

PROGRAM HISTORY

Concurrent enrollment (CE) is one of three accelerated programs available to Utah high school students. Concurrent enrollment provides an opportunity for prepared high school junior and senior students to take selected college courses while still in high school. Students earn both high school credit for graduation and college credit corresponding to the first year at a USHE institution. Concurrent enrollment begins a student's college experience: the grade(s) earned create a permanent college transcript. This program, which originated in 1985 in Utah with what is today Utah Valley University, was formally established by the Utah State Legislature in 1988. The legislature appropriated funds for the concurrent enrollment program in 1995.

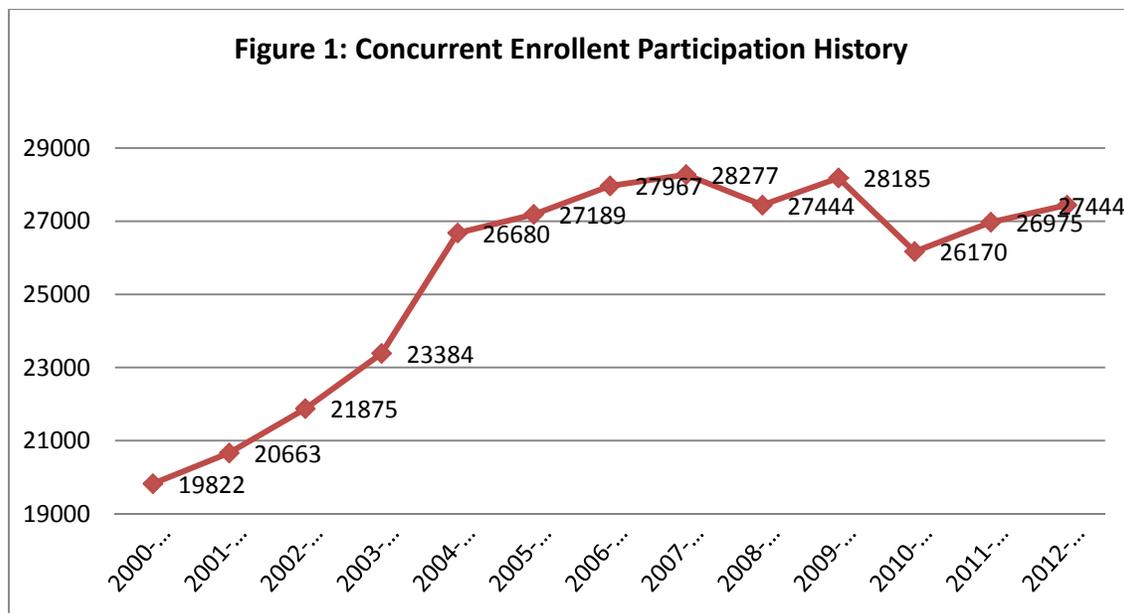
Program Benefits

Concurrent enrollment:

- Increases access to higher education across the state.
- Provides rigorous course opportunities senior year.
- Establishes a more seamless connection between K-12 and postsecondary systems.
- Shortens the pathway for certificate or degree completion as required courses are completed.
- Provides an early assessment of a student's ability to do college-level work.

ENROLLMENT

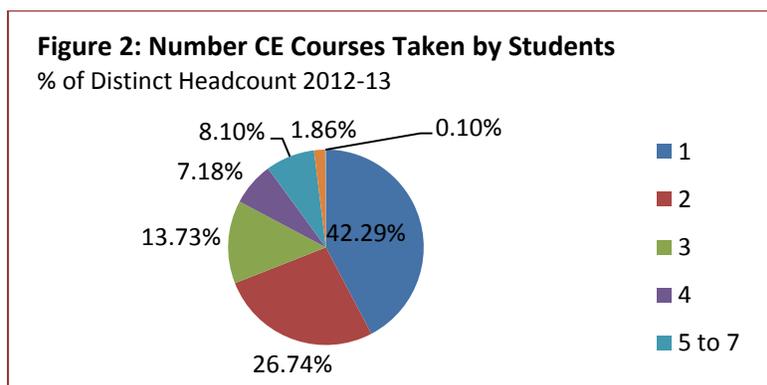
Program participation, which grew steadily from a handful of students in the late 1980s to 19,822 in 2000-01, has stabilized in the last seven years (see Figure 1). In 2010-11, there was a slight dip in student participation due in great part to elimination, by legislation, of several high enrollment courses typically taught in 10th grade. The 27,444 students who participated in the concurrent enrollment program in 2012-13 represent 36.6%* of all juniors and seniors counted in the average daily membership for public high school students.



*From Superintendent's Annual Report, SY 2012-2013, www.schools.utah.gov/data/Superintendents-Annual-Report/AR-2012-2013.aspx

Course Taking Patterns

83% of students enrolled in concurrent enrollment take one to three classes, with only .10% of students taking 12+ classes.



CREDIT AWARDED

In 2012-13, participating students registered in 66,119 classes. Students earned 189,417 semester credit hours; 65.49% of earned concurrent enrollment credit was general education credits; 93.7% of the credit earned fell within the categories of credit described in Regent policy R165: highly transferrable general education courses and select career and technical education (CTE) courses (see Table 1 for detail; see Table 2 for five-year trend). Other Academic credits, classes that are neither general education nor CTE courses, were earned in a small number of classes, primarily classes that serve as gateways to majors pathways, including MATH 1060, MATH 1210, OSS 1060, EDUC 1010, FIN 1010, NUTR 1020, ART 1540.

