ACADEMIC YEAR 2022-2023: HIGH SCHOOL STUDENTS ATTENDING CCCS COLLEGES

COLORADO
COMMUNITY COLLEGE SYSTEM

CONTENTS

System Overview of High School Students

AY 22-23 showed a continued rebound in CCCS concurrent enrollment, following a drop in AY 20-21 that was heavily impacted by the pandemic. The number of students taking college courses through CCCS while still in high school surpassed the high-water mark from AY 20-21, as the overall high school headcount grew 18.5% year over year. This is shown in Figure 1. Overall, 44,422 high school students enrolled in CCCS colleges in academic year AY 22-23. High school students accounted for 38.3% of the annual headcount within CCCS colleges (Figure 2), a 4.8 percentage-point increase over the year prior. High school students attempted 18.6% more credit hours than last year (Figure 3). In AY 22-23, 15.8% of all public high school students in Colorado earned some college credit via CCCS (Figure 4.1) and this percentage has increased 3.9 percentage points from AY 20-21 (11.9%, Figure 4.2). Compared to all Colorado public high school students, CCCS high school students are composed of a higher percentage of female students but a lower percentage of students of color (Figures 4.3, 4.4, and 4.5).

Figure 1 - Number of Unique High School Students by Academic Year

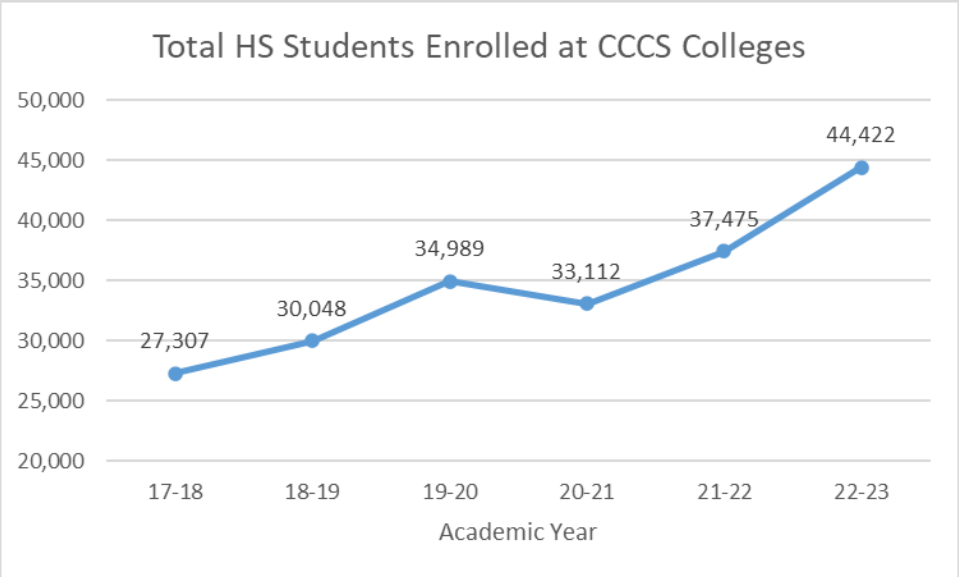


Figure 2 - High School Students as a Percentage of Overall CCCS Headcount

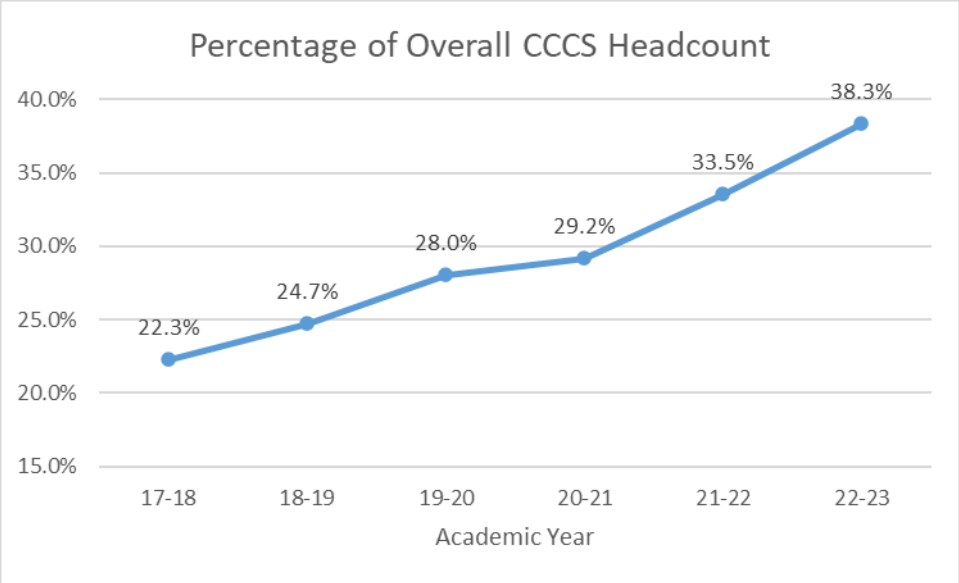


Figure 3 - Total Credit Hours Attempted by CCCS High School Students

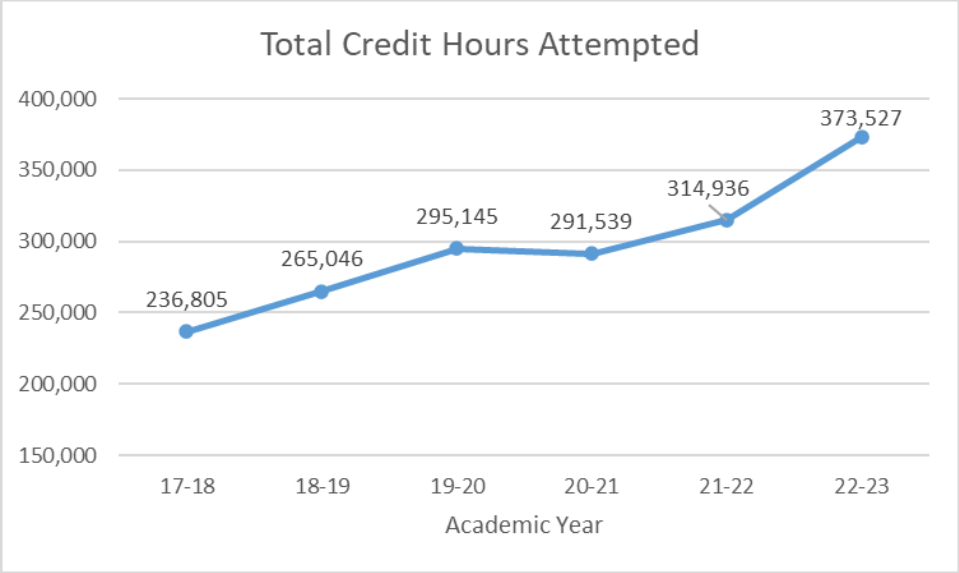
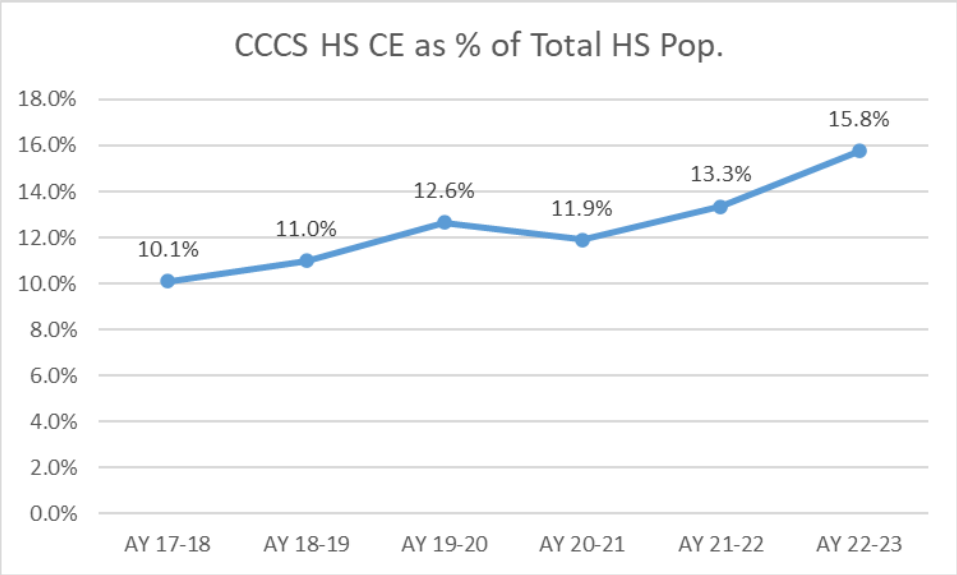


Figure 4.1 - CCCS High School Students Compared to all Colorado Public HS Students

	Fall 2017 Enrollment AY 17-18	Fall 2018 Enrollment AY 18-19	Fall 2019 Enrollment AY 19-20	Fall 2020 Enrollment AY 20-21	Fall 2021 Enrollment AY 21-22	Fall 2022 Enrollment AY 22-23
Public High School[1]						
Total Number of Students	270,190	273,519	276,730	278,424	280,745	281,808
% Change Year-to-Year	1.8%	1.2%	1.2%	0.6%	0.8%	0.4%
CCCS HS Students						
Total Number of Students	27,307	30,048	34,989	33,112	37,475	44,422
% Change Year-to-Year	7.3%	10.0%	16.4%	-5.4%	13.2%	18.5%
CCCS as of Public High School	10.1%	11.0%	12.6%	11.9%	13.3%	15.8%

Figure 4.2 - CCCS Concurrent Enrollment as % of Total High School Population



[1] Public high school data/totals based on published Colorado Department of Education pupil membership data at https://www.cde.state.co.us/cdereval/pupilcurrent.

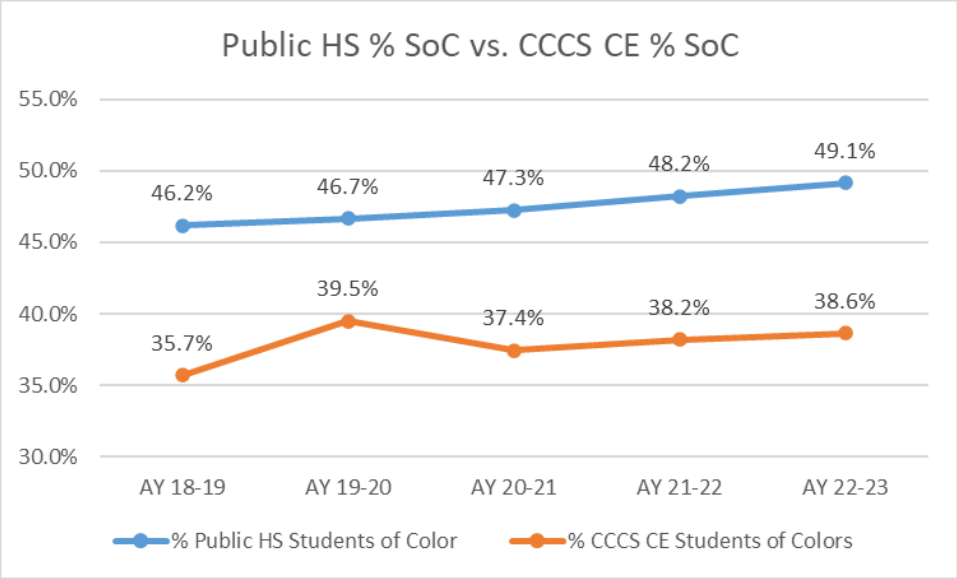
Figure 4.3 - AY 2022-23 Demographics of CCCS High School Students Compared to all Colorado Public HS Students

	Public High School		CCCS HS Students		
Gender	**#**	**%**	**#**	**%**	**% Diff.**
Female	137,303	48.7%	24,126	54.3%	5.6%
Male	144,505	51.3%	20,296	45.7%	-5.6%
Race/Ethnicity	**#**	**%**	**#**	**%**	**% Diff.**
American Indian or Alaskan Native	1,852	0.7%	261	0.6%	-0.1%
Asian	8,933	3.2%	1,725	3.9%	0.7%
Black or African American	12,610	4.5%	1,655	3.7%	-0.7%
Hispanic	101,441	36.0%	11,291	25.4%	-10.6%
Multiple races	12,822	4.5%	2,160	4.9%	0.3%
Native Hawaiian and Other Pacific Islander	815	0.3%	69	0.2%	-0.1%
Non-Resident Alien (Int'l.)	0	0.0%	1,371	3.1%	3.1%
Unknown	0	0.0%	2,693	6.1%	6.1%
White	143,335	50.9%	23,197	52.2%	1.4%
Students of Color	138,473	49.1%	17,161	38.6%	-10.5%

