuition Included in the Long Bill for Informational Purposes Only

While **no statutory change is needed to implement the CCHE adopted tuition policy and process**, CDHE and CCHE do see a critical need to amend statute in order to continue including tuition revenue in the Long Bill for information purposes only.

The appropriation of tuition is a bureaucratic process making predictions 18 months in advance for enrollment levels and the mix of students (resident, non-resident, undergraduate and graduate), as well as the tuition to be charged in order to calculate an estimated total tuition revenue amount resulting in a spending authority limit. Actual tuition revenue is then trued-up through the supplemental and 1331 process, adding workload to the JBC, institutions, and the Department. The Department sees no additional value or more accurate tuition revenue estimates with appropriating tuition. Rather, the spending authority limit acts to either limit access, by limiting the number of students an institution can enroll, or hamper quality.

Implementation of the CCHE recommended tuition policy would **not make significant changes to the budget process.** Rather, it will maintain the current process of including tuition in the Long Bill for informational purposes.

Attachment – Tuition Policy Crosswalk

COLORADO COMMISSION ON HIGHER EDUCATION BY-LAWS

September 10, 1965
(Amended January 14, 1966)
(Amended February 25, 1972)
(Amended June 1, 1978)
(Amended July 1, 1993)
(Amended October 7, 2004)
(Amended May 6, 2011)

Section 1. Organization and Meetings

- 1.1 **Organization:** The Commission shall consist of eleven members appointed by the Governor with the consent of the Senate. The members of the Commission are selected on the basis of their knowledge of and interest in higher education and shall serve for four-year terms. No member of the Commission may serve more than two consecutive full four-year terms.
- 1.2 **Officers:** The officers of the Commission shall be the Chair, Vice Chair, and Secretary, as may be designated by the Commission. The Secretary shall be the Executive Director of the Department.
- 1.3 **Election and Terms of Officers:** All officers shall be elected at the May meeting of the Commission to serve a term of one year, except the Secretary whose term shall be coterminous with his or her term as Executive Director.
- 1.4 **Regular Meetings of the Commission:** The Commission shall adopt at the October Commission meeting a schedule of regular meetings of the Commission for the following year.
- 1.5 **Notice of Meetings:** Any meetings at which the adoption of any proposed policy, position, resolution, rule, regulation, or formal action occurs or at which a majority or quorum of the body is in attendance, or is expected to be in attendance, shall be held only after full and timely notice to the public. In addition to any other means selected by the Commission for giving notice to the public, the Commission shall post notice of its



meetings at the office of the Colorado Department of Higher Education located at 1560 Broadway, Suite 1600, Denver, Colorado 80202. Notices shall be posted no less than two days prior to the holding of the meeting. The posting shall include specific agenda information where possible.

- 1.6 Special Meetings: Special meetings of the Commission may be held at the call of the Chair on two days' notice, or at the request of five members of the Commission who may petition the Chair to call such a meeting. Notice of special meetings shall be made electronically or by telephone and posted at the office of the Colorado Department of Higher Education no less than two days prior to the meeting date.
- 1.7 Conduct of Meetings: The Chair shall preside at all meetings at which he or she is present. In the Chair's absence, the Vice Chair shall preside, and in the event both are absent, those present shall elect a presiding officer. All meetings shall be conducted in accordance with all State laws and regulations. The parliamentary rules contained in Colorado Commission on Higher Education (CCHE) Robert's Rules of Order, latest revision, shall govern in all cases to which they are applicable, except as modified herein.
- 1.8 Attendance at Meetings: The term of any member of the Commission who misses more than two consecutive regular Commission meetings without good cause shall be terminated and his successor appointed in the manner provided for appointments under C.R.S. §23-1-102.
- 1.9 Preparation of Agenda: Agenda shall be prepared by the Executive Director of the Department with the approval of the Chair. At a regular or special meeting, an item of business may be considered for addition to the agenda by a majority vote of the Commissioners present.
- 1.10 Minutes of the Commission: The Secretary shall maintain an accurate set of minutes of Commission meetings, which shall include a complete record of all actions taken by the Commission. Such minutes shall be annually bound and constitute a permanent record. After the minutes of each meeting are completed, they shall be reviewed by the Executive Director and after approval, posted on the CCHE website and made available to the public for inspection upon written request.

