

**El Camino College- Compton Center
Enrollment Growth and Academic Course Performance
Traditional vs. Distance Education Courses, Spring 2011**

This study chronicles the recent growth of online course offerings and enrollments at El Camino College-Compton Center (CEC) and compares academic performance in these courses with their traditional classroom counterparts. Whereas past studies have focused on Fall offerings, this study compares Spring terms. Like terms (spring to spring rather than fall to spring) are used because scheduling patterns and faculty course loads are more likely to follow similar patterns. This gives a better indication of the growth or change in Distance Education (DE).

Student Demographics

Before discussing the academic performance of students in DE courses, it is important to know who these students are. Figure 1 below shows the basic demographic data for the 1,873 students who enrolled in a DE course during the Spring 2011 term. Distance Education students are largely female. Almost 2/3 of Compton students are women, but the percentage of DE students who are women is over 70%. Most of the students are enrolled in less than 12 units for the term. In terms of age and ethnicity, DE students are very similar to the overall student population of the Compton Center. The major races/ethnicities are all within a few percentage points of the campus population. Fifty percent of those enrolled in DE courses are in the typical college going age range of 18 to 24 years. Another 36% are between 25 and 39 years old. For the most part, DE students represent the same population as campus students. The demographic data presented show one semester but similar results can be seen over time.

**Figure 1: Student Demographics
Online Classes- Spring 2011**

Gender	Percent
Female	71.6%
Ethnicity	
Black	47.2%
Asian	7.6%
Latino	32.3%
White	7.5%
Enrollment Status	
Full-Time	21.2%
Age Group	
<18	1.1%
18-20	20.8%
21-24	29.0%
25-29	20.7%
30-39	15.1%
40-49	7.8%
50+	2.8%

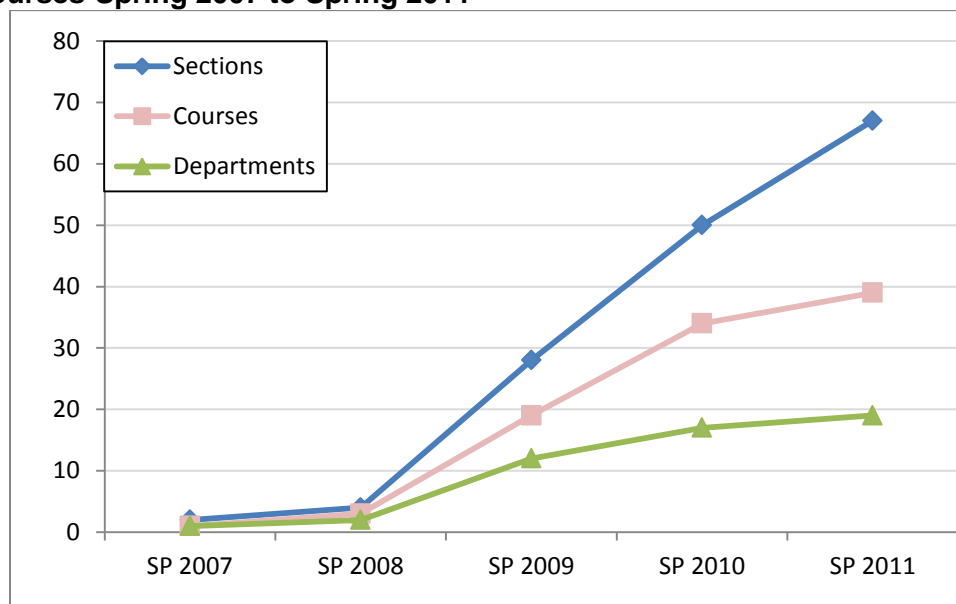
ENROLLMENT GROWTH

The demand for distance education offerings led to an increase in departments, courses, and sections offered since Spring 2007 when only one course was offered online. Spring 2011 saw 39 courses offered, accounting for over 2,500 enrollments. This includes online and hybrid courses. The number of courses, sections, and seats available for students to take through the distance education option has more than doubled in the last two years. Please refer to figures 2 and 3.