Figure 4.4 - AY 2021-22 Demographic of CCCS High School Students Compared to all Colorado Public HS Students

	Public High School		CCCS HS Students		
Gender	**#**	**%**	**#**	**%**	**% Diff.**
Female	137,012	48.8%	20,546	54.8%	6.0%
Male	143,733	51.2%	16,929	45.2%	-6.0%
Race/Ethnicity	**#**	**%**	**#**	**%**	**% Diff.**
American Indian or Alaskan Native	1,969	0.7%	211	0.6%	-0.1%
Asian	8,893	3.2%	1,533	4.1%	0.9%
Black or African American	12,388	4.4%	1,379	3.7%	-0.7%
Hispanic	99,102	35.3%	9,327	24.9%	-10.4%
Multiple races	12,224	4.4%	1,806	4.8%	0.5%
Native Hawaiian and Other Pacific Islander	808	0.3%	64	0.2%	-0.1%
Non-Resident Alien (Int'l.)	0	0.0%	1,178	3.1%	3.1%
Unknown	0	0.0%	1,946	5.2%	5.2%
White	145,361	51.8%	20,031	53.5%	1.7%
Students of Color	135,384	48.2%	14,320	38.2%	-10.0%

Figure 4.5 - 5-Year Comparison of Public HS % Students of Color vs. CCCS Concurrent Enrollment % Students of Color



High school students enrolled in 123,097 courses in AY 22-23, an increase of 18.8% from the previous year (Figure 5). Over half (61.0%) of the high school students enrolled in one or two courses, and 17.3% enrolled in five or more courses (Figure 6). Compared to previous academic years, the percentage of students enrolled in different number of courses remained relatively flat (Figure 7). Also, the average amount of credits earned by each student was flat, moving from 8.5 to 8.6 year over year (Figure 8). Figure 9 shows the top ten highest enrolled courses taken by CCCS high school students, with English Composition, College Algebra and English Composition II holding the top three spots. The top ten highest enrolled courses comprise 33.1% of CE course enrollments.

Figure 5 - Total Courses Taken by CCCS High School Students

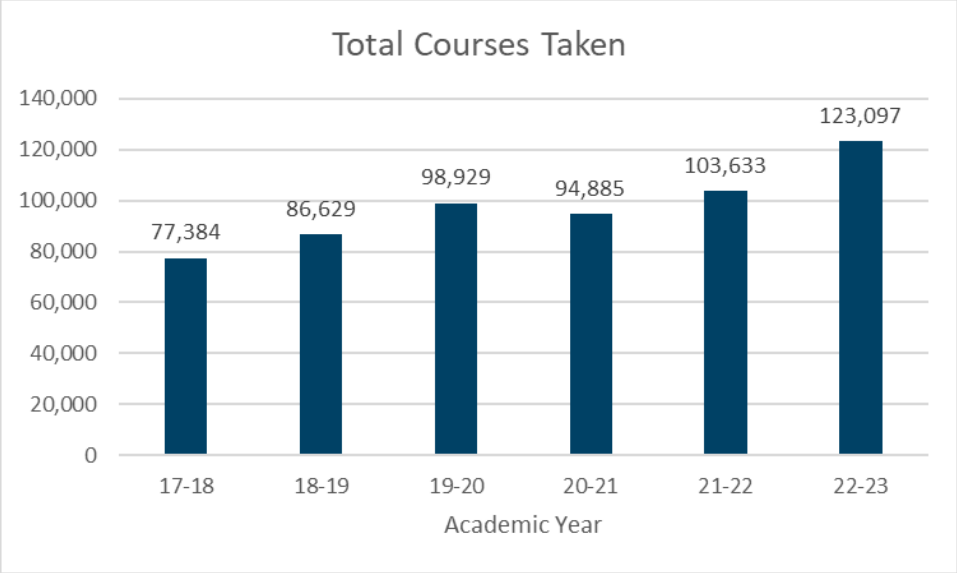


Figure 6 - High School Students by Number of Courses Taken: AY 2022-23

# of Courses Taken During the Year	1 Course	2 Courses	3 Courses	4 Courses	5+ Courses	Total
# of Students	15,481	11,628	5,152	4,464	7,697	44,422
% of Students	34.8%	26.2%	11.6%	10.0%	17.3%	100.0%

Figure 7 - Number of Courses Taken by High School Students

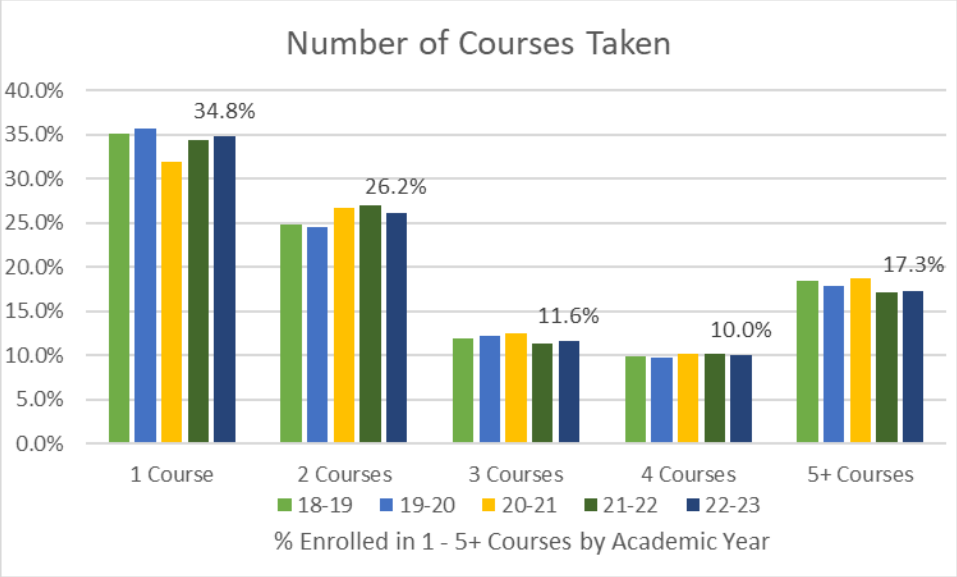


Figure 8 - Average Credit Hours Taken Per High School Student by Academic Year

	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
Average Credits Taken	8.9	8.7	8.9	8.5	8.6

Figure 9 - Top Ten Courses Taken by CCCS High School Students: AY 2022-23

Courses	Course Enrollments	% of all HS Course Enrollments
ENG1021	9,824	8.0%
MAT1340	6,833	5.6%
ENG1022	6,094	5.0%
LIT1015	2,809	2.3%
BUS1015	2,768	2.2%
MAT1420	2,742	2.2%
PSY1001	2,736	2.2%
BUS1016	2,531	2.1%
HIS1220	2,254	1.8%
MAT1260	2,108	1.7%

COLORADO
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HIGH SCHOOL STUDENTS BY COLLEGE

In AY 22-23, Front Range Community College had the largest number of high school students, followed by Arapahoe Community College (Figure 10). Pueblo Community College saw the biggest one-year increase in enrollments (Figure 11). Among CCCS colleges, the proportion of high school enrollments to overall enrollments ranged from a high of 56.8% at Community College of Aurora to 19.9% at Pikes Peak State College (Figures 12 and 13). High school enrollments in eleven out of thirteen CCCS colleges comprised over a quarter of college enrollments.

Figure 10 - High School Students by College

College	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
ACC	6,349	8,089	7,529	8,631	9,497
CCA	4,819	5,561	4,913	5,465	6,326
CCD	1,810	1,894	1,550	2,756	3,045
CNCC	622	548	423	619	665
FRCC	6,283	7,742	8,192	9,005	11,457
LCC	315	352	318	312	293
MCC	611	687	729	822	903
NJC	373	361	394	373	416
OC	475	546	509	449	403
PCC	2,059	2,448	2,256	2,564	3,695
PPSC	2,982	3,307	3,242	2,966	3,450
RRCC	2,584	2,736	2,434	2,815	3,561
TSC	766	718	623	698	711
CCCS Total	**30,048**	**34,989**	**33,112**	**37,475**	**44,422**

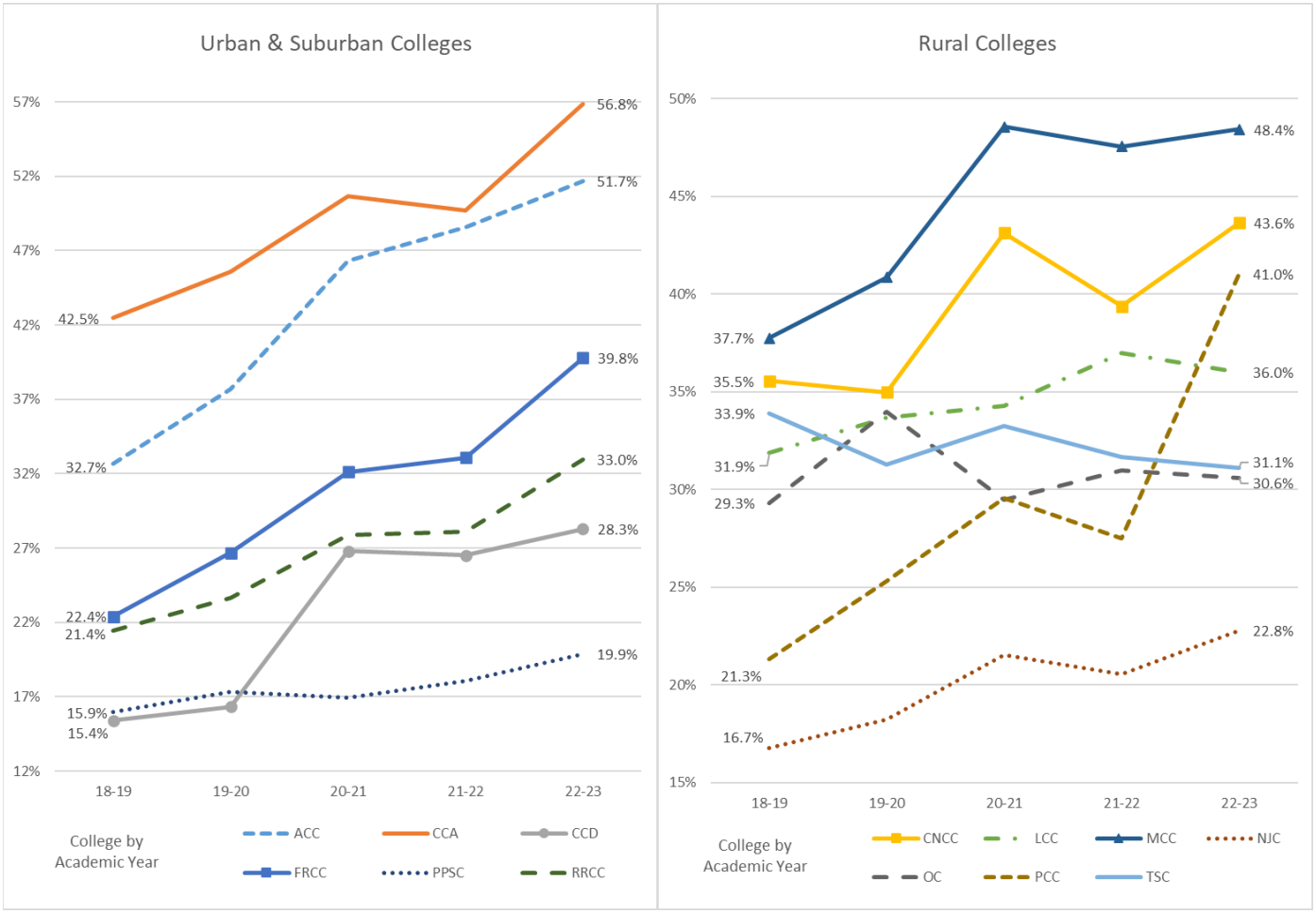
Figure 11 – Change from Previous Year in Number of High School Students Enrolled

