

Colorado Education Alignment Council Recommendations



Colorado Education Alignment Council

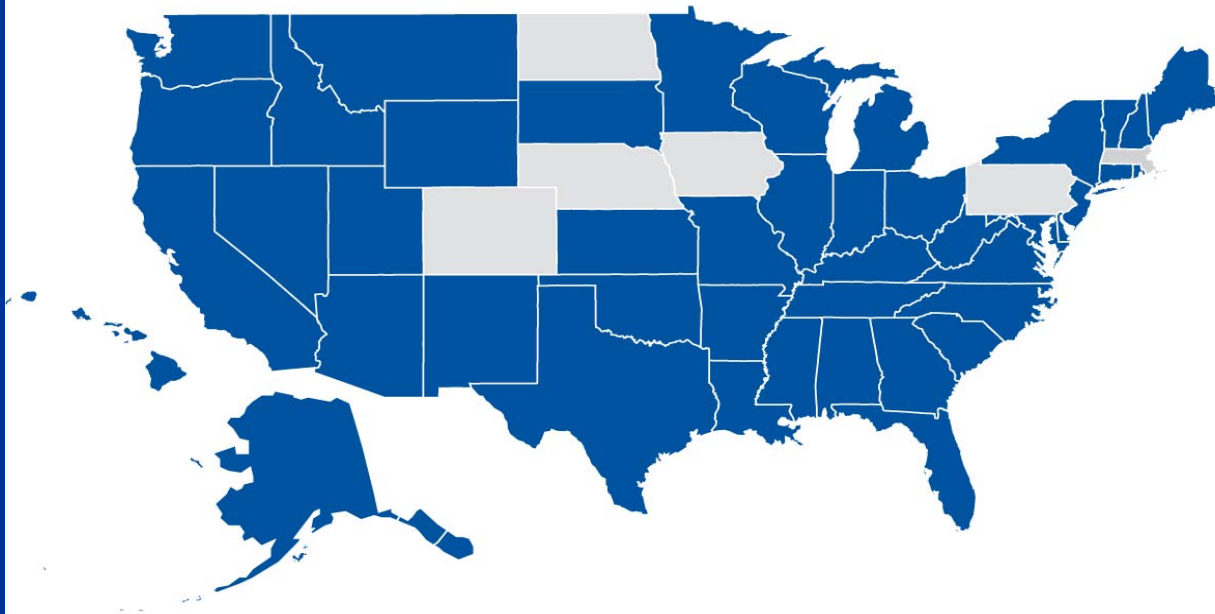
- Governor Bill Owens issued an executive order creating the Alignment Council.
- The Alignment Council was composed of 30 members representing the K-12 system, the postsecondary education system, the business & workforce development communities, and the state legislature.
- The Alignment Council's primary charge was to develop recommendations that will align the **secondary** education system with the expectations of the postsecondary education system and the business community.

Colorado Education Alignment Council

- The Alignment Council examined issues relating to:
 - High School Graduation Standards.
 - Statewide Academic Standards.
 - Statewide Assessments.
 - The Higher Education System.