Section 2. Duties and Responsibilities of Officers

- 2.1 Chair of the Commission: The Chair of the Commission shall preside at meetings of the Commission at which he or she is in attendance. The Chair shall approve all agendas for regular and special meetings of the Commission as prepared by the Executive Director.
- 2.2 The Vice Chair: The Vice Chair shall perform all duties of the Chair in the Chair's absence.
- 2.3 The Secretary/Executive Director: In addition to performing those duties established by law, the Executive Director of the Department shall: (a) serve as the Secretary of the Commission, (b) meet with the officers and staff of institutions of higher learning as the needs dictate for a mutual discussion of the matters affecting the



responsibilities of the Commission, (c) meet with appropriate state and federal groups and/or officials on matters pertaining to the Commission, (d) meet with appropriate committees of the general assembly on matters pertaining to the Commission's responsibilities, (e) appoint such professional staff as in his or her judgment are required and are within the budget approved by the Commission and for which funds are available, (f) prepare an annual operating budget and work program for approval by the Commission, (g) implement the policies of the Commission and communicate those policies to interested parties as appropriate.

Section 3. The Advisory Committee

- 3.1 There is hereby established an advisory committee as provided by law (C.R.S. 23-1-103).
- 3.2 **Advisory Committee Members:** The advisory committee shall consist of not less than thirteen members, to be designated as follows: (a) Six members shall be appointed from the general assembly, including three senators, two of whom shall be from the majority party, appointed by the President of the Senate, and three representatives, two of whom shall be from the majority party, appointed by the Speaker of the House of Representatives. Said six members shall be appointed for terms of two years or for the same terms to which they were elected to the general assembly, whichever is the lesser. Successors shall be appointed in the same manner as the original members; (b) One member shall be selected and designated by the Commission to represent the faculty in the state and one member shall be selected and designated by the Commission to represent the students in the state; (c) Not more than five additional members representing educational or other groups may be selected and designated by the Commission to serve on the advisory committee.
- 3.3 **Notice and Agendas:** All members of the advisory committee shall receive agendas and background material and be notified of all public meetings of the Commission and shall be invited to attend for the purpose of suggesting solutions for the problems and needs of higher education and maintaining liaison with the general assembly.
- 3.4 **Meetings of the Advisory Committee:** The advisory committee shall meet with the Commission separate from a regular Commission meeting and shall do so as often as necessary to provide assistance to the Commission.
- 3.5 **Recommendations of the Advisory Committee:** The members of the advisory committee shall have full opportunity to present their views on any matter before the Commission.

Section 4. Change in Bylaws

- 4.1 Bylaws shall be subject to amendment at any meeting of the Commission provided any such proposed change is listed on the agenda in accordance with the procedure outlined herein. Bylaw changes must be approved by a majority of the Commission.





CEO Information

INSTITUTION	CEO	LOCATION
Adams State College	Dr. Beverlee McClure, President	Alamosa
Aims Community College	Dr. Leah Bornstein, President	Greeley
Community College System	Dr. Nancy McCallin, President	Denver
1) Arapahoe CC	Dr. Diana Doyle, President	Littleton
2) Northwestern CC	Russell George, President	Rangely
3) CC of Aurora	Dr. Betsy Oudenhoven, President	Aurora
4) CC of Denver	Dr. Everette Freeman, President	Denver
5) Front Range CC	Andy Dorsey, President	Westminster
6) Lamar CC	John Marrin, President	Lamar
7) Morgan CC	Dr. Kerry Hart, President	Ft. Morgan
8) Northeastern JC	Jay Lee, President	Sterling
9) Otero JC	Jim Rizzuto, President	La Junta
10) Pikes Peak CC	Dr. Lance Bolton, President	Colorado Springs
11) Pueblo CC	Dr. Patty Erjavec, President	Pueblo
12) Red Rocks CC	Dr. Michele Haney, President	Lakewood
13) Trinidad State JC	Dr. Carmen Simone, President	Trinidad
Colorado Mesa University	Tim Foster, President	Grand Junction
Colorado Mountain College	Dr. Carrie Besnette Hauser, President	Glenwood Springs
Colorado School of Mines	Paul Johnson, President	Golden



Colorado State System

- 1) CSU-Ft Collins
- 2) CSU-Pueblo
- 3) CSU-Global Campus

Dr. Tony Frank, Chancellor
Dr. Tony Frank, President
Dr. Lesley DiMare, President
Dr. Becky Takeda-Tinker,
President

Denver
Fort Collins
Pueblo
Greenwood Village

CU System

- 1) CU – Boulder
- 2) UCCS

- 3) UCD

- 4) UC-Anschutz

Bruce Benson, President
Dr. Philip DiStefano, Chancellor
Dr. Pam Shockley-Zalabak,
Chancellor
Dr. Jerry Wartgow, Interim
Chancellor
Don Elliman, Chancellor