College	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
ACC	17.5%	27.4%	-6.9%	14.6%	10.0%
CCA	1.4%	15.4%	-11.7%	11.2%	15.8%
CCD	6.3%	4.6%	-18.2%	77.8%	10.5%
CNCC	16.3%	-11.9%	-22.8%	46.3%	7.4%
FRCC	11.7%	23.2%	5.8%	9.9%	27.2%
LCC	-8.2%	11.7%	-9.7%	-1.9%	-6.1%
MCC	-13.0%	12.4%	6.1%	12.8%	9.9%
NJC	1.4%	-3.2%	9.1%	-5.3%	11.5%
OC	-1.0%	14.9%	-6.8%	-11.8%	-10.2%
PCC	11.2%	18.9%	-7.8%	13.7%	44.1%
PPSC	14.6%	10.9%	-2.0%	-8.5%	16.3%
RRCC	20.4%	5.9%	-11.0%	15.7%	26.5%
TSC	-3.9%	-6.3%	-13.2%	12.0%	1.9%
CCCS Total	**10.0%**	**16.4%**	**-5.4%**	**13.2%**	**18.5%**

Figure 12 - HS Students as a Percentage of Overall Enrollment by Academic Year

College	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
ACC	32.7%	37.7%	46.3%	48.5%	51.7%
CCA	42.5%	45.6%	50.7%	49.7%	56.8%
CCD	15.4%	16.3%	26.8%	26.5%	28.3%
CNCC	35.5%	35.0%	43.1%	39.4%	43.6%
FRCC	22.4%	26.7%	32.1%	33.1%	39.8%
LCC	31.9%	33.7%	34.3%	37.0%	36.0%
MCC	37.7%	40.8%	48.6%	47.5%	48.4%
NJC	16.7%	18.2%	21.5%	20.6%	22.8%
OC	29.3%	34.0%	29.5%	31.0%	30.6%
PCC	21.3%	25.3%	29.6%	27.5%	41.0%
PPSC	15.9%	17.3%	16.9%	18.1%	19.9%
RRCC	21.4%	23.7%	27.9%	28.1%	33.0%
TSC	33.9%	31.3%	33.2%	31.7%	31.1%
CCCS Total	**24.7%**	**28.0%**	**33.0%**	**33.5%**	**38.3%**

Figure 13 - HS Students as a Percentage of Overall Enrollment



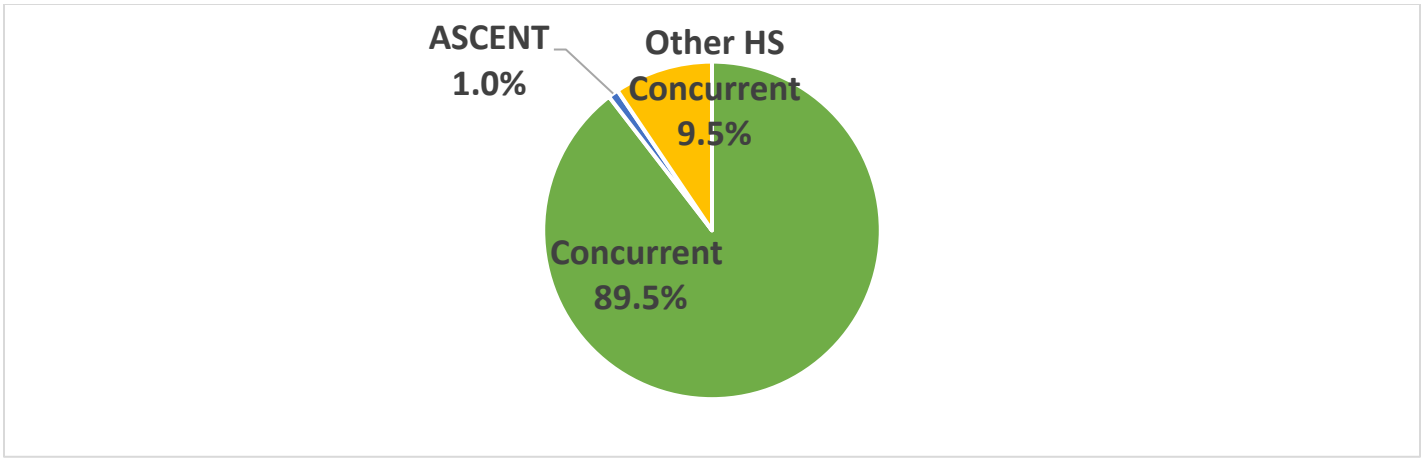
PARTICIPATION BY PROGRAM

The most common method provided by Colorado law for high school students to earn college credit is the concurrent enrollment program. However, high school students are not strictly limited to this method of enrollment and may participate in college courses through other methods as well. The concurrent enrollment program provides high school students the opportunity to earn college credits at little or no cost[2]. The concurrent enrollment program is open to students in grades 9-12 from public high schools and charter schools. Students at these institutions must receive permission from their local education provider to participate in the program. The local education providers must enter into cooperative agreements with the colleges with agreed-upon tuition rates. Colleges also receive state funding for these students via the College Opportunity Fund (COF).

The ASCENT program extends the concurrent enrollment program, utilizing state extended high school funding to retain students for an additional year beyond grade 12. The number of participants in the program is no longer limited by the state[3], and students are only eligible if they complete, or are on schedule to complete, nine credit hours of credit-bearing, college-level postsecondary course work by the end of twelfth grade. Eligibility is also limited to the year immediately following a student's twelfth grade year. Students who took CCCS courses outside the parameters of the concurrent enrollment and ASCENT programs are categorized as "other" forms of high school enrollment (namely Early College, P-Tech, TREP and self-pay). This method of categorizing students mirrors that of the Colorado Department of Education.

By far the most common method utilized by students to take college-level courses is the concurrent enrollment program, which accounted for 89.5% of high school enrollments system wide in AY 22-23 (Figure 14). The ASCENT program accounted for 1.0% of student enrollments. These are roughly the same percentages as in AY 21-22, when 88% of high school students participated through the concurrent program.

Figure 14 - High School Students by Program Type: AY 2022-23



[2] Students in Concurrent Enrollment pay no tuition costs, and may only have to pay books or fees for courses at the college campuses.

[3] HB22-1390 repealed the 500 student funding cap and lowered the eligibility from 12 credits to 9 credits.

PARTICIPATION BY PROGRAM AND COLLEGE

Figures 15.1 and 15.2 provide college breakdown by program – concurrent, ASCENT, Early College, P-Tech, TREP and others. The vast majority of students (89.5%) enrolled in CCCS colleges through the concurrent enrollment program. Front Range Community College had the highest number of students (9,759) in the concurrent program, followed by Arapahoe Community College (8,424). In terms of course level, a vast majority (99.7%) of the course enrollment was college level, with only 0.3% in developmental education (Figure 16).

Figure 15.1 - High School Students by Program and College: AY 2022-23

College	Concurrent	ASCENT	Early College	P-Tech	TREP	Other HS Concurrent
ACC	8,424	45	885	55	3	85
CCA	6,246	66	0	0	4	10
CCD	2,604	28	383	8	3	19
CNCC	659	0	0	0	0	6
FRCC	9,759	175	777	455	21	270
LCC	286	5	0	0	0	2
MCC	870	0	0	0	0	33
NJC	409	1	0	0	0	6
OC	397	0	0	0	0	6
PCC	3,567	15	0	7	0	106
PPSC	2,460	67	735	60	3	125
RRCC	3,400	38	57	0	3	63
TSC	698	1	0	0	0	12
CCCS	**39,779**	**441**	**2,837**	**585**	**37**	**743**

Figure 15.2 - % of High School Students by Program and College: AY 2022-23

College	% Concurrent	% ASCENT	% Early College	% P-Tech	% TREP	% Other HS
ACC	88.7%	0.5%	9.3%	0.6%	0.0%	0.9%
CCA	98.7%	1.0%	0.0%	0.0%	0.1%	0.2%
CCD	85.5%	0.9%	12.6%	0.3%	0.1%	0.6%
CNCC	99.1%	0.0%	0.0%	0.0%	0.0%	0.9%
FRCC	85.2%	1.5%	6.8%	4.0%	0.2%	2.4%
LCC	97.6%	1.7%	0.0%	0.0%	0.0%	0.7%
MCC	96.3%	0.0%	0.0%	0.0%	0.0%	3.7%
NJC	98.3%	0.2%	0.0%	0.0%	0.0%	1.4%
OC	98.5%	0.0%	0.0%	0.0%	0.0%	1.5%
PCC	96.5%	0.4%	0.0%	0.2%	0.0%	2.9%
PPSC	71.3%	1.9%	21.3%	1.7%	0.1%	3.6%
RRCC	95.5%	1.1%	1.6%	0.0%	0.1%	1.8%
TSC	98.2%	0.1%	0.0%	0.0%	0.0%	1.7%
CCCS	**89.5%**	**1.0%**	**6.4%**	**1.3%**	**0.1%**	**1.7%**

Figure 16 - HS Course Enrollment by Course Level: AY 2022-23

Course Level	Course Enrollments	% of Total HS Courses
Developmental Ed	332	0.3%
College Level	122,765	99.7%
Total	**123,097**	**100.0%**

DEMOGRAPHICS

Over the last five years, an average of 54.3 percent of high school students identified as female (Figure 17). In AY 2022-2023, high school students at CCCS colleges self-reported as 52.2 percent white, and the second largest population was Hispanic students at 25.4 percent (Figure 18). Community College of Denver had the highest proportion of Hispanic students at 48.8%, followed by Trinidad State College at 44.7% (Figure 19). The percentage of students of color has remained fairly consistent, hovering within a percentage point of 38% for the last two years (Figure 20). The percentage of first-generation college students has dropped slightly in the past few years, ranging from 35.6% in 2020-2021 to 33.3% in 2022-2023. The percentage of students of color in 2022-2023 ranged from 21.1% to 64.4% at CCCS colleges (Figure 21) Community College of Denver had the highest proportion of students of color as well as the highest proportion of first-generation students among the 13 colleges. In terms of age, most students were 17 years old at 37% (Figure 22).

Figure 17 - CCCS High School Students by Gender

Gender	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
Female	16,033	19,018	18,447	20,546	24,126	53.4%	54.4%	55.7%	54.8%	54.3%
Male	14,015	15,971	14,665	16,929	20,296	46.6%	45.6%	44.3%	45.2%	45.7%
Total	**30,048**	**34,989**	**33,112**	**37,475**	**44,422**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Figure 18 - Percent of CCCS High School Student Population by Race/Ethnicity

Race/Ethnicity	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
American Indian or Alaskan Native	0.5%	0.5%	0.5%	0.6%	0.6%
Asian	3.5%	3.9%	3.9%	4.1%	3.9%
Black or African American	3.6%	3.7%	3.5%	3.7%	3.7%
Hispanic	23.7%	24.6%	24.7%	24.9%	25.4%
Multiple races	4.2%	4.5%	4.6%	4.8%	4.9%
Native Hawaiian and Other Pacific Islander	0.2%	0.3%	0.2%	0.2%	0.2%
Non-Resident Alien (International)	2.1%	2.6%	1.5%	3.1%	3.1%
Unknown	10.5%	7.0%	6.3%	5.2%	6.1%
White	51.6%	53.0%	54.8%	53.5%	52.2%

Figure 19 - Percent of CCCS High School Student Population by Race/Ethnicity and by College, AY22-23

College	American Indian or Alaskan Native	Asian	Black or African American	Hispanic	Multiple races	Native Hawaiian and Other Pacific Islander	Non-Resident Alien (International)	Unknown	White	Students of Color
ACC	0.5%	5.3%	1.9%	13.0%	5.2%	0.2%	1.3%	6.6%	66.2%	26.0%
CCA	0.3%	6.4%	12.7%	32.9%	6.1%	0.3%	10.7%	3.2%	27.4%	58.7%
CCD	0.6%	3.3%	7.8%	48.8%	3.8%	0.2%	6.5%	4.1%	25.0%	64.4%
CNCC	0.9%	0.0%	0.5%	14.9%	4.8%	0.0%	0.2%	4.7%	74.1%	21.1%
FRCC	0.5%	4.1%	1.3%	24.7%	4.2%	0.1%	2.0%	6.5%	56.7%	34.8%
LCC	2.4%	0.3%	0.3%	36.2%	1.4%	0.0%	0.3%	2.0%	57.0%	40.6%
MCC	0.6%	0.3%	1.9%	29.1%	1.9%	0.1%	2.1%	1.4%	62.6%	33.9%
NJC	0.5%	0.5%	0.2%	19.5%	2.2%	0.0%	1.4%	3.6%	72.1%	22.8%
OC	1.0%	0.7%	1.7%	42.2%	3.2%	0.0%	0.0%	2.0%	49.1%	48.9%
PCC	1.8%	0.9%	1.0%	34.1%	4.4%	0.1%	0.6%	8.3%	48.7%	42.3%
PPSC	0.5%	3.2%	5.2%	20.9%	8.3%	0.3%	0.7%	3.9%	56.9%	38.4%
RRCC	0.5%	2.7%	1.0%	17.9%	4.3%	0.0%	1.7%	10.7%	61.3%	26.3%
TSC	0.1%	0.7%	0.7%	44.7%	1.8%	0.0%	0.7%	14.8%	36.4%	48.1%