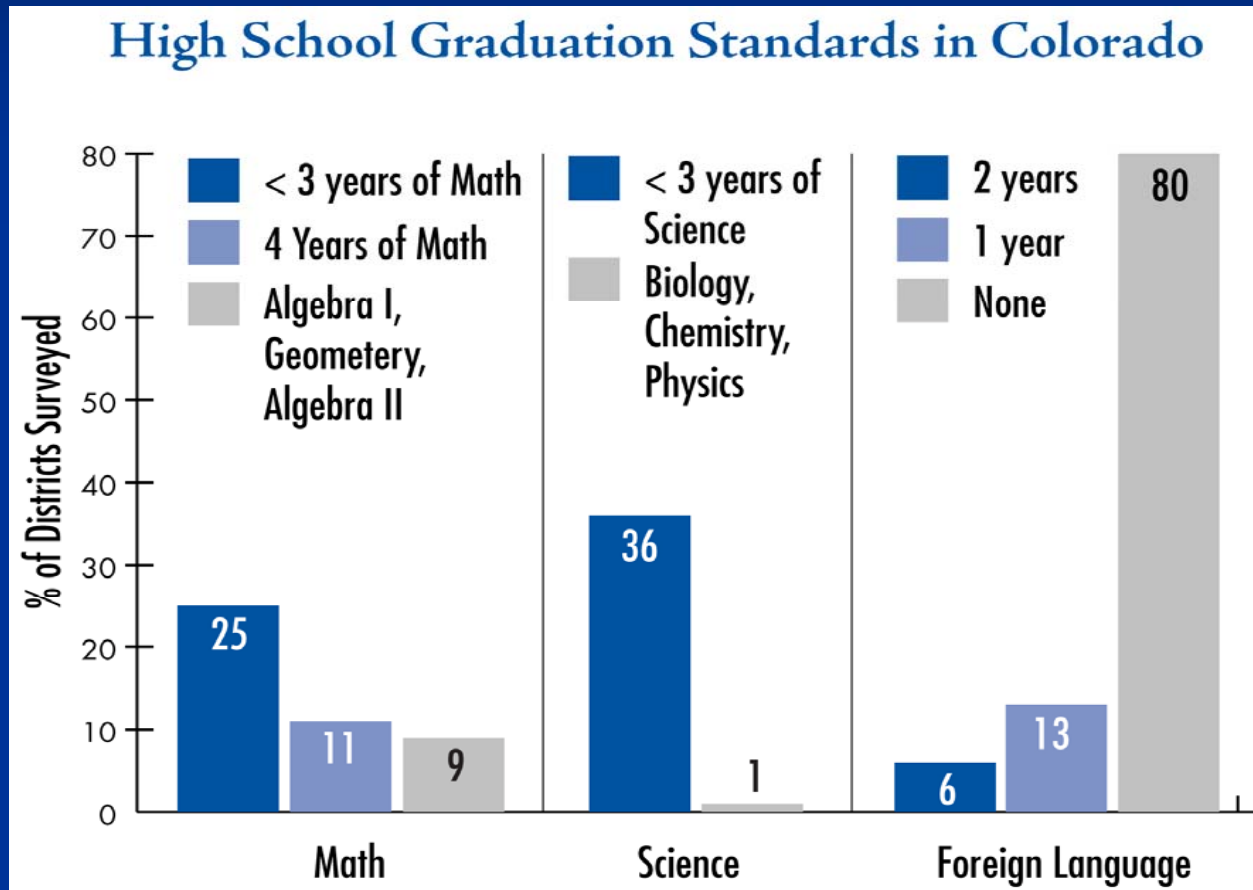
High School Graduation Standards

States with Statewide High School Graduation Standards

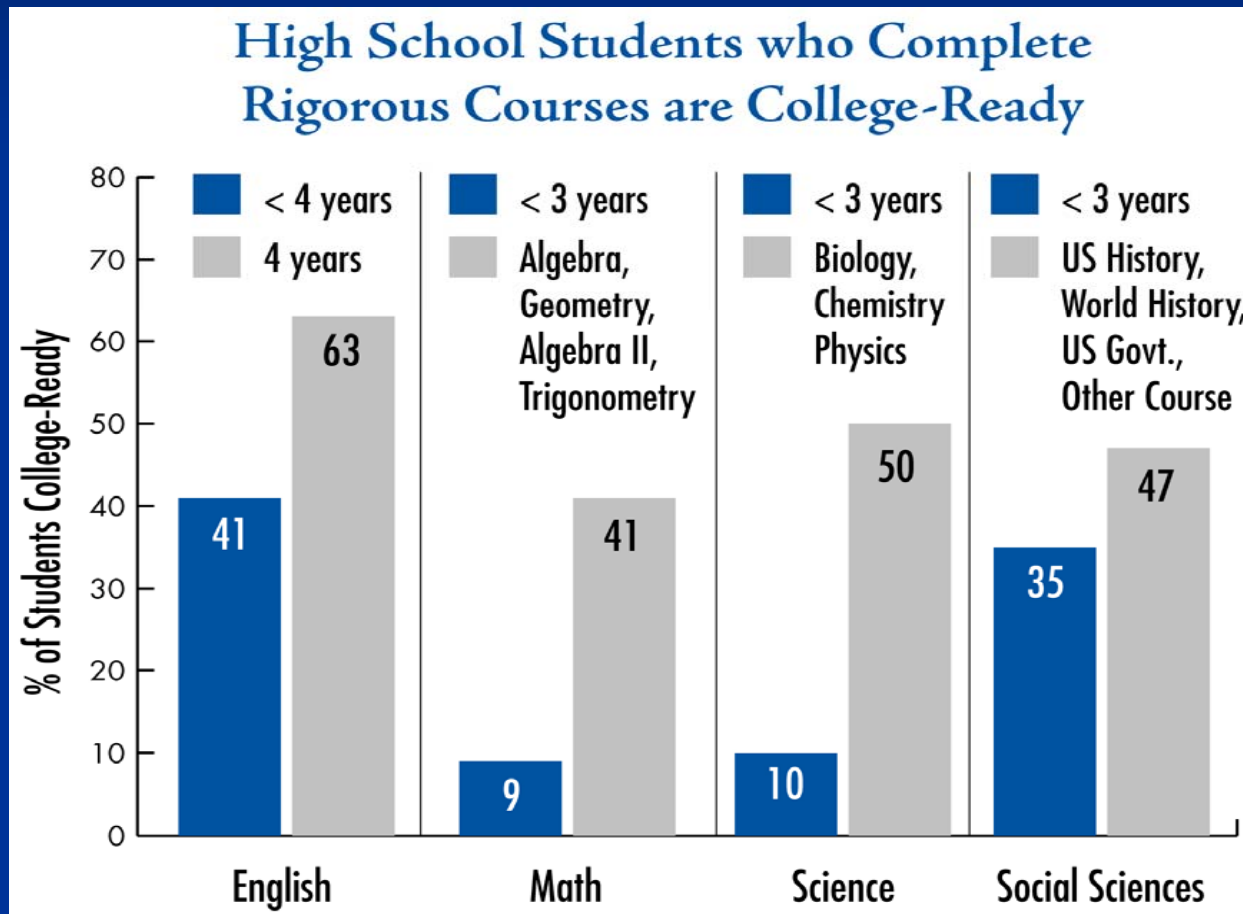


Source: Achieve, Inc., The Expectatons Gap: A 50-State Review of High School Graduation Requirements, 2004.

High School Graduation Standards



High School Graduation Standards



High School Graduation Standards

Occupation	Recommended HS Courses
Iron Workers	English, Algebra, Geometry, Physics
Electricians	English, Algebra, Geometry, Trigonometry, Physics
Sheet Metal Workers	English, Algebra, Geometry, Trigonometry
Plumbers	English, Chemistry, Physics
Draftsmen	Geometry, Trigonometry

Source: Achieve, Inc./AGC of America

High School Graduation Standards (Recommendations)

- The General Assembly should direct the SBE to adopt a minimum set of high school graduation standards.
- The SBE should **consider** the following courses:
 - 4 years of English;
 - 4 years of math (at least Algebra I, geometry, Algebra II or their equivalent);
 - 3 years of science (biology, chemistry, physics);
 - 3.5 years of social sciences (at least 1 year of US history, 1 year of world history, 1 year of US Govt.)

Statewide Academic Standards

- The CMCS define the **broad** set of skills and knowledge students in grades K-12 should acquire in various subjects.
- The CMCS do not contain separate and distinct expectations for students within a particular grade grouping (K-4, 5-8, 9-12).
- As a result, expectations for students in grade 9 are the same as expectations for students in grades 10, 11, and 12.