Category	Sub-category	Credits	Percentage
Core General Education	Quantitative Reasoning	18604	
	Composition	17691	
	American Institutions	9513	
	Fine Arts	9726	
	Humanities	9411	
	Social Science	19539	
	Life Science	8210	
	Physical Science	7617	
		100311	52.95%
	Labs for science classes		1347
Institution-Specific Graduation		5417	2.86%
Foreign Language classes		6256	3.30%
Preparatory Math	Math 1010	10727	5.66%
	TTL GenEd Credits	124058	65.49%

Category	Sub-category	Credits	Percentage
	CTE credits	53421	28.20%
	Non-CTE	11948	6.31%
	TTL Non-GenEd Credits	189427	100%

	2008-09	2009-10	2010-11	2011-12	2012-13
Total General Education Classes	62.57%	66.71%	66.12%	65.37%	65.49%
Non General Education CTE credits	29.53%	26.66%	26.37%	27.99%	28.20%
Other Academic credits	7.90%	6.62%	7.51%	6.63%	6.31%

Top Enrolling Courses

Of the 15 top enrolling CE classes, 13 are general education (MATH 1010 is preparatory for MATH 1030 or 1050; MATH 1060 can fulfill the Quantitative Reasoning requirement), three are CTE courses. These 15 classes represent nearly 45% of total CE enrollments. These courses have been consistent top enrolling courses since 2006-07, when this data was first evaluated. Ten of the top enrolling classes have been developed for hybrid Technology Intensive Concurrent Enrollment (TICE) delivery (see notation on table).

No. Institutions offering class	Course Prefix	Course Number	Course Title	GenEd Type*	No. Enrollments	Cumulative % of TTL Enrollments
8	ENGL/WRTG	1010	Intro to Writing TICE	C	5525	8.36%
7	MATH	1050	College Algebra TICE	QR	4539	15.22%
5	MAT, MATH	1010	Intermed Algebra TICE	Prep	2843	19.52%
4	HTHS/MA/NURS/HLOC	1000, 08/1100,01	Medical Terminology		2173	22.81%
6	PSY	1010	General Psychology TICE	SS	2011	25.85%
5	POLS	1100	American Natl Govt TICE	AI	1740	28.48%
7	MATH	1060	Trigonometry TICE		1710	31.07%
7	HIST/USU	1700/1300	American Civ	AI	1470	33.29%
4	HU/HUM/HUMA	1010/110	Intro to Humanities TICE	H	1333	35.31%
6	BIOL	1010	General Biology TICE	LS	1213	37.14%
6	MUSC	1010	Intro to Music TICE	FA	1174	38.92%
1	FHS	2400	Marriage/Family Relat	SS	1123	40.61%
6	CHEM	1010	Intro to Chem TICE	PS	986	42.11%
2	COMM	2110	Interpersonal Comm	H	943	43.53%
4	NFS/NUTR	1020	Sci Fndtns Human Nutr	LS	885	44.87%

*C = composition; QR = Quantitative Reasoning; AI = American Institutions; SS = Social Science; PS = Physical Science; LS = Life Science; H = Humanities; FL = Foreign Language. Grey cells denote CTE courses.

INSTITUTION/DISTRICT PARTICIPATION

During the 2012-13 year, 145 public, charter, and alternative high schools participated in the concurrent enrollment program. Students from all USOE districts earned concurrent credit. USHE institution participation is shown by percentage in Figure 3. Salt Lake Community College administers the largest USHE program, and in fact, has one of the largest single-institutions programs in the country. The University of Utah offers concurrent enrollment courses in partnership with one early college high school, the Academy of Math Engineering and Science.

Figure 3: Students Enrolled 2012-13

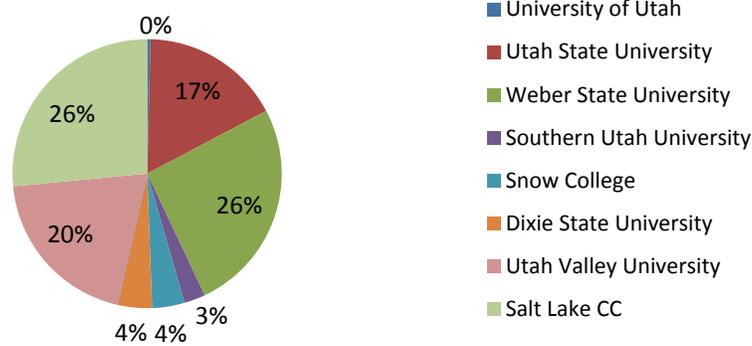


Table 4 shows the change in student participation by institution from the previous year.

	11-12*	12-13*	Net Change
University of Utah	92	119	27
Utah State University/USU Eastern	5,654	5,100	-554
Weber State University	7,036	7,766	730
Southern Utah University	628	771	143
Snow College	751	1,175	424
Dixie State University	1,188	1,248	60
Utah Valley University	6,826	6031	-795
Salt Lake Community College	7,961	8,006	45
Total	30,136	30,216	80
Total Distinct	27,012	27,444	432

*Distinct headcount by institution; TOTAL list students more than once who took classes from multiple institutions.

Delivery Method

In 2012-13, 79% of concurrent enrollment courses were taught by adjunct high school teachers face-to-face in a high school during the regular school day. The remaining CE courses were taught by USHE, 14% in distance learning situations, 7% involving high school students attending class on a USHE campus or, in one instance, campus faculty traveling to a high school campus. Technology-delivered instruction rose from 9% in 1998-99 to a program high of 19% in 2006-07 and has remained around 15-17% for five years. Where the CE program has used EDNET or IVC to delivery CE courses for 20 years, USHE institutions did not begin to offer online delivery as an option until 2006-07. In 2012-13, 1% of the credits earned were delivered exclusively online.