Denver
Boulder
Colorado Springs

Denver

Aurora, Denver

Ft. Lewis College

Dr. Dene Kay Thomas, President

Durango

Metropolitan State University of Denver

Dr. Steve Jordan, President

Denver

University of Northern Colorado

Kay Norton, President

Greeley

Western State Colorado University

Dr. Gregory Salsbury, President

Gunnison

11.23.15





COLORADO

**Colorado Commission on
Higher Education**

Department of Higher Education

Chair, Monte Moses
Vice Chair, Luis Colon
Maia Babbs
John Anderson
Renny Fagan
Jeanette Garcia
Richard Kaufman
Vanecia Kerr
Tom McGimpsey
Regina Rodriguez
Paula Sandoval
BJ Scott

Current CCHE Commissioners and Advisory Committee Members

Chairman Monte Moses - (R-6th Dist.) term ends June 2019
Vice Chair Luis Colon - (R-4th Dist.) term ends June 2017
Commissioner John Anderson - (R-3rd Dist.) term ends June 2015
Commissioner Maia Babbs - (U-7th Dist.) term ends June 2019
Commissioner Renny Fagan - (D-7th Dist.) term ends June 2019
Commissioner Jeanette Garcia - (D-3rd Dist.) term ends June 2015
Commissioner Richard Kaufman - (D-6th Dist.) term ends June 2016
Commissioner Vanecia Kerr – (D- 6th Dist.) term ends June 2018
Commissioner Tom McGimpsey - (R-2nd Dist.) term ends June 2017
Commissioner Paula Sandoval (D-1st Dist.) term ends June 2018
Commissioner B J Scott - (R-5th Dist.) term ends June 2016

Sen. Nancy Todd
Sen. Owen Hill
Sen. Chris Holbert
Rep. Jeni Arndt
Rep. Mike Foote
Rep. Kevin Priola
Mr. Wayne Artis, Faculty Representative
Mr. Mark Cavanaugh, IHEC Representative
Mr. Steve Kreidler, CFO Representative
Dr. Barbara Morris, Academic Council Representative
Ms. Gretchen Morgan, K-12 Representative
Ms. Melissa Wagner, Parent Representative
Mr. Tyrel Jacobsen, Student Representative

11.24.15



Higher Education Glossary

529 Savings Plan - 529 plans are more than just savings accounts. These state-sponsored college savings plans were established by the federal government in Section 529 of the Internal Revenue Code to encourage families to save more for college. They offer unique state and federal tax benefits you can't get from other ways to save, making them one of the best ways to save for college.

Accuplacer - A suite of computer-adaptive placement tests that are used as assessment tools at institutions to evaluate the level of course work for a student. Students measured as needing additional course work will be assigned to remediation.

Admission Standard - includes both Freshman and Transfer standard. The freshman standard applies to all in-state and out-of-state new freshmen applicants and to transfer applicants with 12 or fewer college credit hours, except freshmen and transfer applicants who meet one of the admissions standards index exemptions. The transfer standard applies to all degree-seeking undergraduate transfer applicants with more than 12 college credit hours who do not meet one of the exemptions

Admission Window - Defined in Admission policy, "The maximum allowable percentage of admitted students who are not required to meet the CCHE admission standards within a specific fiscal year is referred to as the admissions window. Separate windows exist for the freshmen and transfer standards. The allowable percentage is determined by the Commission." The percentages vary by institution.

CAP4K - SB08-212, Preschool to Postsecondary Education Alignment Act; Colorado Achievement Plan for Kids.

CHEA - Council for Higher Education Accreditation. As described on their website, CHEA is "A national advocate and institutional voice for self-regulation of academic quality through accreditation, CHEA is an association of 3,000 degree-granting colleges and universities and recognizes 60 institutional and programmatic accrediting organizations."

CIP - Classification of Instructional Program; The purpose of which is to provide a taxonomic scheme that will support the accurate tracking, assessment, and reporting of fields of study and program completions activity. (Relevant in Role & Mission)

CLEP - College Level Examination Program; Earn college credit for passing a subject specific examination.

COA - Cost of Attendance; in the context of financial aid, it is an estimate of what it will reasonably cost the student to attend a given institution for a given period of time.

Concurrent Enrollment – A high school student enrolled for one or more classes at a college or university in addition to high school courses.

Dually Enrolled - A student enrolled at two institutions at the same time. This may affect enrollment reports when both institutions count that student as enrolled.

EFC - Expected Family Contribution; in the context of financial aid, it is calculated by a federally-approved formula that accounts for income, assets, number of family members attending college, and other information.