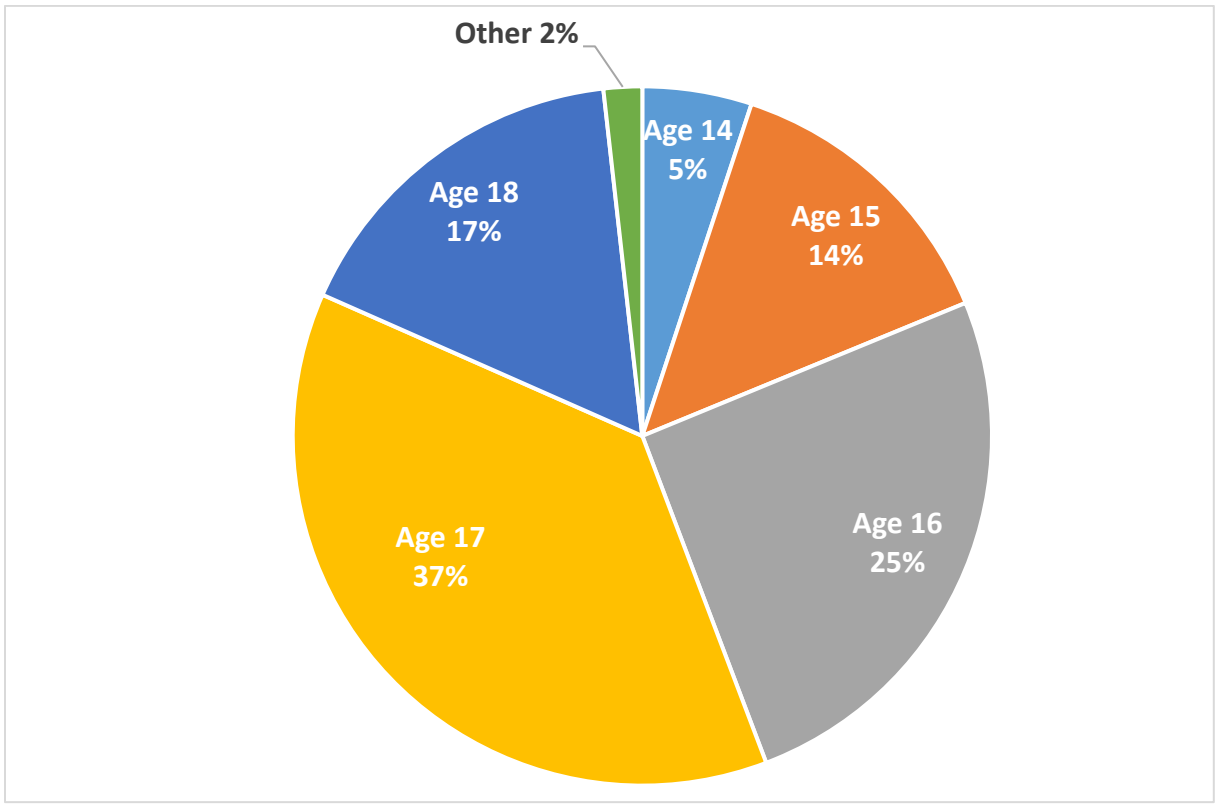
Figure 20 - Demographic Breakdown, Three-year Trend

	AY 20-21	AY 21-22	AY 22-23	AY 20-21	AY 21-22	AY 22-23
Race/Ethnicity:						
Students of Color	12,394	14,320	17,161	37.4%	38.2%	38.6%
Non-Students of Color	20,718	23,155	27,261	62.6%	61.8%	61.4%
First-Generation Status:						
First-Generation	11,777	13,002	14,806	35.6%	34.7%	33.3%
Not First-Generation	21,335	24,473	29,616	64.4%	65.3%	66.7%

Figure 21 - Number and Percentage of Demographic Characteristics by College: AY 2022-2023

College	Students of Color	Percent Students of Color	First-Generation	Percent First-Generation
ACC	2,468	26.0%	1,708	18.0%
CCA	3,714	58.7%	2,948	46.6%
CCD	1,962	64.4%	1,635	53.7%
CNCC	140	21.1%	279	42.0%
FRCC	3,990	34.8%	3,328	29.0%
LCC	119	40.6%	155	52.9%
MCC	306	33.9%	456	50.5%
NJC	95	22.8%	185	44.5%
OC	197	48.9%	214	53.1%
PCC	1,564	42.3%	1,604	43.4%
PPSC	1,326	38.4%	1,194	34.6%
RRCC	938	26.3%	806	22.6%
TSC	342	48.1%	294	41.4%

Figure 22 - High School Students by Age: AY 2022-2023



CREDENTIALS EARNED

Overall, 2,822 high school students earned a credential in AY 22-23 (Figure 24) and 3,434 awards were granted (Figure 23). The total number of credentials awarded increased by 14.1% from AY 21-22. Of all awards granted, 79.5% were certificates, of which the majority were one-year awards (Figure 25). Even though only 3.5% of the credentials earned were AGS degrees, it's worth noting that the number of recipients increased by 33% over last year.

Figures 26 and 27 provide the number of credentials awarded and total headcount by college. In AY 22-23, 36%% of the students who received a credential were from Front Range Community College. In the same academic year (Figure 28), white students received the highest number of credentials (1,947, 56.7%), followed by Hispanic students (912, 26.6%). Figures 29.1 and 29.2 show the proportion of credentials awarded by college and demographic grouping.

Figure 23 - Number of Credentials Awarded to HS Students

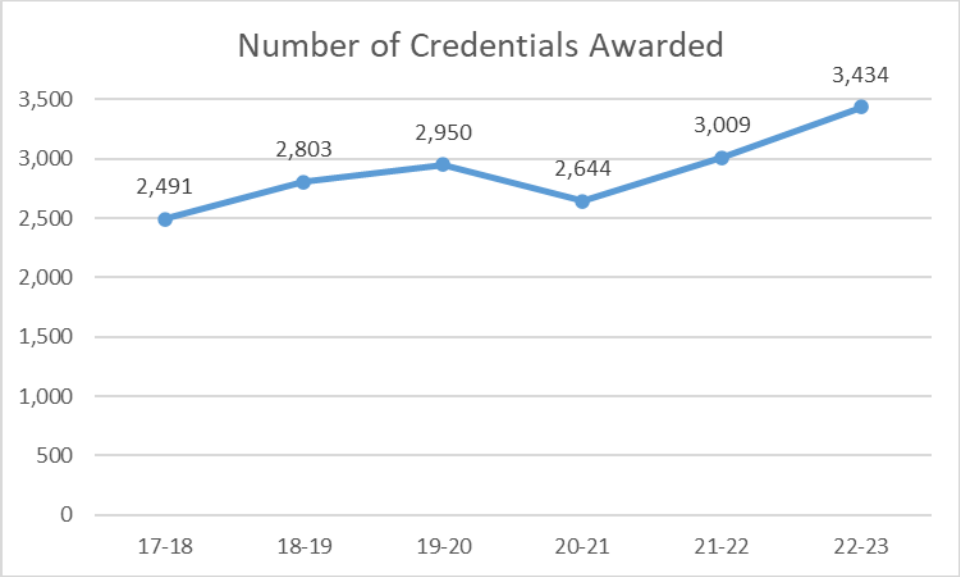


Figure 24 - Total Headcount of HS Students Receiving a Credential

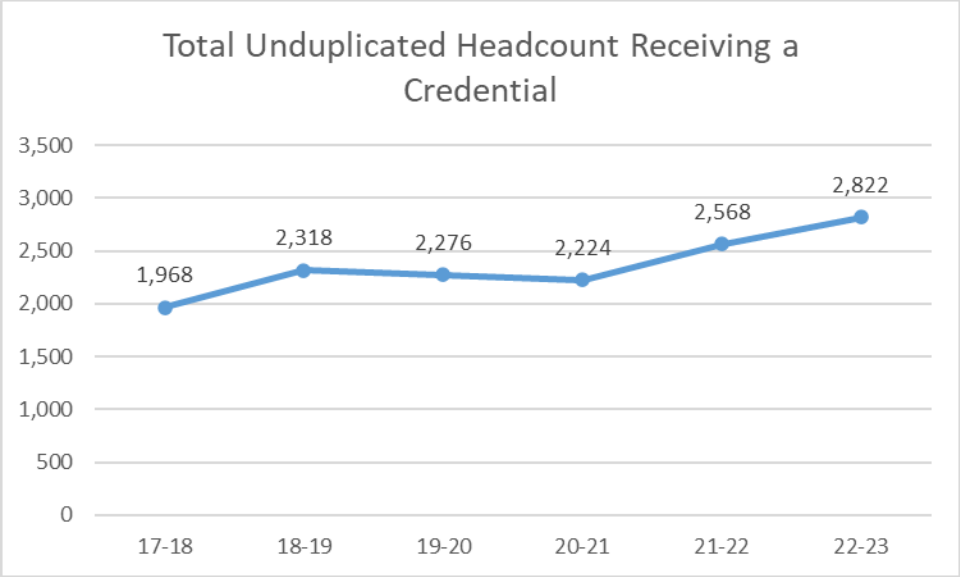


Figure 25 - Number and Type of Credentials Earned by High School Students

Award Type	AY 21-22 Awards	AY 22-23 Awards	% of all Awards Granted	Change from AY 21-22
1-year certificate	2,342	2,613	76.1%	11.6%
2-year certificate	74	117	3.4%	58.1%
Total Certificates	2,416	2,730	79.5%	13.0%
Associate of Applied Science	95	93	2.7%	-2.1%
Associate of Arts	273	320	9.3%	17.2%
Associate of Science	134	170	5.0%	26.9%
Associate of General Studies	91	121	3.5%	33.0%
Total Degrees	593	704	20.5%	18.7%
Total Awards	**3,009**	**3,434**	**100.0%**	**14.1%**

Figure 26 - Number of Credentials Awarded by College

Number of Credentials Awarded	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
ACC	274	187	194	241	306
CCA	27	34	50	80	120
CCD	81	68	67	68	57
CNCC	30	20	13	22	9
FRCC	776	1,067	1,105	1,111	1,213
LCC	30	37	37	24	17
MCC	46	30	67	43	75
NJC	11	10	29	19	25
OC	31	14	35	5	26
PCC	237	271	225	208	401
PPSC	487	468	345	487	417
RRCC	721	697	445	669	732
TSC	52	47	32	32	36
Total	**2,803**	**2,950**	**2,644**	**3,009**	**3,434**

Figure 27 - Total Unduplicated Headcount of HS Students Receiving a Credential: College Breakdown

Total Unduplicated Headcount Receiving a Credential	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
ACC	268	185	187	237	288
CCA	27	34	50	77	114
CCD	80	64	66	63	51
CNCC	29	16	13	19	7
FRCC	600	743	880	928	1,015
LCC	28	33	35	23	17
MCC	37	25	46	37	59
NJC	8	8	20	15	19
OC	31	14	35	5	26
PCC	216	208	185	176	308
PPSC	368	336	280	343	323
RRCC	582	569	395	620	562
TSC	44	41	32	25	33
Total	**2,318**	**2,276**	**2,224**	**2,568**	**2,822**

Figure 28 - Number of Credentials Awarded by College and by Race/Ethnicity: AY 2022-23

Colleges	American Indian or Alaskan Native	Asian	Black or African American	Hispanic	Multiple races	Native Hawaiian and Other Pacific Islander	Non-Resident Alien (Int'l.)	Unknown	White
ACC	2	15	6	57	21	1	1	12	191
CCA	2	16	23	40	6		5	6	22
CCD		3	2	27			14	1	10
CNCC				4					5
FRCC	4	40	7	421	45		21	64	611
LCC			1	8				1	7
MCC		1	1	31	1		4		37
NJC				6			2		17
OC				11	1				14
PCC	3	6		93	13	1		39	246
PPSC	11	10	17	75	35	1	1	10	257
RRCC	5	21	2	113	30		6	34	521
TSC				26				1	9
CCCS	**27**	**112**	**59**	**912**	**152**	**3**	**54**	**168**	**1,947**

Figure 29.1 - Number of Credentials Awarded by College and by Demographic: AY 2022-2023

