

**El Camino College  
Enrollment Growth and Academic Course Performance  
Traditional vs. Online Courses, Fall 2008**

This study chronicles the recent growth of online course offerings and enrollments at El Camino College and compares academic performance in these courses with their traditional classroom counterparts.

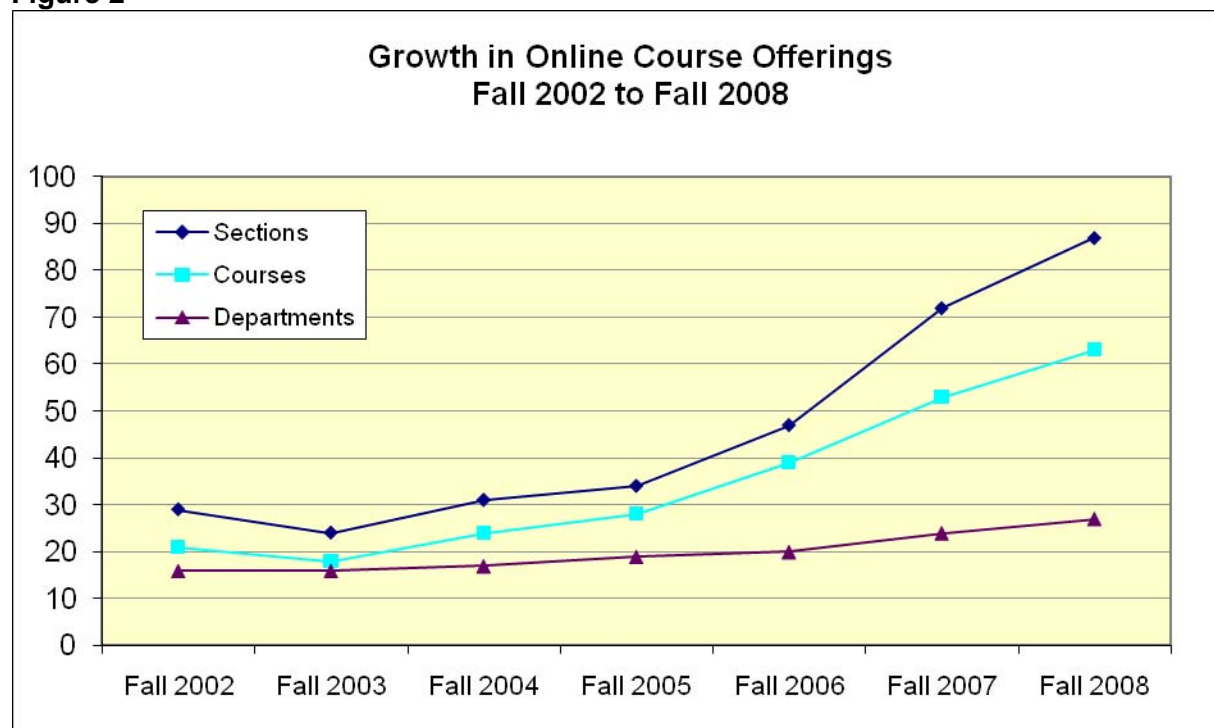
**ENROLLMENT GROWTH**

Responding to demand by students for more online course offerings, El Camino College (ECC) increased the number of online course sections over the past 6 years, most notable in the last two (Figs. 1-2. FTES nearly tripled in 6 years, growing from 142 in Fall 2002 to 407 in Fall 2008 (Fig. 3). During the same period, seats grew at a slightly slower rate (230%) leading to a reduction in the average class size.