USHE institution participation varies in terms of delivery method used. Where Weber State University and Salt Lake Community College’s programs are almost exclusively face-to-face instruction in the high school, roughly one-third of the credits earned through Utah Valley University and Utah State University are faculty-taught over EDNET. Over two-thirds of Dixie State College concurrent earned credit involves high school students coming on campus for instruction. SUU delivers CE courses online.

Instructors

After five years at 75% adjunct-led instruction, in 2012-13, 77% of concurrent enrollment instruction was provided by high school teachers who meet adjunct instructor qualifications within an institutional academic department. Many CE adjunct instructors also have teaching appointments for campus classes. The CE instruction provided by USHE faculty takes two paths: 1. courses originating on a USHE campus and delivered via IVC or EDNET to receive sites in high schools across the state; 2. students attending class on an institution campus.

STUDENT DEMOGRAPHICS

Race/Ethnicity

The ethnic makeup of concurrent enrollment students, reported since 2006-07, suggests improvements can be made engaging Hispanic and ethnic minority populations in the CE program (see Table 5).

TABLE 5: 2012-13 CE Student Race/Ethnicity			
Race/Ethnicity	2012-13	Net Change since 06-07	Total 2012-13 11-12 grade USOE population*
Asian	2.12%	0.03%	1.7%
Black	0.82%	0.23%	1.3%
Hispanic	9.70%	4.85%	16%
American Indian/Native Alaskan	0.69%	-0.02%	1.1%
Non-Resident/Alien	0.11%	-0.09%	NA
Pacific Islander/Hawaiian	0.91%	0.13%	1.5%
White	84.35%	-6.45%	77%
Two or more races	1.30%	1.30%	2%
Unknown	NA	NA	NA

**from USOE, Fall Enrollments by Race/Ethnicity and Gender SY 2012-2013, www.schools.utah.gov/data/Superintendents-Annual-Report/AR-2012-2013.asp*

Gender

Gender has remained the same since 2006-07: 54% of participating students are female, 46% are male.

PROGRAM QUALITY

Over the last five years, great emphasis has been placed on improving advising for students participating in the concurrent enrollment program to ensure the credit they earn serves both to graduate from high school and to lay a foundation for college success in a certificate or degree program. Emphasis has also been placed on ensuring all classes offered for concurrent enrollment are part of a certificate or degree program. USHE CE programs have dedicated advisors for concurrent enrollment students.

Advising/Gen Ed Pathway

In part, as a result of emphasis on general education course taking, nearly 60% of the concurrent enrollment earned credit is general education credit. In addition to individual USHE institution advising and high school counseling efforts, the USHE and USOE system offices publish the USHE General Education Pathway document (see Attachment A), which illustrates how certain concurrent enrollment classes fulfill USHE general education graduation requirements. With three exceptions noted, the courses on the grid transfer as equivalent credit and are counted as the same type of general education credit across the USHE. Students are advised to select one class from each of the eight general education “categories” to ensure all credit will transfer and count toward their chosen post secondary

program. Several course options are provided in each breadth category to ensure state-wide access. Since 83% of students complete six or fewer concurrent enrollment classes in the two years of CE program participation, the guidelines, if followed, eliminate the risk of redundant credit or unstructured accumulation of credit.

Table 6 shows, by district, the number of general education categories out of eight possible where students earned credit during 2012-13. Thirty-eight of 41 districts had enrollments in at least six classes from the pathway grid. Detail in which classes were offered by district is found in Attachment B. Efforts could be made to increase opportunities for students to take Humanities General Education classes and lab-based General Education science classes.

No. Districts		No. Categories Offered
1	Park City (this district partners with Westminster College for private CE offerings)	0
2	Grand, Salt Lake	4
0		5
9	Box Elder, Emery, Garfield, Iron, Kane, Logan, Ogden, Sevier, Tintic	6
10	Carbon, Daggett, Duchesne, Morgan, North Sanpete, Piute, San Juan, South Sanpete, Tooele, Uintah	7
19	Alpine, Beaver, Cache, Canyons, Davis, Granite, Jordan, Juab, Millard, Murray, Nebo, North Summit, Provo, Rich, South Summit, Wasatch, Washington, Weber	8

Technology Intensive Concurrent Enrollment (TICE)

In 2011, the Utah State Legislature appropriated \$2.46M to create technology-delivered general education concurrent enrollment courses. TICE courses are being designed by faculty teams as hybrid courses having a blend of different learning activities that take place in class and online. Fifteen TICE classes have been approved for concurrent enrollment (See Attachment C). TICE course use common assessment to ensure quality of instruction. The delivery method assures TICE course could be a significant part of a solution to guaranteeing equal access to CE opportunities to all Utah high school students.

OUTCOMES

USHE College Going Rate for Concurrent Enrollment Students

The college going rate refers to students who go immediately to college after high school graduation. For the cohort of 12,880 students who took concurrent enrollment classes 2009-10 in their senior year, 71% enrolled immediately in a college Fall 2010; 86% of these enrollments were in USHE institutions (see Table 7). This figure compares favorably to the 53.5% college going rate for all Utah 2010 graduating seniors and a national rate of 62.5% as reported by NCHEMS². (NOTE: The state college going rate was for 2008 was 58.5% compared to a national rate of 63.3%.) The data also suggests that students are likely to attend the institution from which they earned concurrent credit.

¹ Figure represents duplicate headcount: students taking concurrent classes from more than one institution will be counted once for each institution. In 2009-10, 1,905 students took classes from multiple institutions, a significant reduction from 2008-09, where 3147 students took classes from multiple institutions.