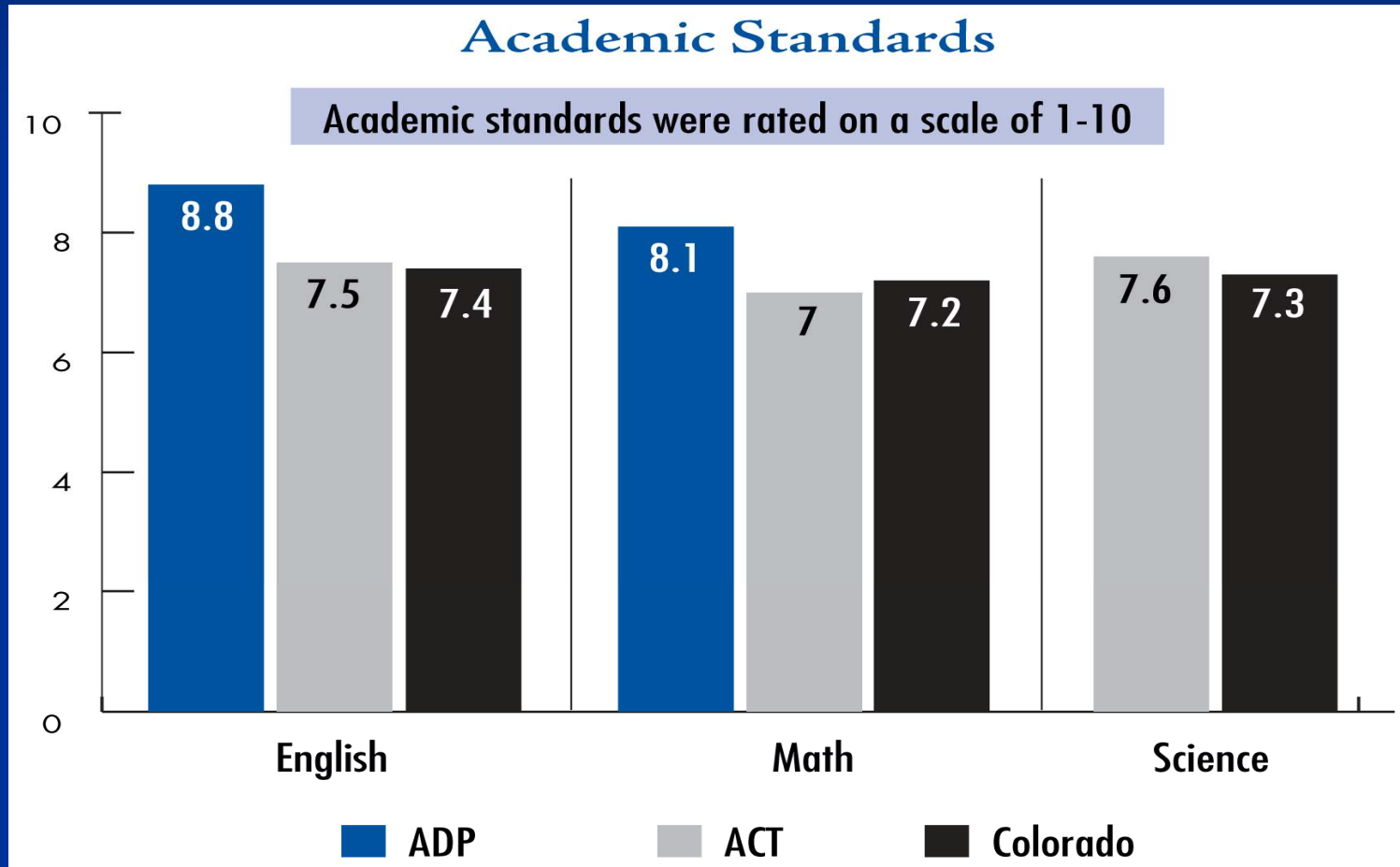
Statewide Academic Standards

- Assessment frameworks developed for each subject and grade level comprising the CSAP define the **specific** set of skills and knowledge assessed on the CSAP.
- The CSAP isn't administered to students in grades 11 and 12; therefore, assessment frameworks for students in grades 11 and 12 do not exist.
- Consequently, specific and distinct expectations for students in grades 11 and 12 do not exist.