Colleges	All Credentials	Students of Color	Non-Students of Color	First-Generation	Not First Generation	Male	Female
ACC	306	102	204	75	231	96	210
CCA	120	87	33	58	62	34	86
CCD	57	32	25	41	16	10	47
CNCC	9	4	5	6	3	3	6
FRCC	1213	517	696	504	709	719	494
LCC	17	9	8	9	8	8	9
MCC	75	34	41	41	34	22	53
NJC	25	6	19	15	10	12	13
OC	26	12	14	16	10	7	19
PCC	401	116	285	178	223	220	181
PPSC	417	149	268	143	274	163	254
RRCC	732	171	561	179	553	458	274
TSC	36	26	10	20	16	7	29
CCCS	**3,434**	**1,265**	**2,169**	**1,285**	**2,149**	**1,759**	**1,675**

Figure 29.2 - Proportion of Credentials Awarded by College and by Demographic: AY 2022-23

Colleges	Students of Color	Non-Students of Color	First-Generation	Not First Generation	Male	Female
ACC	33.3%	66.7%	24.5%	75.5%	31.4%	68.6%
CCA	72.5%	27.5%	48.3%	51.7%	28.3%	71.7%
CCD	56.1%	43.9%	71.9%	28.1%	17.5%	82.5%
CNCC	44.4%	55.6%	66.7%	33.3%	33.3%	66.7%
FRCC	42.6%	57.4%	41.5%	58.5%	59.3%	40.7%
LCC	52.9%	47.1%	52.9%	47.1%	47.1%	52.9%
MCC	45.3%	54.7%	54.7%	45.3%	29.3%	70.7%
NJC	24.0%	76.0%	60.0%	40.0%	48.0%	52.0%
OC	46.2%	53.8%	61.5%	38.5%	26.9%	73.1%
PCC	28.9%	71.1%	44.4%	55.6%	54.9%	45.1%
PPSC	35.7%	64.3%	34.3%	65.7%	39.1%	60.9%
RRCC	23.4%	76.6%	24.5%	75.5%	62.6%	37.4%
TSC	72.2%	27.8%	55.6%	44.4%	19.4%	80.6%
CCCS	**36.8%**	**63.2%**	**37.4%**	**62.6%**	**51.2%**	**48.8%**

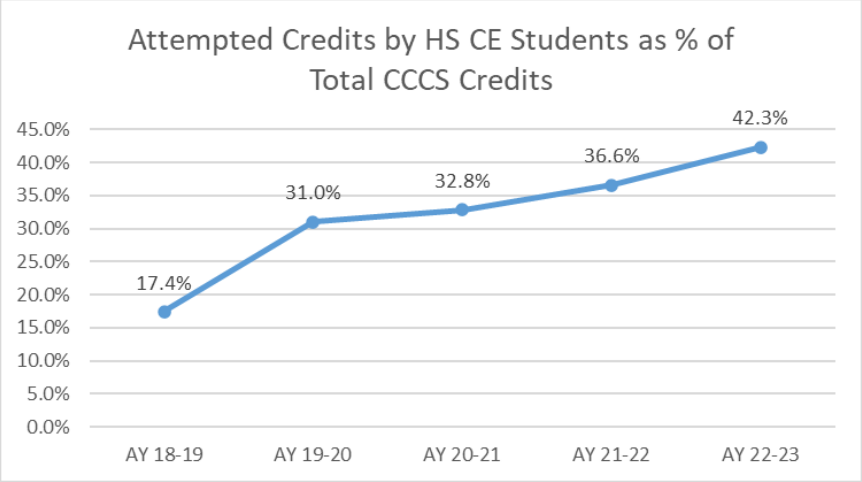
CREDIT HOURS ATTEMPTED

System-wide, students carried an average of 8.6 credit hours over the course of the AY 22-23 (Figure 30.1). Lamar Community College's average of 14.2 credit hours per student was the highest among the thirteen colleges. The proportion of high school credit hours to total credit hours was highest at the Community College of Aurora, at 68.7%. Credit hours taken by high school students are over 40% of total credit hours at seven of the thirteen colleges. Front Range Community College high school students took the largest number of credit hours, followed by Pikes Peak State College and then by Arapahoe Community College.

Figure 30.1 - CCCS High School Credits Attempted and Average Credits by College: AY 2022-23

College	HS Credit Hours	All CCCS Credit Hours	HS as of Total	Average Credit Hours Per Student
ACC	73,253	130,480	56.1%	7.7
CCA	56,134	81,739	68.7%	8.9
CCD	21,629	80,925	26.7%	7.1
CNCC	6,856	13,481	50.9%	10.3
FRCC	84,917	210,710	40.3%	7.4
LCC	4,147	8,001	51.8%	14.2
MCC	10,501	15,961	65.8%	11.6
NJC	4,305	14,770	29.1%	10.3
OC	3,501	12,524	28.0%	8.8
PCC	31,501	68,187	46.2%	8.8
PPSC	41,639	145,570	28.6%	12.1
RRCC	29,112	80,802	36.0%	8.2
TSC	6,034	20,435	29.5%	8.5
CCCS Total	**373,527**	**883,582**	**42.3%**	**8.6**

Figure 30.2 - CCCS High School Credits Attempted as a % of Total CCCS Credit Hours, over 5 years



ACADEMIC STUDIES AND OUTCOMES

The course pass rates for all high school students across the Colorado Community College System have consistently been around 89-90 percent for the last five years (Figure 31). When broken down by high school program type (Figure 32), students in the concurrent program had a higher pass rate (90.8 %) than students in ASCENT (85.0%) or other programs (87.5%). In examining the course pass rate across demographic groupings, students of color, first-generation college students, and male students had a lower pass rate than their counterparts (Figure 33).

Figure 31 - System Wide Course Pass Rates for High School Students, AY 2018-2019 through 2022-2023

	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
Number of Courses Passed	78,105	88,961	84,933	92,032	111,017
Total Courses	86,647	98,957	94,902	103,637	123,112
Success Rate	**90.1%**	**89.9%**	**89.5%**	**88.8%**	**90.2%**

Figure 32 - High School Student Course Pass Rate by Program Type – AY 2022-2023

	Concurrent	ASCENT	Other HS Concurrent
Number of Courses Passed	92,515	3,195	15,307
Total Courses	101,855	3,758	17,499
Success Rate	**90.8%**	**85.0%**	**87.5%**

Figure 33 - HS Course Pass Rates by Demographic Group by College: AY 2022-2023

Colleges	Students of Color	Non-Students of Color	First-Generation	Not First Generation	Male	Female
ACC	93.7%	94.4%	91.1%	95.0%	92.7%	95.3%
CCA	86.6%	87.8%	84.2%	89.7%	85.8%	88.0%
CCD	81.4%	89.9%	81.0%	88.8%	82.7%	85.4%
CNCC	87.2%	93.1%	89.2%	93.9%	89.5%	93.5%
FRCC	86.4%	92.2%	84.6%	92.6%	89.9%	90.5%
LCC	93.4%	94.9%	92.9%	95.6%	95.8%	93.5%
MCC	89.0%	92.9%	88.7%	94.2%	89.6%	92.6%
NJC	85.4%	90.5%	88.5%	90.2%	87.3%	90.7%
OC	86.3%	91.5%	87.3%	90.7%	87.1%	90.4%
PCC	84.5%	88.0%	85.9%	87.4%	85.0%	88.2%
PPSC	84.8%	89.9%	82.7%	90.6%	87.1%	88.8%
RRCC	91.8%	95.4%	90.5%	95.7%	94.9%	94.0%
TSC	90.8%	92.6%	89.5%	93.2%	91.4%	92.0%
CCCS Total	**87.3%**	**92.0%**	**85.9%**	**92.5%**	**89.3%**	**90.9%**

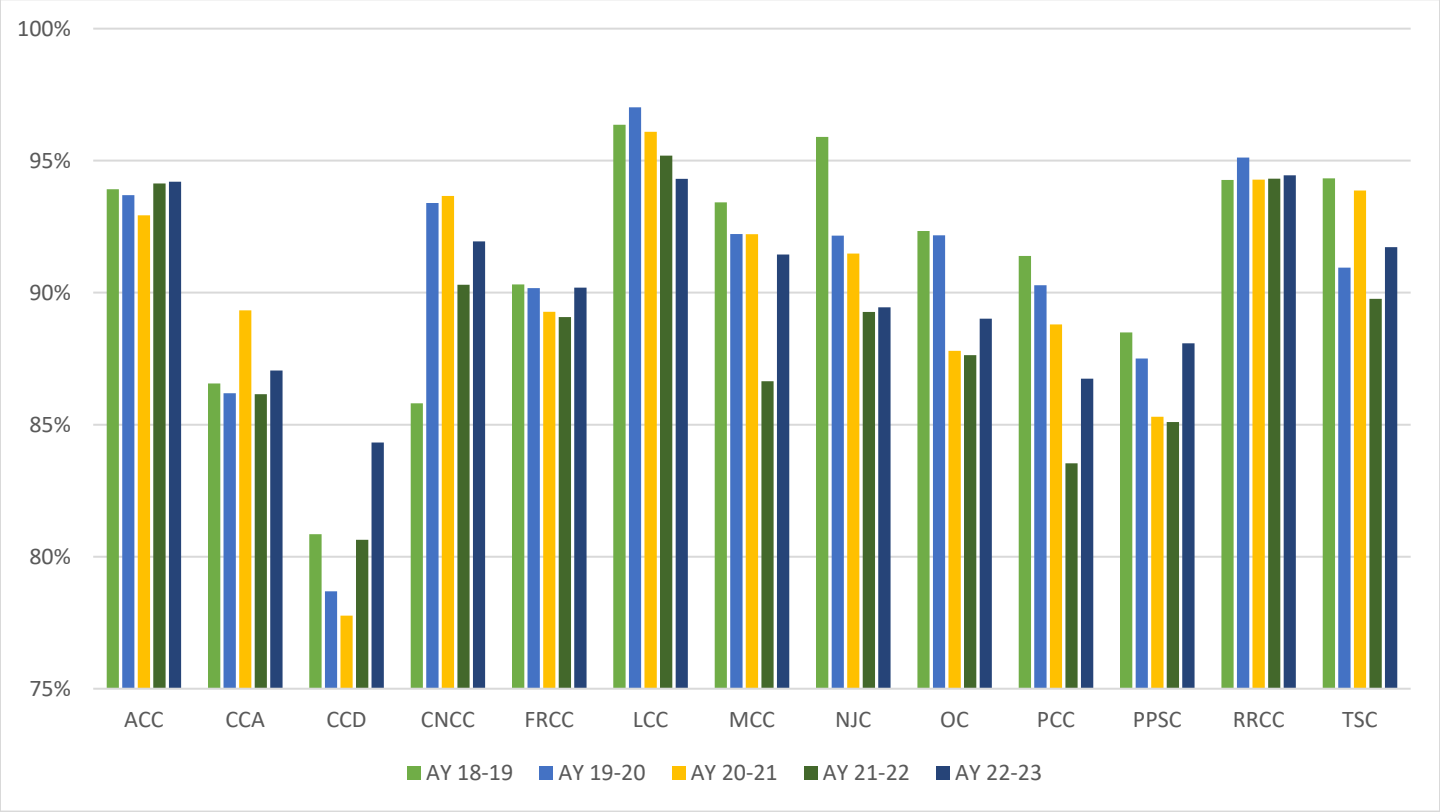
COMPARISON OF COURSE PASS RATES BY COLLEGE

Course pass rates for high school students are displayed by college below (Figures 34 and 35). Seven out of thirteen CCCS colleges met or exceeded the overall system level of 90.2 percent in 2022-23. Red Rocks Community College had the highest course pass rate at 94.4 percent, followed closely by Lamar Community College (94.3 percent) and Arapahoe Community College (94.2 percent).

Figure 34 - Course Pass Rates of HS Students by College

Colleges	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
ACC	93.9%	93.7%	92.9%	94.1%	94.2%
CCA	86.6%	86.2%	89.3%	86.2%	87.1%
CCD	80.9%	78.7%	77.8%	80.6%	84.3%
CNCC	85.8%	93.4%	93.7%	90.3%	91.9%
FRCC	90.3%	90.2%	89.3%	89.1%	90.2%
LCC	96.4%	97.0%	96.1%	95.2%	94.3%
MCC	93.4%	92.2%	92.2%	86.6%	91.4%
NJC	95.9%	92.2%	91.5%	89.3%	89.4%
OC	92.3%	92.2%	87.8%	87.6%	89.0%
PCC	91.4%	90.3%	88.8%	83.5%	86.7%
PPSC	88.5%	87.5%	85.3%	85.1%	88.1%
RRCC	94.3%	95.1%	94.3%	94.3%	94.4%
TSC	94.3%	91.0%	93.9%	89.8%	91.7%
CCCS Total	**90.2%**	**90.0%**	**89.6%**	**88.8%**	**90.2%**

Figure 35 - Comparison of Pass Rates by College



CREDITS EARNED AND TUITION SAVED

High school students earned 341,145 credits in AY 22-23, which was 93.5% of the 364,958 credit hours attempted (Figure 36). As with the number of course enrollments, most credit hours were earned by concurrent enrollment students. To calculate cost savings for all high school students who took college classes in AY 22-23, we must consider ASCENT, Early College, P-Tech, and TREP students as well as Concurrent Enrollment. These programs afford students similar opportunities to earn tuition-free college credit while in high school. With resident tuition of $156.40 (after COF) per credit hour in AY 22-23, concurrent enrollment, Early College, ASCENT, P-Tech, and TREP students and their families saved $57 million in college tuition costs for attempted credit hours.