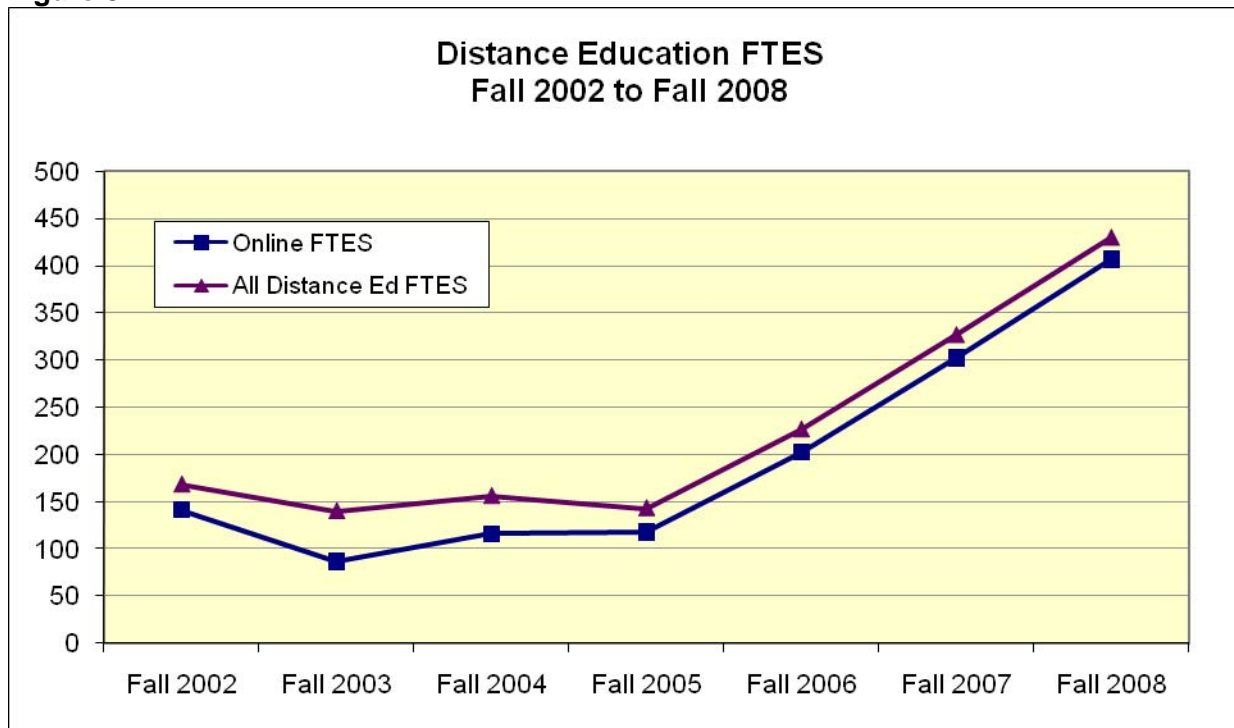
**Figure 1: Course, Section and Enrollment Growth  
Online Classes  
Fall 2002 to Fall 2008**

|               | FA 2002 | FA 2003 | FA 2004 | FA 2005 | FA 2006 | FA 2007 | FA 2008 |
|---------------|---------|---------|---------|---------|---------|---------|---------|
| Departments   | 16      | 16      | 17      | 19      | 20      | 24      | 27      |
| Courses       | 21      | 18      | 24      | 28      | 39      | 53      | 63      |
| Sections      | 29      | 24      | 31      | 34      | 47      | 72      | 87      |
| Seats         | 1,403   | 1,367   | 1,510   | 1,405   | 1,727   | 2,365   | 3,256   |
| Avg Sec. Size | 48      | 57      | 49      | 41      | 37      | 33      | 37      |
| Online FTES   | 142     | 87      | 116     | 118     | 203     | 302     | 407     |
| All DE FTES:  | 168     | 140     | 156     | 143     | 227     | 327     | 430     |

**Figure 2**



**Figure 3**



Source: CCC Chancellor's Office

### COURSE OFFERINGS

The following table shows all online courses offered successfully in Fall 2008, ordered by department and course. Section and census date seat counts are included. The vast majority of online courses are UC or CSU transferable.