**Figure 2: Course, Section and Enrollment Growth
Online Classes- Spring 2007 to Spring 2011**

	SP 2007	SP 2008	SP 2009	SP 2010	SP 2011
Departments	1	2	12	17	19
Courses	1	3	19	34	39
Sections	2	4	28	50	67
Seats	71	113	1,025	1912	2,523
Avg Sec. Size	36	28	37	38	38
Online FTES	7.36	16.01	135.05	250.04	307.7

**Figure 3: Department, Course, and Section Trends
Online Courses-Spring 2007 to Spring 2011**



Source: CCC Chancellor's Office

COURSE OFFERINGS

The following table shows all online courses offered Spring 2011, ordered by department and course. Section and census date seat counts are included. The majority of online courses are UC and/or CSU transferable.

**Figure 4: Online Course Offerings
Spring 2011**

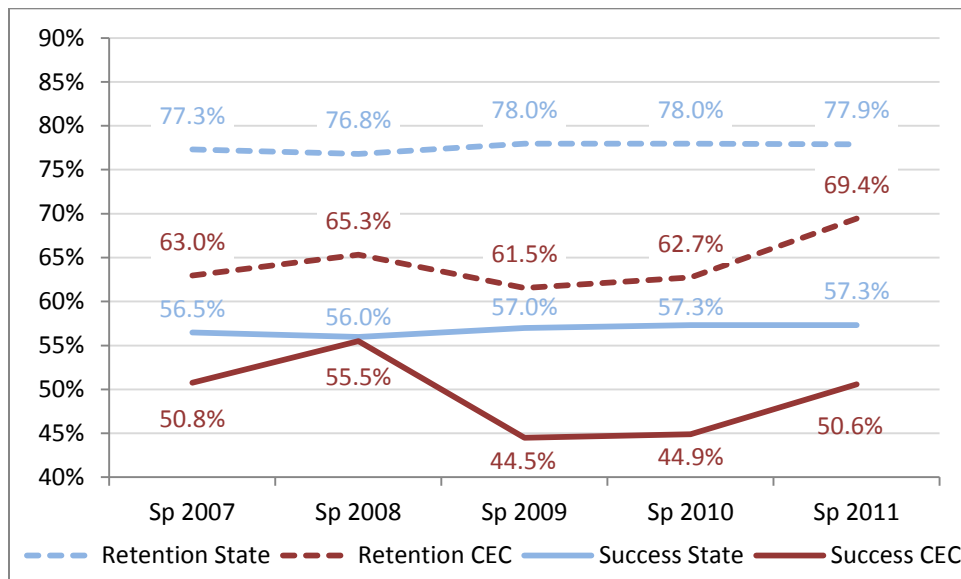
COURSE	TITLE	SECTIONS	SEATS	TRANSFERABLE
AJ-100	Intro to Admin of Justice	1	41	Yes
ANTH-1	Intro to Physical Anthropology	1	45	Yes
ANTH-2	Intro Cultural Anthropology	2	86	Yes
ART-1	Art/Visual Cultr in Modrn Life	2	96	Yes
AS-60	Stratgy-Success in Distance Ed	2	43	No
BUS-19	Principles Retail Management	1	26	Yes
CDEV-104	The Home, School, Community	1	27	Yes
CDEV-122	Development - School Age Child	1	41	Yes
CDEV-154	Role/Responblty Spec Ed Assist	1	34	Yes
CH-1	Persnl/Commnty Health Issues	2	93	Yes
CIS-13	Intro-Compnr Info System	4	160	Yes
CIS-134	Web Programming	1	34	No
CIS-19	Intro Internet/Web Publishing	1	26	No
CIS-26	Using Spreadsheets	1	22	Yes
ECON-2	Princ Economics:microecon	1	54	Yes
ENGL-1A	Reading and Composition	4	130	Yes
ENGL-1B	Literature/Composition	1	28	Yes
ENGL-1C	Critical Thinking/Comp	2	62	Yes
ENGL-27	Children's Literature	1	47	Yes
HIST-101	U.S. History to 1877	4	101	Yes
HIST-102	U.S. History - 1877-Present	2	35	Yes
HIST-141	History of Modern Civilizations	1	40	Yes
HUMA-1	An Introduction to the Humanities	4	180	Yes
MATH-150	Elemntry Statistcs W/Probabty	1	44	Yes
MATH-40	Elementary Algebra	1	36	No
MATH-73	Intermediate Algebra Gen Ed	2	65	No
MATH-80	Intermed Alg - Sci/Engr/Math	1	28	No
MUSI-11	Music Appreciation-Survey	2	90	Yes
NFOO-11	Nutrition	1	50	Yes
PHIL-10	Hist Ancnt/Medvl/Philsphy	1	27	Yes
PHIL-3	Ethics and Society	1	44	Yes
PHIL-8	Introduction to Logic	2	63	Yes
POLI-1	Governments US/Calif	3	144	Yes
POLI-10	Intro-Interntl Relations	1	43	Yes
PSYC-3	Crit Thinking and Psychology	1	40	Yes
PSYC-5	General Psychology	4	178	Yes
SOCI-101	Introduction to Sociology	2	96	Yes
SOCI-102	The Family	2	88	Yes
SOCI-104	Social Problems	1	36	Yes