² www.higheredinfo.org/dbrowser/index.php?submeasure=63&year=2008&level=nation&mode=graph&state=0

	UofU	USU	WEBER	SUU	SNOW	DSU	UVU	SLCC	TOTAL
UofU	24	170	225	3	6	18	147	598	1191
USU	4	899	374	12	22	24	228	366	1929
Weber	1	413	997		9	4	47	203	1674
SUU		199	58	87	69	61	143	144	761
Snow		146	72	4	151	8	179	101	661
DSC		84	69	11	24	242	71	76	577
UVU		137	93	4	32	19	638	243	1166
SLCC	19	120	85		3	7	41	924	1199
BYU	1	107	107	5	6	16	273	166	681
LDSBC		3	8		1		4	25	41
Westminster	5	21	12	1	4	1	23	79	146
In-State Private			1				2	5	8
BYU Idaho		41	40		3	8	51	54	197
Out-of-State Public	2	26	19	1		1	17	36	102
Out-of-State Private	1	53	67	2	6	11	31	85	256
TOTAL FOUND	57	2419	2227	130	336	420	1895	3105	10589
Unknown	15	754	865	34	102	173	627	1110	3680
TOTAL	72	3173	3092	164	438	593	2522	4215	14269

*Data provided by the Utah Data Alliance.

**Table 7 Explanation: Snow College provided concurrent instruction to 438 seniors in 2009-10. By checking the UDA database, 336 college records can be found for the 438 seniors. Of the 336 seniors, 151 attended Snow College Fall 2010. In total, Snow College enrolled 661 of the 10589 seniors in the 2009-10 cohort in Fall 2010-11.

Student Retention

Retention rate refers to students who return to enroll the second year. Some participation in the concurrent enrollment program may lead to higher retention rates: of the 2009-10 seniors cohort who enrolled in college Fall 2010, 73% of those former CE students returned Fall 2011 compared to 63% of all first time freshmen in the 2009-10 population (see Table 8).

	Started Fall 2010	Returned Fall 2011	% Retained
UofU	1191	1025	86.1%
USU	1929	1287	66.7%
Weber	1674	1270	75.9%
SUU	761	520	68.3%
Snow	661	362	54.8%
DSC	577	365	63.3%
UVU	1166	834	71.5%
SLCC	1199	1025	85.5%

*Data provided by the Utah Data Alliance

Tuition Savings to USHE Students

USHE estimates Utah secondary students would have paid \$27.7M tuition for the 189,417 concurrent enrollment credit hours award FY 2012-13 (see Table 8). This figure was derived using resident, or in-state, tuition tables; calculating the incremental different in tuition between one and two credits removes campus student fees embedded in the first credit.

TABLE 8: 2012-13 Estimated Tuition Cost Savings from Concurrent Enrollment*			
Institution	Earned Credits	Incremental Tuition Cost between 1-2 credit hours	Estimated Cost Savings
UU	1,296	\$174	\$225,763
USU	31,144	\$173	\$5,375,143
WSU	39,772	\$162	\$6,459,371
SUU	5,503	\$233	\$1,282,199
SNOW	7,085	\$63	\$446,355
DSU	8,411	\$145	\$1,215,726
UVU	39,086	\$159	\$6,214,674
SLCC	57,120	\$115	\$6,568,800
TOTAL	189,417		\$27,788,031

*Calculated from resident tuition schedules using credit hours from distribution formula. 52A-17A-120.5 Section 5(b) requires this data be reported annually.

Time to Completion

Time to Completion refers to the number of semesters a student takes to successfully complete a certificate or degree. USHE analysis of the impact of college credits earned through concurrent enrollment, advanced placement (AP), International Baccalaureate (IB) or CLEP exams found that college credit hours earned by secondary students result in a statistically significant difference in the number of semester needed to graduate post-high school when compared to a student who did not earn any college credits while in high school (See Attachment D for the complete study). The impact in reduction of semesters needed to complete an associate degree is more significant than the semesters needed to complete a bachelor degree. Students who take advantage of college work while still enrolled in high school have the ability to save significant amounts of money paid for tuition and fees over their college career.

CE MATH Performance/Course Taking Patterns

FY1213, there were 2843 enrollments in CE MATH 1010; total USHE enrollments in MATH 1010, including the CE enrollments was 23598. CE and total enrollments for MATH 1050 were 4539 and 20,186, respectively. Figures 4 and 5 show grades awarded CE students in blue, grades awarded to all USHE students in green. The fact that concurrent enrollment students received higher percentages of A and B grades is likely a result of the program: CE appeals to students seeking a more rigorous junior and senior year and counselors vet students for performance, such as 3.0 GPA or 22 ACT composite score, which indicates readiness for college instructor. The more significantly smaller numbers of CE students who failed or withdrew from CE Math courses, may be due, in part, to the population but also due to the fact that, as secondary students, they are functioning in a more structured environment where attendance is compulsory.

Figure 4: FY2012-13 MATH 1010 grades: CE students v. total USHE student population



Figure 5: FY2012-13 MATH 1050 grades: CE students v. total USHE student population



USHE also conducted a study of Math enrollments to ascertain if there was any impact on taking Math 1010 concurrent enrollment credit. Aggregate data for grades awarded for Math 1010 during 2010-11 and an advanced Math class any time between 2010-11 and 2012-13 is shown in Table 9.

TABLE 9: Student performance in a Math sequence		
	Student Status	Outcome
CE Math 1010 ONLY	Student took only Math 1010 as a concurrent enrollment student and has not taken a higher level math course.	NA
CE to CE	Student took both Math 1010 and a subsequent Math course as concurrent enrollment courses.	The student earned, on average, a one grade step (e.g. A- over a B+ or a .40 grade points) higher in a subsequent math course than students who took the subsequent math course at a college or university.
CE to College	Student took only Math 1010 as a concurrent enrollment student and a subsequent Math course as a college student.	On average, there is not a significant differences in the grade earned in a subsequent math course when comparing a student who took math 1010 as concurrent enrollment and one who completed math 1010 at a college or university.
College to College	Both Math 1010 and the advanced math courses were taken as a regular college student.	