**Figure 4: Online Course Offerings  
Fall 2008**

| Course  | Course Title                   | Sections | Seats | Transferable |
|---------|--------------------------------|----------|-------|--------------|
| ANAT-30 | Essentls Anatomy/Physiol       | 1        | 38    | Yes          |
| ANTH-1  | Intro to Physical Anthropology | 2        | 102   | Yes          |
| ANTH-2  | Intro Cultural Anthropology    | 1        | 51    | Yes          |
| ART-1   | Art/Visual Cultr in Modrn Life | 1        | 42    | Yes          |
| ART-2   | Hist West:prehist-Gothic       | 2        | 93    | Yes          |
| ASTR-20 | The Solar System               | 2        | 101   | Yes          |
| BUS-1A  | Financial Accounting           | 2        | 69    | Yes          |
| BUS-1B  | Managerial Accounting          | 2        | 59    | Yes          |
| BUS-15  | Business Mathematics           | 1        | 22    |              |
| BUS-17  | Personal Finance               | 1        | 40    | Yes          |
| BUS-19  | Principles Retail Management   | 1        | 37    | Yes          |
| BUS-20  | Business Management            | 1        | 49    | Yes          |
| BUS-54  | Mcrosoft Ofc - Integtrd Appl   | 1        | 31    | Yes          |
| BUS-60B | Microcompnr Document Proc      | 1        | 29    | Yes          |
| BUS-60C | Micrcmpnr Docmnt Formting      | 1        | 5     | Yes          |

| Course     | Course Title                   | Sections | Seats | Transferable |
|------------|--------------------------------|----------|-------|--------------|
| CADD-31A-D | Orientation to CATIA           | 1        | 16    | Yes          |
| CDEV-3     | Child Development              | 1        | 62    | Yes          |
| CDEV-4     | Survey Children Special Needs  | 1        | 41    | Yes          |
| CDEV-9     | The Home, School, Community    | 1        | 49    | Yes          |
| CDEV-29    | Intro Program Administrtrtn    | 1        | 24    | Yes          |
| CDEV-31    | Suprvsing/Mentorng Adults      | 1        | 24    |              |
| CDEV-130   | Principles Progm Admnistration | 1        | 42    | Yes          |
| CH-1       | Persnl/Commnty Health Issues   | 4        | 175   | Yes          |
| CIS-13     | Intro-Compnr Info System       | 3        | 120   | Yes          |
| CIS-143    | Lan/Wan Router Config Cisco 4  | 1        | 17    | Yes          |
| DANC-1     | Dance Appreciation             | 2        | 89    | Yes          |
| ECON-1     | Principls of Econ - Macroecon  | 1        | 51    | Yes          |
| ECON-2     | Principls of Econ - Microecon  | 1        | 60    | Yes          |
| ENGL-84    | Developmental Reading/Writing  | 2        | 53    |              |
| ENGL-1A    | Reading and Composition        | 4        | 118   | Yes          |
| ENGL-1B    | Literature/Composition         | 1        | 29    | Yes          |
| ENGL-1C    | Critical Thinking/Comp         | 3        | 104   | Yes          |
| ENGL-7     | Speed and Power Reading        | 1        | 22    |              |
| ENGL-27    | Children's Literature          | 1        | 42    | Yes          |
| HIST-1A    | U.S. History to 1877           | 1        | 50    | Yes          |
| HIST-1B    | U.S. History - 1877-Present    | 1        | 29    | Yes          |
| HIST-3     | Hist Early Civilization        | 1        | 28    | Yes          |
| HIST-4     | Hist Modern Civilization       | 1        | 25    | Yes          |
| JOUR-1     | News Writing/Reporting         | 1        | 35    | Yes          |
| JOUR-4     | Feature Writing                | 1        | 21    | Yes          |
| LAW-5      | Contrct,sale/Commrc'l Papr     | 1        | 38    | Yes          |
| MATH-40    | Elementary Algebra             | 1        | 34    |              |
| MTT-11A-D  | Numerical Cntrl Grphcs-CATIA   | 1        | 9     | Yes          |
| MUSI-11    | Music Appreciation-Survey      | 2        | 102   | Yes          |
| NFOO-11    | Nutrition                      | 1        | 51    | Yes          |
| OCEA-10    | Intro to Oceanography          | 1        | 24    | Yes          |
| PHIL-2     | Introductn to Philosophy       | 1        | 40    | Yes          |
| PHIL-3     | Ethics and Society             | 1        | 40    | Yes          |
| PHIL-5     | Crit Thinking/Discourse        | 1        | 23    | Yes          |
| PHIL-7     | Philosophy of Religion         | 1        | 39    | Yes          |
| PHIL-8     | Introduction to Logic          | 1        | 32    | Yes          |
| POLI-1     | Governments US/Calif           | 2        | 98    | Yes          |
| PSYC-3     | Psychology of Thinking         | 1        | 28    | Yes          |
| PSYC-5     | General Psychology             | 3        | 144   | Yes          |
| PSYC-16    | Lifespan Development           | 1        | 45    | Yes          |
| RE-11      | Real Estate Principles         | 1        | 26    | Yes          |
| RE-13      | Real Estate Practice           | 1        | 38    | Yes          |
| RE-14A     | Real Estate Finance I          | 1        | 34    | Yes          |
| SCOM-14    | Intro-Intercultrl Commun       | 2        | 62    | Yes          |