ACADEMIC PERFORMANCE

This section addresses the academic performance of students in online courses. Metrics for assessing academic performance include the success and retention rates of students taking distance education courses. First, success and retention comparisons for the entire El Camino College-Compton Center distance education program are compared with the overall state rates. Next, success rates are compared for courses which are offered in both traditional and distance modes. These side by side comparisons have been clustered by academic division and disaggregated by course.

Figure 5 illustrates the comparison between local success and retention rates with those of the state for all distance education offerings. The California Community College Chancellor's Office defines success rates as the percentage of students who receive a grade of A, B, C, or P. Retention rates are the percentage of students who stayed in the course until the end, thus did not receive a notation of DR or W. Figure 5 shows the success rates for distance education in the state have remained steady at around 57%. The success rates for CEC have averaged about 7 points lower than the state rate. There are some fluctuations but the rates are still at 50%. Retention rates have been rising but they are still far below the state rates. The state rate has been consistently around 78%. The CEC rate has risen from 63% to 69.4% within the last five years.

**Figure 5: Success and Retention Rates for Online Courses
Local vs Statewide- Spring 2007 to Spring 2011**



As a whole, there does not appear to be much difference in the outcomes for online and traditional courses although there are some noticeable differences in outcomes for individual courses which are taught both online and on campus. Overall, online success rates were about 6 points lower than traditional classroom success rates for the same courses, while online retention was only 3 points lower. Figure 6 examines students' academic performance in online vs.

traditional classes in terms of successful course completion (success rate) and retention in the course. The difference in rates is found in the columns at the right where negative differences indicate traditional courses are performing better and bold shaded numbers show courses where online sections have better outcomes.

Even though the overall difference is not great, examination of the chart shows some very large differences in outcomes for certain classes, departments, or divisions. For example, students taking the Anthropology courses online were much less successful than their traditional counterparts. Success rates for online sections of Anth-1 and Anth-2 were 23% and 31% lower, respectively. Further examination would need to occur in order to investigate commonalities in the courses with large differences in outcomes. On the surface, there does not seem to be any links. General survey courses in the Fine Arts division seem to be similarly structured yet the students in the Art-1 online sections were 20% less successful than the traditional students but there is no difference in outcomes for Musi-11. While Engl-1A and Engl-1C received much lower success rates in online sections, Engl-1B students performed very well in online sections.

**Figure 6: Student Success and Retention Rates by Course
Online vs. Traditional Sections- Spring 2011**

Course	Traditional			Online			Difference	
	Total	Successful	Retained	Total	Successful	Retained	Successful	Retained
Behavioral and Social Sciences								
ANTH-1	94	58.5%	86.2%	45	35.6%	44.4%	-22.9%	-41.8%
ANTH-2	53	73.6%	88.7%	86	43.0%	76.7%	-30.6%	-12.0%
CDEV-104	102	42.2%	61.8%	25	44.0%	60.0%	1.8%	-1.8%
ECON-2	30	73.3%	80.0%	54	74.1%	81.5%	0.8%	1.5%
HIST-101	391	57.5%	73.7%	128	57.0%	71.9%	-0.5%	-1.8%
HIST-102	101	53.5%	82.2%	81	46.9%	67.9%	-6.6%	-14.3%
PHIL-3	58	48.3%	75.9%	44	56.8%	93.2%	8.5%	17.3%
POLI-1	375	52.5%	76.0%	143	60.1%	72.0%	7.6%	-4.0%
PSYC-16	47	87.2%	91.5%	52	82.7%	88.5%	-4.5%	-3.0%
PSYC-5	397	58.2%	76.1%	173	48.6%	63.6%	-9.6%	-12.5%
SOCI-101	113	64.6%	75.2%	96	64.6%	88.5%	0.0%	13.3%
SOCI-102	99	63.6%	84.8%	88	60.2%	81.8%	-3.4%	-3.0%
SOCI-104	30	80.0%	83.3%	36	38.9%	72.2%	-41.1%	-11.1%
Business								
CIS-13	252	63.9%	81.0%	160	32.5%	52.5%	-31.4%	-28.5%
Fine Arts								
ART-1	240	63.8%	79.6%	96	42.7%	71.9%	-21.1%	-7.7%
MUSI-11	115	56.5%	71.3%	90	54.4%	71.1%	-2.1%	-0.2%
Health and Physical Science								
CH-1	271	62.0%	66.8%	93	61.3%	65.6%	-0.7%	-1.2%
Humanities								
ENGL-1A	434	58.3%	71.4%	130	35.4%	57.7%	-22.9%	-13.7%
ENGL-1B	115	53.9%	65.2%	28	82.1%	85.7%	28.2%	20.5%
ENGL-1C	235	71.1%	81.3%	62	41.9%	67.7%	-29.2%	-13.6%
HUMA-1	44	61.4%	68.2%	180	64.4%	80.0%	3.0%	11.8%
Industry and Technology								