FUNDING HISTORY

The state-wide concurrent enrollment program has been supported by legislative appropriation since 1995-96. Table 9 lists the annual appropriation, including one-time and supplemental funds.

Year	Ongoing	One-Time	Supplemental	TOTAL
1995-96	\$2,044,856		\$400,000	\$2,444,856
1996-97	\$2,554,591	\$207,000		\$2,761,591
1997-98	\$3,494,241		\$1,450,800	\$4,945,041
1998-99	\$4,610,898			\$4,610,898
1999-00	\$4,701,173			\$4,701,173
2000-01	\$4,960,838		\$650,000	\$5,610,838
2001-02	\$6,149,390			\$6,149,390
2002-03	\$5,310,029			\$5,310,029
2003-04	\$5,354,633			\$5,354,633
2004-05	\$5,354,633			\$5,354,633
2005-06	\$5,541,959			\$5,541,959
2006-07	\$8,292,311			\$8,292,311
2007-08	\$9,215,497			\$9,215,497
2008-09	\$8,705,286			\$8,705,286
2009-10	\$8,531,186			\$8,531,186
2010-11	\$8,531,186			\$8,531,186
2011-12	\$8,531,186			\$8,531,186
2012-13	\$8,893,300			\$8,893,300

ATTACHMENT A/ CAO GenEd Pathway Document

**Academic Year 2011-12 Concurrent Enrollment General Education Pathway:
Recommended First Year College Experience**

Concurrent enrollment provides an opportunity for prepared high school students to take selected college courses while still in high school. Students earn both high school credit for graduation and college credit corresponding to the first year at a USHE institution. Concurrent enrollment begins a student's college experience: the grade(s) earned create a permanent college transcript.

General education courses are highly advisable for concurrent enrollment because they are required for college graduation and are transferable from one USHE institution to another. The grid below shows the general education requirements outlined in Board of Regents policy R470. Individual institutions may have additional unique requirements.

1. **Select one class from each general education category***. Classes listed here are offered by the institution indicated in partnership with local districts and/or by distance delivery. **Core** courses make up the general education foundation. **Breadth** courses give an opportunity to explore various subjects. **NOTE:** There are many classes in each breadth category which may be substituted for those listed here. Before registering, ask a campus advisor if the class will “transfer as equivalent” credit to the institution you wish to attend. *Factor in all the credit you earn while still in high school – concurrent, early college, IB, and AP.
2. **Speak with an expert about classes.** You are highly encouraged to meet with an academic adviser, preferably from the campus you intend to enroll after high school, before registering. An advisor can help you select classes that fit your educational goals and ensure the classes you take are part of a pre-major pathway. Campus advisor contact information is listed on the flip side.
3. **Register.** Good luck and welcome to the Utah System of Higher Education.

	Credits Required	Recommended General Education Courses	Institutions Offering Concurrent Course						
General Education Core (12 credits)	Composition 1 (6 credits*)	ENGL 1010 (3 credits) Available in TICE format	USU	WSU	SUU	Snow	DSU	UVU	SLCC
	Quantitative Literacy (3 credits) <i>Select ONE of these courses</i>	MATH 1030 (3 credits) Available in TICE format			SUU				
		MATH 1040 (3 credits)			2		DSU		SLCC
		MATH 1050 (3-4 credits) Available in TICE format	USU		SUU	Snow	DSU	UVU	SLCC
	American Institutions (3 credits) <i>Select ONE of these courses</i>	HIST 1700 (3 credits)	USU	WSU	SUU	Snow	DSU	UVU	SLCC
		ECON 1740 (3 credits)							SLCC
POLS 1100 (3 credits) Available in TICE format		USU		SUU	Snow	DSU	UVU		
General Education Breadth (18 – 27 credits)	Fine Arts <i>Select ONE of these courses</i>	ART 1010 (3 credits) Available in TICE format	USU	WSU	SUU	Snow	DSU	UVU	SLCC
		MUSC 1010 (3 credits) Under development for TICE	USU	WSU	SUU	Snow	DSU	UVU	SLCC
		THEA 1013 (3 credits)	USU	WSU	SUU	Snow	DSU	UVU	
	Humanities <i>Select ONE of these courses</i>	HU/M 1010/1100 (3 credits) Available in TICE format	3		SUU	Snow	DSU	UVU	SLCC
		COMM/CMST 2110 (3 credits)	USU	WSU			DSU	UVU	
		ENGL 2200 (3 credits)/ ENGL 2236 (3 credits) SNOW	USU		SUU	4	DSU	UVU	
	Social & Behavioral Science <i>Select ONE of these courses</i>	PSY 1010 (3 credits) Available in TICE format	USU		SUU	Snow	DSU	UVU	SLCC
		CHF/FAML/FCHD/FCS/FHS(T) 1500 or PSY 1100 (3 credits) Under development for TICE	USU	WSU		Snow	DSU	UVU	SLCC
	Life Science <i>Select ONE of these courses</i>	BIOL 1010 (3 credits) Under development for TICE	USU		SUU	Snow	DSU	UVU	SLCC
		NUTR/NFS 1020 (3 credits)		WSU	SUU		DSU	5	
Physical Science <i>Select ONE of these courses</i>	CHEM 1010 (3 credits) Available in TICE format	USU		SUU	Snow	DSU	UVU	SLCC	
	CHEM 1110 (3-5 credits)		WSU	SUU		DSC		SLCC	