FAFSA - Free Application for Federal Student Aid. This is a free service provided by the Federal government under the Department of Education and students are not charged to complete/file the FAFSA.

FAP – Financial Aid Plan (HESP specific)

FERPA - Family Educational Rights and Privacy Act, view federal website. The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education.

FFS – Fee-For-Service Contracts; A portion of the College Opportunity Fund program in addition to COF stipends, this contract provides funding to certain higher education institutions to supplement high cost programs and purchase additional services (such as graduate programs).

Floor - In reference to the admission window, the floor is the minimum requirements for admission without requiring an exception of some kind. This usually coincides with the Index score.

FTE - Full-time Equivalent; a way to measure a student's academic enrollment activity at an educational institution. An FTE of 1.0 means that the student is equivalent to full-time enrollment, or 30 credit hours per academic year for an undergraduate student.

GEARUP - Gaining Early Awareness and Readiness for Undergraduate Programs; A Federal discretionary grant program designed to increase the number of low-income students who are prepared to enter and succeed in postsecondary education.

Guaranteed Transfer, GT Pathways - gtPATHWAYS applies to all Colorado public institutions of higher education, and there are more than 900 lower-division general education courses in 20 subject areas approved for guaranteed transfer. Courses are approved at least twice per academic and calendar year and apply the next semester immediately following their approval.

HB 1023 - In most cases, refers to HB 06S-1023, which declares "It is the public policy of the state of Colorado that all persons eighteen years of age or older shall provide proof that they are lawfully present in the United States prior to receipt of certain public benefits."

HB 1024 - In most cases, refers to HB 06-1024, which declares "On or before September 1, 2006, each governing board of a state institution of higher education shall submit to the Colorado commission on higher education and the education committees of the senate and the house of representatives, or any successor committees, a report regarding underserved students".

HB 1057 - In most cases, refers to HB 05-1057, which declares "a college preparation program operating within the school district that the college preparation program shall provide to the Colorado commission on higher education, on or before December 31 of each school year, a report specifying each student, by unique identifying number."

HEAR - Higher Education Admission Requirements, 2008-2010.

Index, Index Score - This index score is a quantitative evaluation that is part of a larger student application evaluation. The score is generated from academic achievement (GPA or High School Rank) and college placement tests (ACT or SAT). You can calculate your index score online. Index varies by institution depending on that institutions selection criteria.

IPEDS - Integrated Postsecondary Education Data System; Run by NCES, this system collects statistical data and information on postsecondary institutions. The Colorado Department of Higher Education submits aggregated data on public institutions to IPEDS.

Need - In the context of student financial aid, Need is calculated by the difference between the COA (Cost of Attendance) and the EFC (Expected Family Contribution)

NCATE - National Council for Accreditation of Teacher Education; NCATE is the profession's mechanism to help establish high quality teacher preparation.

NCLB - No Child Left Behind; The No Child Left Behind Act of 2001 (NCLB) reauthorized the Elementary and Secondary Education Act (ESEA) -- the main federal law affecting education from kindergarten through high school.

PSEO - Post Secondary Enrollment Option; A program that offers concurrent enrollment in college courses while in high school.

PWR - Postsecondary and Workforce Readiness; Definition was created during the SB08-212 CAP4K meetings.

QIS - Quality Indicator System; Implemented in HB96-1219, the specific quality indicators involved in QIS are similar to those used in the variety of quality indicator systems found in other states: graduation rates, freshmen retention and persistence rates, passing scores or rates on tests and licensure examinations, undergraduate class size, faculty teaching workload rates, and institutional support/administrative expenditures.

REP - Regional Education Provider; Colorado Statute authorizes Adams State College, Fort Lewis College, Mesa State College and Western State College to function as regional

educational providers and “have as their primary goal the assessment of regional educational needs...” Regional education providers focus their attention on a certain geographical area.

SB 3 – In most cases refers to SB10-003, the Higher Education Flexibility Bill.

SB 212 - In most cases, refers to HB 08-212, the CAP4K legislation.

SBE - State Board of Education; As described on their website, "Members of the Colorado State Board of Education are charged by the Colorado Constitution with the general supervision of the public schools. They have numerous powers and duties specified in state law. Individuals are elected on a partisan basis to serve six-year terms without pay."

SFSF – State Fiscal Stabilization Fund; A component of the ARRA legislation and funding.

SURDS - Student Unit Record Data System

WICHE - Western Interstate Commission for Higher Education; A regional research and policy organization that assists students, policymakers, educators, and institutional, business and community leaders. WICHE states include: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

WUE - Western Undergraduate Exchange Program, managed by WICHE