Statewide Academic Standards

- Rigorous academic standards in English and math were developed by Achieve, the Education Trust, and the Thomas B. Fordham Foundation.
- In the fall of 2005, Achieve conducted a side-by-side comparison of these standards (ADP) with Colorado's standards.
- Achieve concludes that Colorado's standards lack specificity, lack rigor, are repetitive, and incorporate multiple expectations into 1 standard.

Statewide Academic Standards (Input from Colorado Educators)



Statewide Academic Standards (Input from Colorado Educators)

ADP		Colorado	
Plan writing by taking notes, writing informal outlines, and researching.	9.4	Plan, draft, revise, and edit for a legible final copy.	7.8
		Plan, draft, revise, and edit for a final copy.	6.8
		Average	7.3

Statewide Academic Standards (Input from Colorado Educators)

ADP		Colorado
Define and narrow a problem or research topic.	9.2	None
Report findings within a prescribed amount of time.	8.8	None
Write an extended research essay that contains certain criteria.	9.8	None
Average	9.3	

Statewide Academic Standards (Input from Colorado Educators)

ADP		Colorado	
Calculate and apply ratios, rates, proportions, and percentages to solve problems.	8.9	Grade 9 – Use ratios, proportions, and percents in problem solving situations that involve rational numbers.	6.7
		Grade 10 – Use ratios, proportions, and percents in problem solving situations that involve rational numbers.	6.6
		Average	6.7

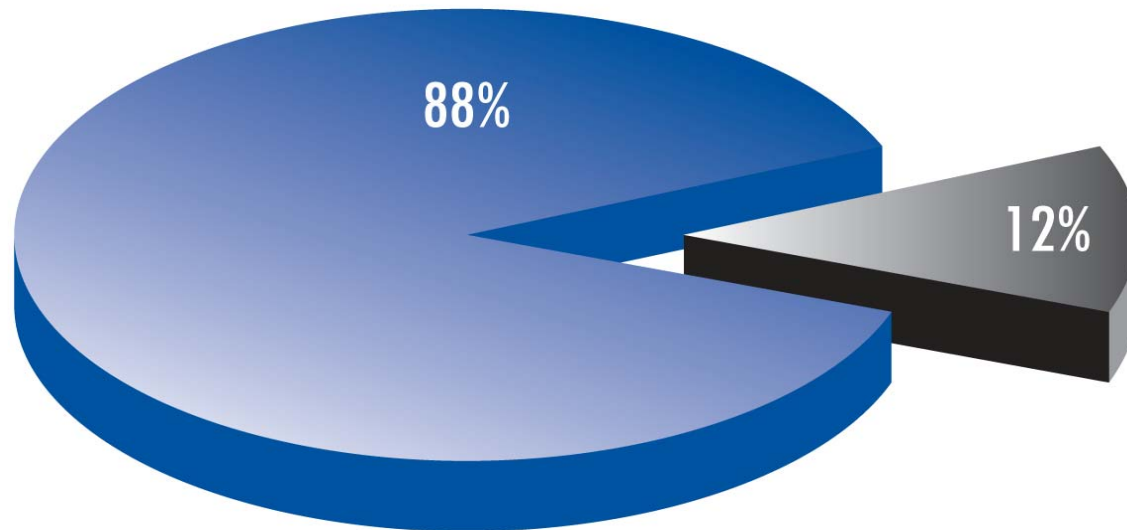
Statewide Academic Standards (Input from Colorado Educators)

ADP		Colorado
Describe a line by a linear equation.	9.4	None
Find the distance between two points using their coordinates and the Pythagorean Theorem.	9.3	None
Find an equation of a circle given its center and radius.	8.9	None
Average	9.2	

Statewide Academic Standards (Input from Business Leaders)

English Standards

88% of the ADP English Standards omitted from the CO Standards are essential to the success of HIGH-SKILLED employees.