ATTACHMENT C/Technology Intensive Concurrent Enrollment Course Offerings

Phase	Course	Title	Lead Institution	GenEd Type	PE Course Alignment	11-Digit Code	PE Credit Type
CORE GENERAL EDUCATION							
1	ENGL 1010	Introduction to College Writing	WSU	Composition	Expository Writing I CE	06010013115	Elective
3	ENGL 2010 (Pilot ONLY)	Intermediate Writing	WSU	Composition	Expository Writing II CE	06010013116	Elective
2	POLS 1100	US National Government	SLCC	American Institutions	US National Government CE	09060013020	Core
1	MATH 1030	Mathematical Decision-Making	UofU	Quantitative Reasoning	Decision Making for Life CE	07070013090	Elective
2	MATH 1050	College Algebra	SLCC	Quantitative Reasoning	Precalculus Elective CE	07040013020	Elective
BREADTH GENERAL EDUCATION							
1	ART 1010	Introduction to Visual Arts	DSU	Fine Arts	Art History CE	02010013020	Elective
2	MUSC 1010	Introduction to Music	Snow	Fine Arts	Music Appreciation CE	02040013020	Core
2	HUM 1010	Essentials of Humanities	SLCC	Humanities	Humanities CE	06010013080	Elective
1	PSY 1010	Intro to Psychology	USU	Social Science	Psychology Elective CE	09070013010	Elective
2	CHEM 1010/1015	Introduction to Chemistry with Lab	UVU	Physical Science	Chemistry with Lab CE (if both class & lab are taken)	08030013012	Core
3	BIOL 1010/1015 (Pilot ONLY)	Introduction to Biology	UVU	Life Science	Biology with Lab CE (if both class & lab are taken)	08010013010	Core
PREPARATORY/OTHER							
1	MATH 1010	Intermediate Algebra	UofU		College Prep Math CE	07070013060	Elective
2	MATH 1060 (Pilot ONLY)	Trigonometry	SLCC		Precalculus Elective CE	07040013020	Elective
CTE ENTRY COURSES							
2	1010	Intro to Engineering & Technical Design	SUU		Technical Drafting I CE	4010001030	Elective
3	ARCH 1020 (Pilot ONLY)	Fundamentals of Architectural Drafting	WSU		Architectural Design I CE	40100013025	Elective

**ATTACHMENT D/Time to Completion Analysis
November 2013**

Purpose

The purpose of this analysis is examine the impact of college credits earned through concurrent enrollment, advanced placement (AP), International Baccalaureate (IB) or CLEP exams while a student is still enrolled in High School on the amount of time needed to complete an associate or bachelor’s degree. The financial impact on student costs related to tuition and fees is estimated as part of the evaluation of the benefits of early college course completions.

Definitions

High School Credits: Credits earned while a student is designated as a concurrent enrollment, dual enrolled, or an early admit student. The student continues to be enrolled as a high school student while taking college courses. Credits earned for AP, IB, and CLEP tests are included in this count.

College Semesters: The number of semesters/terms enrolled at the degree granting institution where the student was not also considered a high school student.

Semesters Saved: The Difference in the average number of semester enrolled for a group with relation to the average number of semester enrolled for a student without any college credits earned while in High school.

Method

Student who completed either an associate or bachelor’s degree in the academic year of 2012 were identified and their historical enrollment data was gathered from the USHE student database. Students were categorized into one of six groups based on the number of college credits earned while they were still in high school either through concurrent enrollment, dual enrollment or credit by test (e.g. AP, IB, CLEP) The six groups created were:

Group	Definition
0	No credit earned while in high school
1	1 to 15 credit hours
2	16 to 30 credit hours
3	31to 45 credit hours
4	46 to 60 credit hours
5	Over 60 credits

A one-way analysis of variance (ANOVA) of the number of college semesters enrolled at the degree granting institution was conducted using a Tukey HSD post hoc test to identify any significant differences in the number of college semesters attended between the six groups. The confidence level for determining statistical significance was set at 95% (Alpha, $\alpha = .05$).

The impact of tuition and fees paid by students who completed an Associate degree has been estimated as the (count of students * number of semesters saved) * tuition & fee rate. The tuition and fee estimate used the amount charged to enroll in 15 credit hours for the full-time tuition and the amount charged to enroll in 6 credit hours for the part-time tuition rate for the academic year 2011-12.

Findings

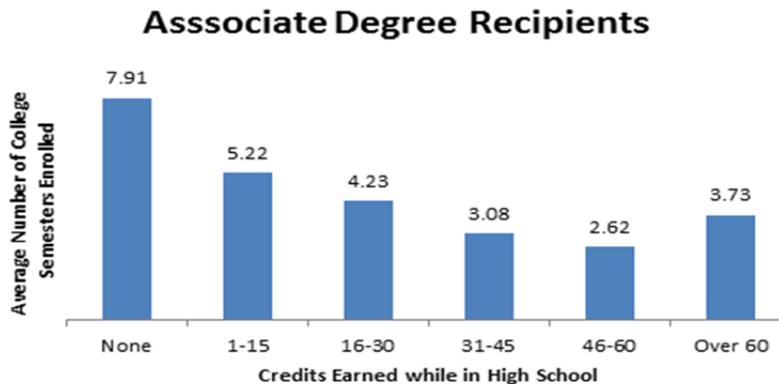
For students who completed an associate degree in 2012, only the group representing students without any college credit in high school (group 0) was statistically different in the number of semesters post-high attended when compared to the other 5 groups (table 1).