AJ-100	93	35.5%	58.1%	41	46.3%	68.3%	10.8%	10.2%
NFOO-11	50	32.0%	66.0%	50	34.0%	68.0%	2.0%	2.0%
Mathematical Sciences								
MATH-40	328	53.4%	71.6%	36	25.0%	50.0%	-28.4%	-21.6%
MATH-73	347	47.8%	66.3%	66	47.6%	75.8%	-0.2%	9.5%
MATH-80	74	41.9%	52.7%	28	39.3%	60.7%	-2.6%	8.0%
MATH-150	147	67.3%	80.3%	44	56.8%	84.1%	-10.5%	3.8%

In order to make a comparison of the academic rigor of online courses in comparison with traditional courses, improvement rates are commonly used. If a student completes one level of a sequence and then completes the next level of the sequence with a passing grade, it is considered *improvement*. The presumption is the lower course in the sequence should prepare a student for success in the next level of the sequence. If the academic rigor of online courses is comparable to the academic rigor of traditional courses, there should be little difference in the success rates for the second course when comparing outcomes based on whether the first course was taken online or on campus.

Since not every course must be followed by another, only courses that serve as prerequisites have been tracked. However, because students are not required to take the follow-up course, students who did enroll in the follow-up course for the first time during the Spring 11 term were reverse tracked to determine whether the prerequisite course was taken online. Five of these courses had students enroll in the subsequent course during the Spring 2011 term. The success rates for these courses have been calculated based on the mode in which the prerequisite course was taken. A comparison of these rates is found in Figure 7 below.

The number of students in the Spring 2011 term who took their prerequisite course online is too small to make any definitive statements but some of the trends are worth investigation. For the most students who took the prerequisite course online seem to do as well as students who took it on campus. The small number of students available for comparison means this data will have to be followed over time to get a strong enough sample to draw conclusions.

Figure 7: Improvement Rates by Prerequisite Course Online vs. Traditional Courses (Selected Courses)- Spring 2011

Prerequisite Course	Traditional		Distance Education	
	N	%	N	%
CIS-13	6	66.7%	7	57.1%
ENGL-1A	203	70.9%	30	70.0%
MATH-40	141	48.9%	7	42.9%
MATH-73	66	57.8%	15	53.3%
PSYC-5	47	72.3%	8	87.5%
Total	468	62.4%	67	64.2%

CONCLUSION

The demand for Distance Education offerings has continued to increase over time, with over 20% of the Compton Center student body utilizing at least one DE offering during the Spring 2011 term. Overall, the success and retention rates for online offerings have fluctuated over the past four years but continue to lie below state distant education rates. There are some courses where the outcomes are much lower in online sections compared to on campus sections. In these instances, divisions might want to review the course material as well as the online resources and presentation to see if they are compatible with positive online implementation. In instances where they are not, online instruction may need to be revised or abandoned altogether. Likewise, it is important these classes properly prepare students for the next level. A snapshot of this comparison is provided, but there is not enough data to show whether a difference in quality of preparation exists. This is an area that should continue to be explored.

Appendix A: Divisional Success Rate Comparison for Distance Education and Traditional Sections- Spring 2011

This is a graphic representation of the success rates found in Figure 5.