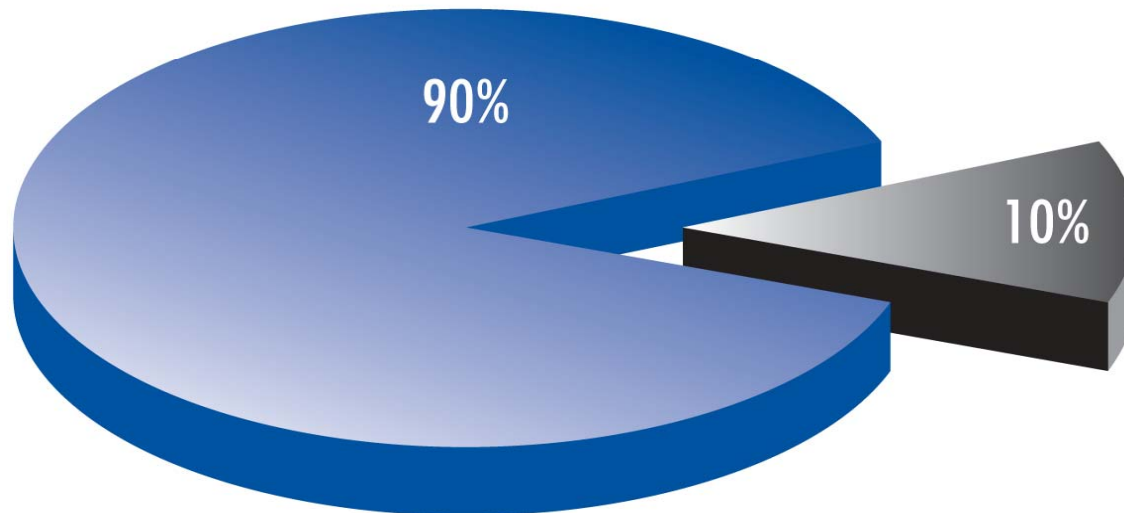
Statewide Academic Standards (Input from Business Leaders)

- The 3 ADP standards in English most essential to the success of high-skilled employees are:
 - 9.2** Participate productively in self-directed work teams for a particular purpose.
 - 9.5** Give and follow spoken instructions to perform specific tasks, to answer questions, or to solve problems.
 - 9.5** Follow instructions in informational or technical texts to perform specific tasks, answer questions, or solve problems.

Statewide Academic Standards (Input from Business Leaders)

Math Standards

90% of the ADP Math Standards omitted from the CO Standards are essential to the success of HIGH-SKILLED employees.



Statewide Academic Standards (Input from Business Leaders)

- The 3 ADP standards in math most essential to the success of high-skilled employees include:
 - 8.9** Compute with rational numbers fluently and accurately *without a calculator*.
 - 8.2** Understand the capabilities and limitations of calculators and computers in solving problems.
 - 7.6** Recognize and apply magnitude (absolute value) and ordering of real numbers.

Statewide Academic Standards (Recommendations)

- The General Assembly should direct the SBE to substantially revise the CMCS for grades 9-12.
- When revising the CMCS, the SBE should:
 - Develop separate and distinct expectations for students in each grade level.
 - Develop rigorous expectations for students that will prepare them for college or the workforce.
 - Eliminate expectations for students in one grade level that are worded identically to expectations for students in another grade level.
 - Avoid incorporating multiple expectations into 1 standard.
 - Incorporate input provided by Achieve, Colorado educators, and business leaders.

Statewide Assessments

- Any statewide assessment program is designed to measure a student's proficiency of a state's academic standards.
- Some states (VA & OR) administer their statewide assessments electronically in order to provide results in a timelier manner.
- Some states (AL, CA, GA, NV, NY, OH, SD) administer a statewide assessment to high school seniors in order to ensure that clear expectations exist for 12th grade students.
- CO administers the ACT to all students in the 11th grade.

Statewide Assessments

- In order to ensure that statewide assessments don't include content that students have not been exposed to, some states administer end-of-course assessments to high school students.
- Administering end-of-course assessments that are specifically aligned with a common set of statewide academic standards may ensure that the content of courses taught in high schools is consistently rigorous across the entire state.
- 12 states have developed and 8 states plan to develop end-of-course assessments.