Figure 36 - Tuition Saved by Academic Year

	AY 20-21	AY 21-22	AY 22-23
Attempted Credit Hours	282,467	306,852	364,958
Earned Credit Hours	261,308	287,323	341,145
Tuition (after COF)	$153.35	$153.35	$156.40
Tuition Saved	**$43,316,314**	**$47,055,754**	**$57,079,431**

POSTSECONDARY CAREER AND TECHNICAL EDUCATION

Postsecondary career and technical education (CTE) accounted for 36.1 percent of high school course enrollments in 2022-23, with a success rate of 92.4% (Figure 37). Note that Red Rocks Community College had a significantly higher percentage of CTE courses due to their extensive work with Warren Tech in Jeffco Public Schools. The top three CTE courses taken by high school students, system-wide in 2022-23, were Introduction to Business, Personal Finance, and Principles of Marketing (Figure 38).

Figure 37 – Postsecondary CTE Course Enrollments and Completions Rates by College

College	AY 22-23 CTE Courses	All Courses Taken by HS Students	CTE as a Percent of all HS Courses	Success Rate for CTE Courses
ACC	11,676	25,090	46.5%	94.6%
CCA	2,175	17,905	12.1%	93.2%
CCD	1,025	6,730	15.2%	83.5%
CNCC	457	2,109	21.7%	93.9%
FRCC	10,297	27,361	37.6%	92.0%
LCC	304	1,353	22.5%	92.4%
MCC	1,290	3,564	36.2%	92.6%
NJC	416	1,450	28.7%	90.6%
OC	336	1,156	29.1%	84.2%
PCC	4,323	10,620	40.7%	87.5%
PPSC	4,944	13,475	36.7%	90.5%
RRCC	6,413	10,317	62.2%	95.5%
TSC	835	1,982	42.1%	92.0%
CCCS Total	**44,491**	**123,112**	**36.1%**	**92.4%**

Figure 38 - Top CTE Courses Taken by High School Students: AY 2021-2022

AY 22-23 Course Total	Course	Course Description
2,768	BUS1015	Introduction to Business
2,531	BUS1016	Personal Finance
1,043	MAR2016	Principles of Marketing
1,037	CRJ1010	Intro to Criminal Justice
969	CIS1018	Intro to PC Applications
696	HWE1050	Human Nutrition
676	CSC1019	Intro to Programming
622	ASE1020	Basic Auto Electricity
589	MGD1011	Adobe Photoshop I
531	NUA1001	Nurse Aide Health Care Skills

MATRICULATION RATES TO CCCS COLLEGES

To ascertain the rate at which high school students later matriculate to CCCS colleges after high school, a one-year high school cohort model was used to track enrollment after high school graduation[4]. Accordingly, the cohort used in the following matriculation rates included high school students enrolled in CCCS courses during AY 2021-2022, and who also graduated high school during that year. High school graduation dates through the end of July are included in the analysis. Students were counted as having matriculated if they enrolled as a non-high school student in a CCCS college at any point from their most recent concurrent term through the end of AY 2022-2023.

2,028 unique high school students from the 2021-2022 cohort enrolled at any CCCS college within one academic year after graduation; a matriculation rate of 13.6 percent (Figure 40). This is down from 15.7 percent for the 2020-2021 cohort.

Figure 39 and Figure 40 display high school student matriculation rates by college. When arrayed by college, high school students matriculate after graduation to the same CCCS college where they earned credit within one year 11.7 percent of the time. However, they were more likely to matriculate to any school in the Colorado Community College System, as this occurs 13.6 percent of the time.

Figure 39 - High School Matriculation Rates at Same College within One Academic Year, 2021-2022 HS Cohort

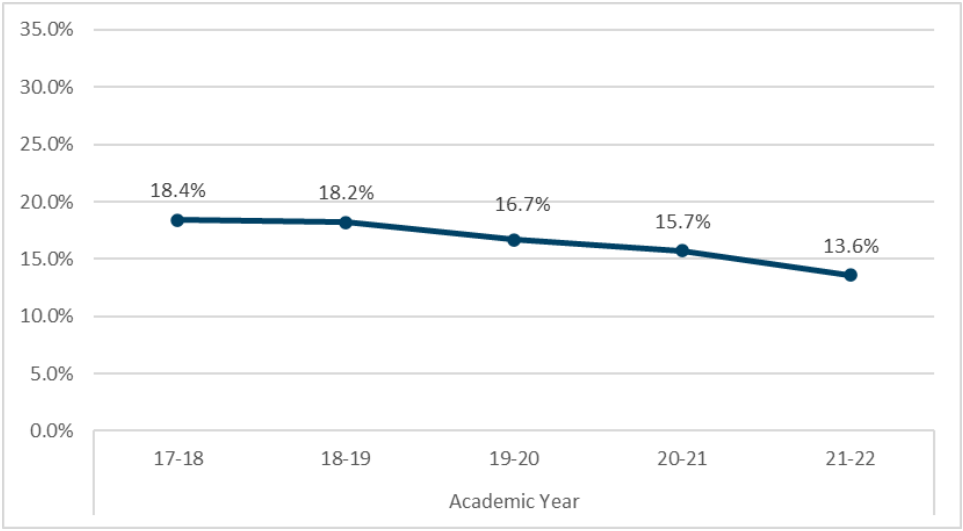
College	Total HS Graduates in 2021-2022	Students Matriculated to Same College In 2022-2023	Matriculation Rate
ACC	3,166	247	7.8%
CCA	2,381	172	7.2%
CCD	1,411	115	8.2%
CNCC	250	29	11.6%
FRCC	3,374	452	13.4%
LCC	134	37	27.6%
MCC	340	64	18.8%
NJC	187	43	23.0%
OC	157	38	24.2%
PCC	963	148	15.4%
PPSC	1,123	194	17.3%
RRCC	1,233	175	14.2%
TSC	238	36	15.1%
CCCS Total	**14,957**	**1,750**	**11.7%**

[4] Previous reports used a four-year model, where all high school students in an academic year were tracked over the next four years for matriculation, regardless of when they graduated high school. The new model was adopted to better reflect student activity immediately upon graduating high school.

Figure 40 - High School Matriculation Rates at any CCCS College within One Academic Year, 2021-2022 HS Cohort

College	Total HS Graduates in 2021-2022	Students Matriculated to any CCCS College in 2022-2023	Matriculation Rate
ACC	3,166	291	9.2%
CCA	2,381	241	10.1%
CCD	1,411	150	10.6%
CNCC	250	31	12.4%
FRCC	3,374	497	14.7%
LCC	134	39	29.1%
MCC	340	75	22.1%
NJC	187	46	24.6%
OC	157	39	24.8%
PCC	963	162	16.8%
PPSC	1,123	200	17.8%
RRCC	1,233	221	17.9%
TSC	238	36	15.1%
CCCS Total	**14,957**	**2,028**	**13.6%**

Figure 41 - Matriculation of HS Students to CCCS Colleges over Time



Enrollment in a Four-Year University and Overall Matriculation

Using the cohort model described above, we know that 13.6 percent of 2021-2022 students enroll at a CCCS college within one academic year after graduation. However, these rates jump considerably when looking at matriculation to four-year universities. Taking this into account, 55.2% of HS students go on to attend a four-year university in the next academic year (Figure 42.1). Combining those two groups of students, we now know that 67% of 2021-2022 CCCS high school students went on to pursue additional higher education opportunities at either a CCCS college or a four-year university, which was roughly the same as the 2020-2021 cohort. While roughly 33% of 2021-2022 students didn't pursue additional higher education opportunities, 23.9% of the cohort was instead employed at some point through the end of AY 2022-2023. This indicates a total matriculation and employment rate of 91% (Figure 42.2). Figure 43 reflects that same information broken down by college.

Figure 42.1 - Overall Matriculation of CCCS High School Students Year-Over-Year Comparison

Year Over Year Matriculation Comparison	Total High School Grad Cohort	Matriculated at CCCS Institution	Matriculated to Four- Year School	Overall Matriculation (Either CCCS or Four-Year)	CCCS Matriculation Rate	Four-Year School Matriculation Rate	Overall Matriculation Rate
2020-2021 CCCS HS Grad Cohort	13,427	2,106	7,076	8,971	15.7%	52.7%	66.8%
2021-2022 CCCS HS Grad Cohort	14,957	2,028	8,251	10,023	13.6%	55.2%	67.0%
Y/Y Difference	1,530	-78	1,175	1,052	-2.1	2.5	0.2

Figure 42.2 - Overall Matriculation of CCCS High School Students with Most Recent Cohort Including Not Matriculated but Employed

2021-2022 CCCS High School Grad Cohort	Matriculated at CCCS Institution	Matriculated to Four- Year School	Overall Matriculation (Either CCCS or Four-Year)	Not Matriculated but Employed	CCCS Matriculation Rate	Four-Year School Matriculation Rate	Overall Matriculation Rate	Matriculation and Employment Rate
14,957	2,028	8,251	10,023	3,581	13.6%	55.2%	67.0%	91.0%

Figure 43 - Overall Matriculation of CCCS High School Students within Four Years, By CCCS College

College	2021-2022 CCCS High School Grad Cohort	Matriculated to CCCS Institution	Matriculated to Four-Year School	Overall Matriculation (Either CCCS or Four-Year)	Not Matriculated but Employed	CCCS Matriculation Rate	Four-Year School Matriculation Rate	Overall Matriculation Rate (CCCS or Four-Year)	Matriculation and Employment Rate
ACC	3,166	291	2,254	2,489	519	9.2%	71.2%	78.6%	95.0%
CCA	2,381	241	1,375	1,582	489	10.1%	57.7%	66.4%	87.0%
CCD	1,411	150	701	836	393	10.6%	49.7%	59.2%	87.1%
CNCC	250	31	126	154	76	12.4%	50.4%	61.6%	92.0%
FRCC	3,374	497	1,812	2,246	875	14.7%	53.7%	66.6%	92.5%
LCC	134	39	53	84	36	29.1%	39.6%	62.7%	89.6%
MCC	340	75	159	229	79	22.1%	46.8%	67.4%	90.6%
NJC	187	46	85	130	41	24.6%	45.5%	69.5%	91.4%
OC	157	39	56	94	44	24.8%	35.7%	59.9%	87.9%
PCC	963	162	401	538	304	16.8%	41.6%	55.9%	87.4%
PPSC	1,123	200	476	658	330	17.8%	42.4%	58.6%	88.0%
RRCC	1,233	221	631	829	334	17.9%	51.2%	67.2%	94.3%
TSC	238	36	122	154	61	15.1%	51.3%	64.7%	90.3%
CCCS	**14,957**	**2,028**	**8,251**	**10,023**	**3,581**	**13.6%**	**55.2%**	**67.0%**	**91.0%**

In examining the demographics of those students who matriculated to either a CCCS college or a four-year university, first-generation college students and students of color were more likely to enroll in a CCCS college (Figure 44.1). These same groups were less likely to matriculate to a four-year school. That trend was consistent among students declared in CTE programs as well, as high school students in a CTE program were more likely to matriculate to a CCCS school and less likely to matriculate to a four-year college (Figure 44.2).

Additionally, Figure 45 displays matriculation rates by race/ethnicity. Hispanic and American Indian or Alaskan Native students were the most likely to attend a CCCS college. On the other hand, Asian students were the most likely to matriculate to a four-year university. Colorado State University (13.4%) was the most popular 4-year college to which students matriculated (Figure 46), followed by University of Colorado Boulder (12.1%) and Metropolitan State University of Denver (8.6%).