Table 1 - Associate Degree Graduates Average Semesters Attended by Credit Group

Associate Degree Earners				
Group	Credits Earned while in High School	N	Average Number College Semesters	Significant Difference w/ groups (p=.05)
0	None	5,947	7.91	1-5
1	1-15	1,925	5.22	0
2	16-30	454	4.23	0
3	31-45	121	3.08	0
4	46-60	42	2.62	0
5	Over 60	15	3.73	0
Total		8,504	7.00	0

While the analysis identifies only one group as being statistically different than the other groups, this may be due in part to small sample sizes of the groups with the greatest number of credits earned while still in high school. A visual display of the data shows a practical relationship between credits earned while in high school and the number of semesters attended at college post high school graduation (figure 1).

Figure 1 – Associate Degrees, Average Semesters Attended Post-High School by Credits Earned Group



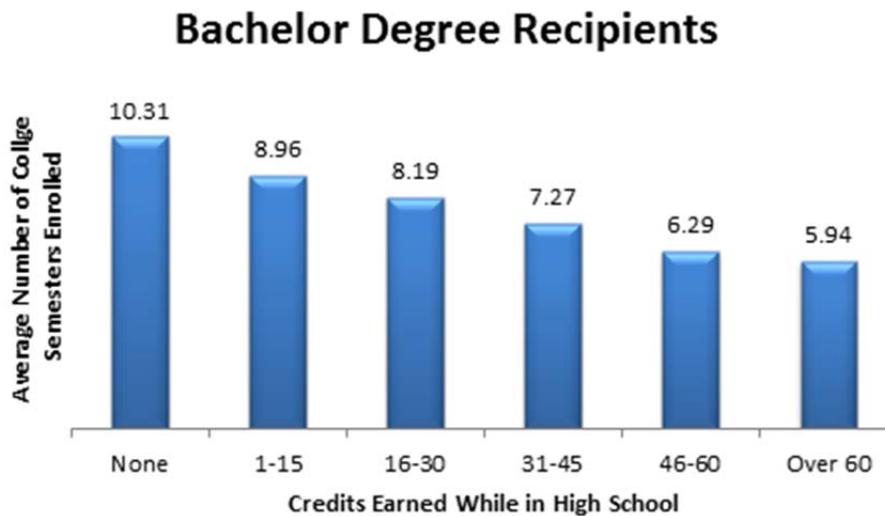
A similar pattern holds true in the analysis of the 2012 bachelor's degree recipients with the exception of group 1 (1-15) also being significantly different from all other groups in terms of the average number of semesters attending the degree granting institution post-high school (table 2).

Table 2 - Bachelor's Degree Graduates Average Semesters Attended by Credit Group

Bachelor's Degree Earners				
Group Number	Credits Earned while in High School	N	Average Number of College Semesters	Significant Difference w/ groups (p=.05)
0	None	7,827	10.31	1-5
1	1-15	1,160	8.96	0, 2-5
2	16-30	286	8.19	0,1
3	31-45	67	7.27	0,1
4	46-60	31	6.29	0,1
5	Over 60	16	5.94	0,1
Total		9,387	10.04	0

As with the associate degree analysis, the sample size and large standard deviation measures impact the ability to determining statistical significance between the bachelor' degree groups. The graphical display of the means illustrates the impact of the number of college credits earned while in high school on the number of college semesters (post high school) needed to complete the bachelor's degree (figure 2).

Figure 2 – Bachelor's Degrees, Average Semesters Attended Post-High School by Credits Earned Group



Student Cost Savings Analysis

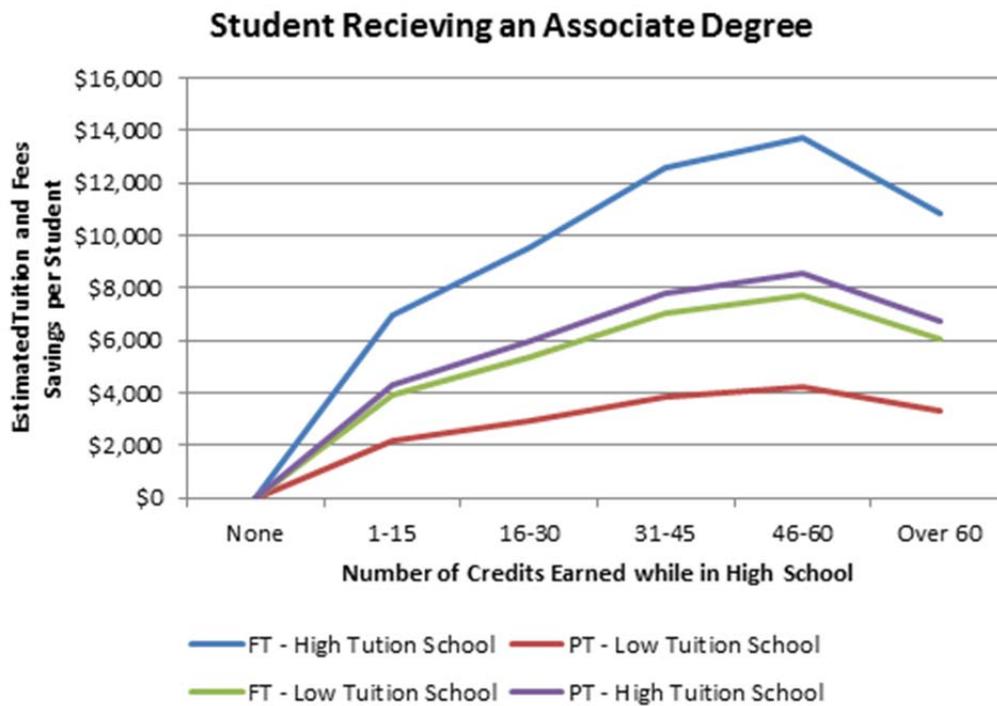
The total estimated amount saved in tuition and fees by student who received an associate degree in 2011-12 ranges from \$6.1 to \$20.0 million depending on assumptions (table 3). This translates to an estimated \$2,100 to \$13,750 per student depending on the number of credits earned in high school, where they went to school after high school graduation and enrollment status (full or part time) (figure 3).