Statewide Assessments (Recommendations)

- The General Assembly should direct the SBE to realign the statewide assessment program with the revised version of the CMCS for grades 9-12.
- The SBE should examine the feasibility of administering the statewide assessment program electronically.
- The SBE should examine the feasibility of developing and administering end-of-course assessments for students in grades 9-12.
- The state should continue to administer the ACT to all students in the 11th grade.

Higher Education System (CCHE Admission Standards)

Academic Discipline	2008	2010
English	4 years	4 years
Math (Algebra I or higher)	3 years	4 years
Science (2 years of lab-based courses)	3 years	3 years
Social Sciences (1 course in US history or world history)	3 years	3 years
Foreign Language (same language)	none	2 years
Academic Electives	2 years	2 years

Source: Colorado Commission on Higher Education.

Higher Education System

Academic Discipline	2008 CCHE Admission Standards	% of Districts with HS Graduation Standards that are Aligned with 2008 CCHE Standards
English	4 years	90%
Math (Algebra I or higher)	3 years	13%
Science (2 years of lab-based courses)	3 years	64%*
Social Sciences (1 course in US history or world history)	3 years	89%
Foreign Language (same language)	none	NA
Academic Electives	2 years	Unknown

* Does not take into account the lab-based course requirements.

Higher Education System

CCHE Admission Standards			Statewide General Education Core Curriculum	
Academic Discipline	2008	2010	Academic Discipline	Alignment?
English	4 years	4 years	Communication/ Arts and Humanities	Yes
Math (Algebra I or higher)	3 years	4 years	Math	Yes
Science (2 years of lab-based courses)	3 years	3 years	Natural and Physical Sciences	Yes
Social Science (1 course in US history or world history)	3 years	3 years	History/Social and Behavioral Sciences/ Arts and Humanities	Yes
Foreign Language	none	2 years	None	No
Academic Electives	2 years	2 years	All Disciplines	Yes

Source: Colorado Commission on Higher Education

Higher Education System

(Foreign Language Admission Standards)

- Foreign Language is not included in the general education core curriculum that is required by all public postsecondary education institutions.
- ACTFL suggests that HS students who only complete 2 years of a foreign language generally function at a “mid novice” level of proficiency.
- ACTFL suggests that students exposed to a foreign language throughout their entire K-12 experience generally function at a “high intermediate” level of proficiency.

Higher Education System (Remediation)

- 30 percent of HS graduates who immediately enrolled in a CO public postsecondary education institution in 2004 required remediation in reading, writing, or math.
- Of this cohort, 14 percent required remediation in reading, 14 percent required remediation in writing, and 25 percent required remediation in math.
- The state incurred a cost of \$10.5 million in FY 2003-04 in order to provide remedial instruction.
- CCHE suggests that many HS students are not exposed to the rigorous curriculum that is needed to be successful at the collegiate level.

Higher Education System (Remediation)

Academic Discipline	ACT Score	SAT Score	Accuplacer Score
Reading	Reading 17	Verbal 430	Reading 80
Writing	English 18	Verbal 440	Sentence Skills 95
Math	Math 19	Math 460	Algebra 85

Source: Colorado Commission on Higher Education

Higher Education System (Remediation)

Academic Discipline	ACT Score Required by CCHE	Average ACT Score Earned by CO. Students
Reading	Reading 17	Reading 21
Writing	English 18	English 20
Math	Math 19	Math 20

Higher Education System (Remediation)

Academic Discipline	ACT Score Required to be "Ready for College"		ACT Score Required by CCH		Average ACT Score Earned by CO. Students	
Reading	Reading	21	Reading	17	Reading	21
Writing	English	18	English	18	English	20
Math	Math	22	Math	19	Math	20

Higher Education System (Recommendations)

- CCHE should align its admission standards with the minimum set of HS graduation standards that is adopted by the SBE.
- CCHE should continue to allow institutions to establish admission standards that exceed CCHE's minimum admission standards.
- CCHE should examine its policy on remediation and determine whether or not the test scores a student must earn in order to avoid remediation should be modified.
- CCHE should ensure that parents and students understand how students are placed into remedial courses and the ramifications associated with being placed into remedial courses.
- CCHE should maintain the statewide general education core curriculum.

The Fund for Colorado's Future

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