Figure 44.1 - Overall Matriculation by Demographic Groupings: AY 2017-2018 High School Cohort

Demographic Grouping	% Matriculating to CCCS	% Matriculated to Four-Year School	Overall Matriculation Rate (CCCS or Four-Year School)
Students of Color	15.5%	48.9%	62.9%
Non-Students of Color	12.3%	59.2%	69.7%
First-Generation	17.7%	39.5%	55.4%
Not First-Generation	11.1%	64.6%	74.0%

Figure 44.2 – Overall Matriculation by CTE Programs vs Non-CTE Programs

Demographic Grouping	% Matriculating to CCCS	% Matriculated to Four-Year School	Overall Matriculation Rate (CCCS or Four-Year School)
CTE	16.2%	48.5%	63.0%
Not CTE	12.4%	58.2%	68.8%

Figure 45 - Overall Matriculation of CCCS High School Students by Race/Ethnicity: AY 2021-2022 High School Cohort

College	2021-2022 CCCS High School Grad Cohort	Matriculated to CCCS Institution	Matriculated to Four-Year School	Overall Matriculation (Either CCCS or Four-Year)	CCCS Matriculation Rate	Four-Year School Matriculation Rate	Overall Matriculation Rate (CCCS or Four-Year)
American Indian or Alaskan Native	80	14	33	46	17.5%	41.3%	57.5%
Asian	573	65	447	495	11.3%	78.0%	86.4%
Black or African American	615	89	365	446	14.5%	59.3%	72.5%
Hispanic	3,876	664	1,625	2,231	17.1%	41.9%	57.6%
Multiple races	687	75	386	452	10.9%	56.2%	65.8%
Native Hawaiian and Other Pacific Islander	30	4	10	14	13.3%	33.3%	46.7%
Non-Resident Alien (International)	374	35	147	178	9.4%	39.3%	47.6%
Unknown	648	49	371	411	7.6%	57.3%	63.4%
White	8,074	1,033	4,867	5,750	12.8%	60.3%	71.2%
CCCS Total	**14,957**	**2,028**	**8,251**	**10,023**	**13.6%**	**55.2%**	**67.0%**

Figure 46 - Top Four-Year Destinations of CCCS High School Students

Four-Year College Destination	Number of Students Matriculating	Percent of All Four-Year Matriculation
COLORADO STATE UNIVERSITY	1,124	13.4%
UNIVERSITY OF COLORADO BOULDER	1,020	12.1%
METROPOLITAN STATE UNIVERSITY OF DENVER	720	8.6%
UNIVERSITY OF COLORADO DENVER	506	6.0%
UNIVERSITY OF COLORADO COLORADO SPRINGS	322	3.8%
UNIVERSITY OF NORTHERN COLORADO	297	3.5%
COLORADO MESA UNIVERSITY	270	3.2%
COLORADO SCHOOL OF MINES	224	2.7%
COLORADO STATE UNIVERSITY - PUEBLO	160	1.9%
GRAND CANYON UNIVERSITY-TRADITIONAL	149	1.8%

Effect of Concurrent Enrollment on Academic Success Measures

To examine the effect concurrent enrollment has on student outcomes after high school, retention and graduation rates are presented below. Outcomes are separated into groups based on whether students participated in a high school concurrent enrollment program prior to matriculating to a CCCS college as a non-high school student.

Retention rates are measured on a fall-to-fall basis and adjusted for graduations, and graduation rates are based on 150% time, or graduation within three academic years. For both retention and graduation, the most recent cohorts available are presented: the fall 2021 cohort for retention, and the fall 2020 cohort for graduation.

Students were more likely to both retain and graduate based on past participation in a concurrent enrollment program. Students who had previously enrolled at a CCCS college while still in high school retained 56.5 percent of the time, compared with 47.3 percent for those that never dual enrolled while in high school (Figure 47.1). Retention rates for both groups increased from last year (Figure 47.2). The retention rate of students with previous concurrent enrollment increased by 2.6 percentage points, while those with no previous concurrent enrollment increased by 3.5 percentage points. Students who participated in a concurrent enrollment program at Northeastern Junior College and Trinidad State College had the highest retention rate at 79.2% and 69.1% respectively (Figure 48).

In terms of graduation rate, students with previous concurrent enrollment graduated 32.2% of the time, compared with 21.5% for students with no concurrent enrollment (Figure 49.1). Compared to last year, graduation rate of students with concurrent enrollment increased 2.3 percentage points while their counterpart's graduation rate increased 1.3 percentage points (Figure 49.2). This likely reflects a rebound from the fall 2019 cohort, which was heavily affected by the pandemic in 2020.

Figure 47.1 - Fall-to-Fall Retention Rates by Past HS Concurrent Enrollment

Past High School Dual Enrollment	Fall 2021 Cohort	Retained Fall 2022	Fall-to-Fall Retention Rate
Previous Concurrent Enrollment	2,499	1,413	56.5%
No Previous Concurrent Enrollment	8,730	4,131	47.3%
Total	**11,229**	**5,544**	**49.4%**

Figure 47.2 - Fall-to-Fall Retention Rates by Past HS Concurrent Enrollment – Year-Over-Year Comparison

Past High School Dual Enrollment	Fall 2020 to Fall 2021 Retention Rate	Fall 2021 to Fall 2022 Retention Rate	Y/Y Pct. Pt. Diff
Previous Concurrent Enrollment	54.0%	56.5%	2.6
No Previous Concurrent Enrollment	43.9%	47.3%	3.5
Total	**46.4%**	**49.4%**	**2.9**

Figure 48 - Fall-to-Fall Retention Rates by Past HS Concurrent Enrollment and by College

College	Fall 2021 Cohort	Previous Concurrent Enrollment Retention Rate	No Previous Concurrent Enrollment Retention Rate	Difference in Retention Rate for Prior Concurrent Enrollment
ACC	1,267	58.1%	52.5%	5.56
CCA	873	55.6%	46.2%	9.39
CCD	1,261	47.0%	43.0%	3.97
CNCC	159	41.9%	39.8%	2.09
FRCC	2,576	55.1%	45.7%	9.41
LCC	207	72.8%	53.2%	19.66
MCC	175	67.3%	57.1%	10.20
NJC	356	79.2%	56.2%	23.04
OC	223	50.0%	53.7%	-3.71
PCC	599	46.0%	46.7%	-0.70
PPSC	2,139	54.8%	42.6%	12.20
RRCC	1,048	52.2%	54.7%	-2.43
TSC	346	69.1%	57.9%	11.21
CCCS Total	**11,229**	**56.5%**	**47.3%**	**9.22**

Figure 49.1 - Graduation Rates by Past HS Concurrent Enrollment

Past High School Dual Enrollment	Fall 2020 Cohort	Graduated by Summer 2023	Graduation Rate
Previous Concurrent Enrollment	2,724	877	32.2%
No Previous Concurrent Enrollment	8,590	1,845	21.5%
Total	**11,314**	**2,722**	**24.1%**

Figure 49.2 - Graduation Rates by Past HS Concurrent Enrollment – Year-Over-Year Comparison

Past High School Dual Enrollment	Fall 2019 Cohort -- Graduated by Summer 2022 Graduation Rate	Fall 2020 Cohort -- Graduated by Summer 2023 Graduation Rate	Y/Y Pct. Pt. Diff
Previous Concurrent Enrollment	29.9%	32.2%	2.3
No Previous Concurrent Enrollment	20.1%	21.5%	1.3
Total	**22.0%**	**24.1%**	**2.1**

Figure 50 - Graduation Rates by Past HS Concurrent Enrollment and by College

College	Fall 2020 Cohort	Previous Concurrent Enrollment Graduation Rate	No Previous Concurrent Enrollment Graduation Rate	Difference (Pct. Pt.) in Graduation Rate for Prior Concurrent Enrollment
ACC	1,274	27.6%	15.5%	12.03
CCA	792	23.2%	18.6%	4.64
CCD	1,274	16.5%	13.5%	3.05
CNCC	170	32.5%	26.9%	5.58
FRCC	2,862	34.6%	22.5%	12.11
LCC	181	43.9%	35.7%	8.29
MCC	227	47.5%	37.4%	10.09
NJC	306	53.6%	43.4%	10.27
OC	217	26.2%	40.6%	-14.38
PCC	689	17.9%	22.5%	-4.62
PPSC	2,042	37.7%	17.6%	20.09
RRCC	979	29.9%	22.9%	6.94
TSC	301	60.6%	45.0%	15.56
CCCS Total	**11,314**	**32.2%**	**21.5%**	**10.72**

Median Time and Credits to Degree

To understand how long it takes students to complete an associate degree, median years to degree and median credits to degree were assessed. Similar to retention and graduation rates, students who received an associate degree were separated into two groups based on whether they participated in a concurrent high school enrollment program in or before the semester they graduated.

The methodology of calculating years to degree and credits to degree was adopted and modified from the Colorado Department of Higher Education's (CDHE) ROI report. Reverse transfers were excluded. One academic year was divided into two terms, with summer and fall semesters in one term (0.5) and spring in another (0.5). Students who enrolled in both summer and spring semesters, for example, were counted as one academic year. Students enrolled more than 10 academic years were considered as an outlier and were removed from the final calculation. In the median credits to degree calculation, only institution-earned credits were included.

The median time to complete an associate degree among students who previously participated in a concurrent enrollment program was 2.5 years (Figure 51) for AY22-23 cohort. These students spent less time completing an associate program after high school because they have earned some credit hours in their concurrent enrollment program. On the other hand, the median time for students without concurrent enrollment was 3 years.

No significant difference was found in median credits to degree. In AY 22-23, both students who previously participated in a concurrent enrollment program and students without concurrent enrollment accumulated 63 credits upon graduation.

Figure 51 – Median Time and Credits to Degree by Past HS Concurrent Enrollment

	AY 18-19	AY 19-20	AY 20-21	AY 21-22	AY 22-23
Median Time to Degree:					
Previous Concurrent Enrollment[2]	2.0	2.0	2.0	2.0	2.5
No Previous Concurrent Enrollment	3.0	3.0	3.0	3.0	3.0
Median Credits to Degree:					
Previous Concurrent Enrollment	65.0	64.0	64.0	64.0	63.0
No Previous Concurrent Enrollment	66.0	65.0	64.0	63.5	63.0

[2] Students who obtained an associate degree before graduating from high school were excluded.

Figure 52 shows the breakdown by degree type. In AY 22-23, AAS students with concurrent enrollment (2.5 years) spent a longer time to complete a degree, compared to AA/AS (2 years) and AGS (2 years) students. It's worth noting that, in AA/AS and AGS programs, students with and without concurrent enrollment accumulated roughly the same number of credits upon graduation. The median time to complete an AA/AS and AGS degree, however, was longer among students without concurrent enrollment (3.0 years vs. 2.0 years). Although AAS students with concurrent enrollment accumulated 4 credits more than students without concurrent enrollment, their time to degree was 0.5 years shorter. Figure 53 shows a slight variance among schools in time to degree. Depending on the college, it may take 2.5 years vs 2 years to obtain the same degree for past participants in concurrent enrollment.

Figure 52 – Median Time and Credits to Degree by Past HS Concurrent Enrollment and by Degree Type, AY 22-23

	AA/AS	AAS	AGS
Median Time to Degree:			
Previous Concurrent Enrollment	2.0	2.5	2.0
No Previous Concurrent Enrollment	3.0	3.0	3.0
Median Credits to Degree:			
Previous Concurrent Enrollment	62.0	70.0	61.0
No Previous Concurrent Enrollment	62.0	66.0	60.0

Figure 53 – Median Time to Degree by Past HS Concurrent Enrollment and by College, AY 22-23

College	Previous Concurrent Enrollment	No Previous Concurrent Enrollment
ACC	2.5	3.0
CCA	2.0	3.5
CCD	2.5	3.0
CNCC	2.0	2.0
FRCC	2.5	3.0
LCC	2.0	2.0
MCC	2.0	2.5
NJC	2.0	2.0
OC	2.0	2.0
PCC	2.5	3.0
PPSC	2.0	3.0
RRCC	2.5	3.0
TSC	2.0	2.0

Figure 54 – Median Credits to Degree by Past HS Concurrent Enrollment and by College, AY 21-23

College	Previous Concurrent Enrollment	No Previous Concurrent Enrollment
ACC	63.0	63.0
CCA	62.0	65.0
CCD	61.0	62.0
CNCC	63.3	60.0
FRCC	62.0	63.0
LCC	64.0	61.0
MCC	67.5	61.0
NJC	63.0	61.5
OC	63.0	60.0
PCC	67.0	65.0
PPSC	63.0	66.0
RRCC	66.0	64.0
TSC	69.0	60.0

MEDIAN WAGE

Similar to average time and degree, the methodology of calculating median wage among graduates who previously participated in a concurrent enrollment program was also adopted from CDHE's ROI report. According to this report, wage data from the Colorado Department of Labor and Employment (CDLE) are inclusive of Colorado. Federal employees and self-employed are excluded. Since wage data are based on calendar year, graduation cohorts are established using calendar year. For example, the cohort 2017 includes graduates from spring 2017, summer 2017, and fall 2017. Two thresholds are implemented: (1) number of quarters employed, and (2) state minimum wage (see Appendix for details). As a result, 23.5% of 2017 graduates were included in year one wage calculation, 33.1% were included in year three wage calculation, and 42.9% were included in year 5 wage calculation (Figure 55).