Table 3 - Estimated Total Savings for Associate Degree Earners

Associate Degree							
Hours In HS	Count	Average Semesters	Semesters Saved	Part-time \$ Saving		Full-time \$ Savings	
				Low Estimate	High Estimate	Low Estimate	High Estimate
None	5,947	7.91	0	0	0	0	0
1-15	1,925	5.22	2.69	4,132,200	8,362,900	7,534,400	13,458,300
16-30	454	4.23	3.68	1,333,200	2,698,200	2,430,900	4,342,200
31-45	121	3.08	4.83	466,400	943,900	850,300	1,518,900
46-60	42	2.62	5.29	177,300	358,800	323,300	577,400
Over 60	15	3.73	4.18	50,000	101,300	91,200	163,000
Total	8,504			6,159,200	12,465,000	11,230,100	20,059,800

Total Estimated Savings of CC, AP credits in Tuition & Fee Dollars

Figure 3 - Estimated Per Student Savings by High School College Credits (Associate Degrees)



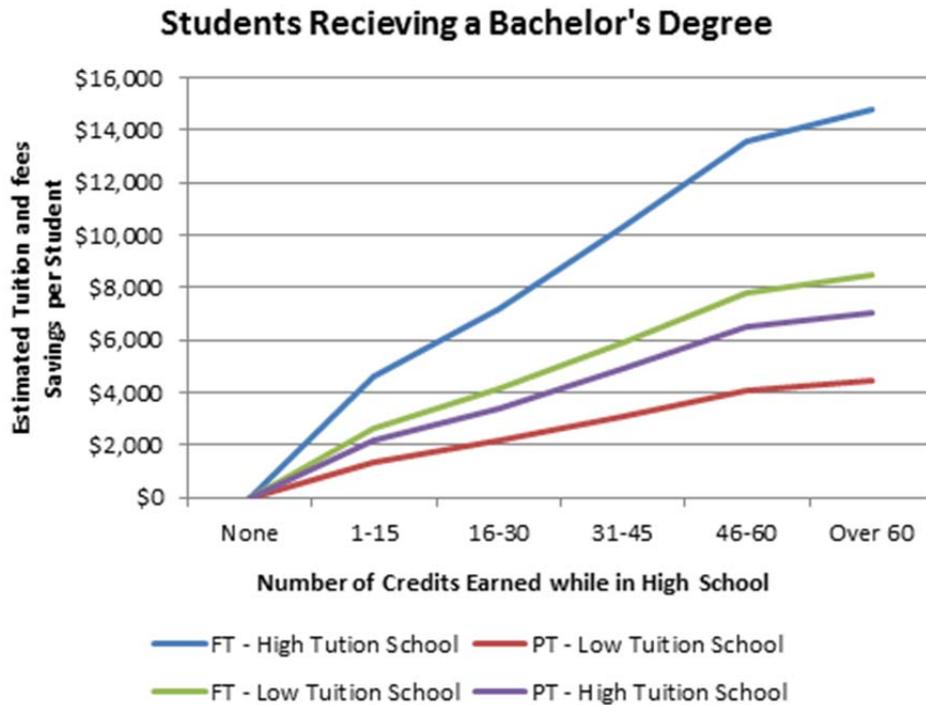
The total estimated amount saved in tuition and fees by students who received a bachelor’s degree in 2011-12 ranges from \$2.6 to \$8.6 million depending on assumptions (table 4). This translates to an estimated \$1,300 to \$13,500 per student depending on the number of credits earned in high school, where they went to school after high school graduation and enrollment status (full or part time) (figure 4).

Table 4 - Estimated Total Savings for Bachelor Degree Earners

Bachelor Degree							
Hours In HS	Count	Average Semesters	Semesters Saved	Part-time \$ Saving		Full-time \$ Savings	
				Low Estimate	High Estimate	Low Estimate	High Estimate
None	7,827	10.31	0	0	0	0	0
1-15	1,160	8.96	1.35	1,594,200	2,529,100	3,044,300	5,295,400
16-30	286	8.19	2.12	617,200	979,200	1,178,700	2,050,300
31-45	67	7.27	3.04	207,300	328,900	396,000	688,700
46-60	31	6.29	4.02	126,900	201,300	242,300	421,400
Over 60	16	5.94	4.37	71,200	112,900	135,900	236,400
Total	9,387			2,616,800	4,151,400	4,997,100	8,692,300

Total Estimated Savings of CC, AP credits in Tuition & Fee Dollars

Figure 4 - Estimated Per Student Savings by High School College Credits (Bachelor Degrees)



Summary

College credit hours earned while a student is still in high school through participation concurrent enrollment, advance placement, International Baccalaureate, or CLEP courses all result in a statistically significant difference in the number of semester needed to graduate post-high school when compared to a student who did not earn any college credits while in high school. When graphing the data, the relationship between hours earned while in high school and fewer semesters later is fairly evident however, in the case of the associate degrees there does appear to be some diminishing returns on the value earned credits that exceed the 60 credit threshold.

Students who take advantage of college work while still enrolled in high school have the ability to save significant amounts of money paid for tuition and fees over their college career. This is especially true if the credits earned while in high school have few, if any, associated costs (e.g. cost to take the A.P. exams).

Additional Study

Recommended additional areas of study would include:

- An equivalency analysis to test the success rates in subsequent course work where the credit earned in high school was a pre-requisite for subsequent course.
- Separate analysis for concurrent enrollment and AP/IB course work.
- An analysis that includes the costs for application, tuition, course fees and exam fees on the overall estimate of savings.