Of the 2017 graduates who previously participated in a concurrent enrollment program, 74.7% were employed in year one after graduation, 70.5% employed in year three, and 64.6% employed in year five (Figure 55). The median wage for all graduates started at $32,547 in year one after graduation and increased to $50,392 in year five (Figure 56).

Figure 55 – Employment Status by Calendar Year

Employment Status	Calendar Year 2015	Calendar Year 2016	Calendar Year 2017	Calendar Year 2015	Calendar Year 2016	Calendar Year 2017
1-Year						
Employed & Met Threshold	841	955	1,044	27.8%	26.0%	23.5%
Employed & Didn't Meet Threshold	1,462	1,841	2,270	48.4%	50.2%	51.2%
Not Employed or No Wage Data	718	871	1,121	23.8%	23.8%	25.3%
3-Year						
Employed & Met Threshold	1,149	1,323	1,468	38.0%	36.1%	33.1%
Employed & Didn't Meet Threshold	1,020	1,347	1,658	33.8%	36.7%	37.4%
Not Employed or No Wage Data	852	997	1,309	28.2%	27.2%	29.5%
5-Year						
Employed & Met Threshold	1,252	1,572	2,051	41.4%	42.9%	46.2%
Employed & Didn't Meet Threshold	751	864	818	24.9%	23.6%	18.4%
Not Employed or No Wage Data	1,018	1,231	1,566	33.7%	33.6%	35.3%
Total Number of Students	**3,021**	**3,667**	**4,435**			

Figure 56 – Median Wage by Year

Years after Graduated	Calendar Year 2015	Calendar Year 2016	Calendar Year 2017
1-Year	$23,340	$28,571	$32,547
3-Year	$35,409	$39,396	$40,371
5-Year	$41,986	$45,916	$50,392
Pct. Change from 1-Year to 3-Year	**51.7%**	**37.9%**	**24.0%**
Pct. Change from 1-Year to 5-Year	**79.9%**	**60.7%**	**54.8%**

2017 graduates earning an AAS had the highest median wage (Figure 57) in Year 5 at $59,491. The Year 1 median wage of AAS graduates was also the highest at over $43,667. The greatest difference in year one wages vs year five was those with less than one-year certificates, as those students earned $21,417 more in median annual wages.

Figure 57 – Median Wage by Credential Type

Type of Credential	Calendar Year 2015	Calendar Year 2016	Calendar Year 2017
Certificate (< 1 Year)[3]			
1-Year	$20,931	$25,113	$27,334
3-Year	$32,469	$36,864	$37,906
5-Year	$39,491	$44,760	$48,751
Pct. Change from 1-Year to 3-Year	**55.1%**	**46.8%**	**38.7%**
Pct. Change from 1-Year to 5-Year	**88.7%**	**78.2%**	**78.4%**
Certificate (1-2 Year)[4]			
1-Year	$33,219	$37,700	$39,546
3-Year	$45,475	$44,583	$47,417
5-Year	$48,701	$49,810	$59,278
Pct. Change from 1-Year to 3-Year	**36.9%**	**18.3%**	**19.9%**
Pct. Change from 1-Year to 5-Year	**46.6%**	**32.1%**	**49.9%**
AAS			
1-Year	$34,574	$40,376	$43,667
3-Year	$44,188	$46,531	$47,406
5-Year	$48,119	$51,740	$59,491
Pct. Change from 1-Year to 3-Year	**27.8%**	**15.2%**	**8.6%**
Pct. Change from 1-Year to 5-Year	**39.2%**	**28.1%**	**36.2%**
AA/AS			
1-Year	$20,768	$23,535	$27,791
3-Year	$33,080	$37,789	$37,619
5-Year	$41,144	$42,983	$48,807
Pct. Change from 1-Year to 3-Year	**59.3%**	**60.6%**	**35.4%**
Pct. Change from 1-Year to 5-Year	**98.1%**	**82.6%**	**75.6%**
AGS			
1-Year	$22,857	$25,846	$31,559
3-Year	$34,604	$44,883	$43,510
5-Year	$44,880	$49,080	$50,366
Pct. Change from 1-Year to 3-Year	**51.4%**	**73.7%**	**37.9%**
Pct. Change from 1-Year to 5-Year	**96.4%**	**89.9%**	**59.6%**

[3] Certificate (< 1 Year) includes CER1 and CER1N

[4] Certificate (1-2 Year) includes CER, CER2 and CER2N

Health Professions and Related Clinical Sciences (e.g., Phlebotomy, Nursing Assistant, Veterinary Assistant, Medical Assisting) were the most popular certificates for students who previously participated in a concurrent enrollment program, followed by Mechanic and Repair Technologies/Technicians certificates (e.g., Auto Technician, Engine Performance Technician, Diesel Mechanics) (Figure 58). The median wage of 2017 graduates from both programs started in the lower to mid $30,000s. By year five, health professionals were earning over $51,504 and those in Mechanic and Repair were earning $49,825.

Figure 58 – Median Wage by Classification of Instructional Programs (CIP) Code, Certificates only

Median Annual Wage	Calendar Year 2015	Calendar Year 2016	Calendar Year 2017
Health Professions and Related Clinical Sciences (CIP: 51xxxx)			
1-Year	$22,574	$33,629	$36,504
3-Year	$29,963	$39,246	$40,420
5-Year	$38,804	$42,768	$51,504
Pct. Change from 1-Year to 3-Year	**32.7%**	**16.7%**	**10.7%**
Pct. Change from 1-Year to 5-Year	**71.9%**	**27.2%**	**41.1%**
Mechanic and Repair Technologies/Technicians (CIP: 47xxxx)			
1-Year	$20,688	$31,282	$32,912
3-Year	$37,700	$44,170	$42,585
5-Year	$42,276	$49,531	$49,825
Pct. Change from 1-Year to 3-Year	**82.2%**	**41.2%**	**29.4%**
Pct. Change from 1-Year to 5-Year	**104.4%**	**58.3%**	**51.4%**

APPENDIX: DATA SOURCES & METHODOLOGY

Data Source:

High school students' data were pulled from the operational data store (ODS) at the Colorado Community College System office. The majority of the sections were pulled from freeze tables for consistency and are reflective of the end-of-term freeze for a given academic term. The end-of-term freeze dates allow time for data entry and cleanup after the actual end of the semester. End-of-term freeze dates are as follows:

- Summer – October 10
- Fall – February 10
- Spring – July 10

Credentials earned and graduation data were extracted from live tables to reflect the most recent award records.

Methodology:

Average credit hours taken: Average credit hours are calculated by summing all credit hours taken and dividing by unduplicated headcount in an academic year.

Career and technical education (CTE): CTE courses are identified using course attributes.

CCCS headcount: Unduplicated headcount of overall CCCS population, including students taking non-countable courses.

Course level: Developmental education courses include CCR (formerly REA), ENG with course number less than 100, MAT106, and MAT with course number less than 102. College level courses are any courses that are not developmental education.

Course pass rate: Pass in this report entails receiving a grade of 'C' or better. Failing courses includes withdrawals. Pass rate is calculated by dividing the number of students passed (any grade of A, B, C, S/A, S/B, S/C, S) by total number of enrolled students (any student who received a grade, including W).

Courses taken: Number of courses taken by high school students. Students who take the same course multiple times are counted the number of times they occur.

Credential awarded: Number of degrees and certificates awarded to students. Students receiving more than one credentials are counted multiple times.

Credits attempted: Number of credit hours enrolled by high school students.

Fall-to-fall retention rate: Fall cohort includes new, first-time degree-seeking students enrolled in fall, or enrolled in fall term and first-time degree seeking in the summer directly preceding fall. Both full-time and part-

time students were included in this study. Students are counted as retained if they enroll in the following fall semester or are awarded with a credential between the fall term of entry and the following summer term. Retention rate is calculated as the sum of students retaining divided by the total number of students in the cohort.

Graduation rate: Fall cohort includes new, first-time degree-seeking students enrolled in fall, or enrolled in fall term and first-time degree seeking in the summer directly preceding fall. Both full-time and part-time students are included in this study. Students are counted as graduates if they are awarded with a credential between the fall term of entry and summer of the third year. Graduation rate is calculated as the sum of graduates divided by the total number of students in the cohort.

Headcount of students receiving a credential: This is an unduplicated headcount of students who receive an associate degree or a certificate. Students receiving more than one credential are counted once.

High school program: Program information is based on the high school attributes: (1) concurrent enrollment – HSC, (2) ASCENT – HSA, (3) other high school concurrent – any other HS attributes, GTC attributes or student population type is L or H.

High school students: Starting 2020, high school students are identified based on population type and high school attributes. Students coded as L or H in population type or have high school attribute are considered high school students.

Matriculation to CCCS colleges: Matriculation cohort includes all high school students enrolled in an academic year, and who also graduated high school during that year. The cohort encompasses individuals whose high school graduation dates fall between August through the end of July. A student is counted as having matriculated if he/she enrolls in a CCCS college as a non-high school student at any point from the most recent semester enrolled in the cohort year through spring of the following academic year.

Matriculation to four-year universities: Matriculation cohort includes all high school students enrolled in an academic year, and who also graduated high school during that year. The cohort encompasses individuals whose high school graduation dates fall between August through the end of July. A student is counted as having matriculated if he/she enrolls in a four-year university at any point from the most recent semester enrolled in the cohort year through spring of the following academic year.

Median credits to degree: Credits to degree cohort includes all graduates with an associate degree in an academic year. Reverse transfers are excluded. Students receiving more than one associate degree are unduplicated, with the earliest graduation term retained. Median credits to degree are calculated as an average credit hour that cohort students earned upon completion of an associate degree.

Median time to degree: Time to degree cohort includes all graduates with an associate degree in an academic year. Reverse transfers are excluded. Students receiving more than one associate degree are unduplicated, with the earliest graduation semester retained. One academic year is divided into two terms, with summer and fall semesters in one term (0.5) and spring in another (0.5). Average time to degree is calculated as an average of the total number of academic years that cohort students spend upon completion of an association degree.

Median wage: Median wage cohort includes all students who receive a credential in a calendar year. Students receiving more than one credential each year are unduplicated, with the highest degree retained. The median wage is the median of earnings in year one, year three and year five. According to CDHE's ROI report, the calculation of wage earnings begins two quarters after the graduation quarter. Therefore, year one wage is the sum of earnings from 3rd quarter to 6th quarter after graduation. Year three wages are the sum of earnings from the 11th quarter to 14th quarter after graduation. Year five wage is the sum of earnings from 19th quarter to 22nd quarter (Q) after graduation. For example, spring 2012 cohort graduated in May 2012 (Figure 61). Their median year one wage is the median of earnings from Q1 2013 to Q4 2013, median year three wage is the median of earnings from Q1 2015 to Q4 2015, and median year five wage is the median of earnings from Q1 2017 to Q4 2017.

Two thresholds are implemented: (1) number of quarters employed and (2) state minimum wage. Graduates who are employed less than four quarters by the end of 6th quarter after graduation are excluded from year one wage calculation; graduates who are employed less than five quarters by the end of 14th quarter or by the end of 22nd quarter are excluded in year three wage and year five wage calculation. Graduates who earned less than the state minimum wage are also excluded.

Figure 61 – Wage calculation for spring 2012 cohort

Calendar Year	Q1	Q2	Q3	Q4
2012		Graduated	1st Quarter	2nd Quarter
2013 (1-Year Wage)	3rd Quarter	4th Quarter	5th Quarter	6th Quarter
2014	7th Quarter	8th Quarter	9th Quarter	10th Quarter
2015 (3-Year Wage)	11th Quarter	12th Quarter	13th Quarter	14th Quarter
2016	15th Quarter	16th Quarter	17th Quarter	18th Quarter
2017 (5-Year Wage)	19th Quarter	20th Quarter	21st Quarter	22nd Quarter

Race/ethnicity: IPEDS's definition of race/ethnicity is used in this report.

Students of color: All race/ethnicity except for non-resident alien, unknown and white.