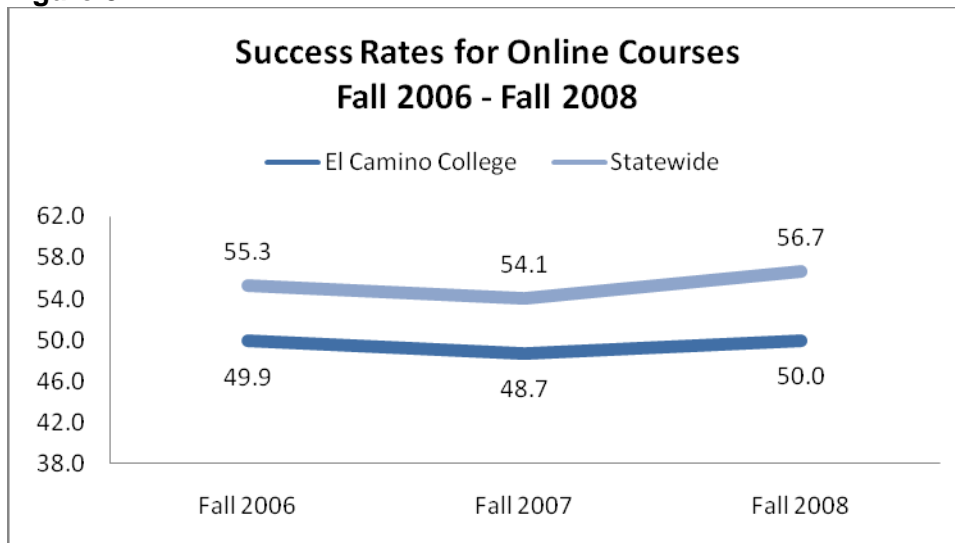
| Course                      | Course Title              | Sections  | Seats        | Transferable |
|-----------------------------|---------------------------|-----------|--------------|--------------|
| SOCI-101                    | Introduction to Sociology | 2         | 91           | Yes          |
| SOCI-102                    | The Family                | 1         | 50           | Yes          |
| SOCI-104                    | Social Problems           | 1         | 43           | Yes          |
| THEA-1                      | Intro to the Theatre      | 2         | 61           | Yes          |
| <b>Total Sections/Seats</b> |                           | <b>87</b> | <b>3,246</b> |              |

## ACADEMIC PERFORMANCE

This section will address academic performance in three ways. First, success and retention rates will be compared by instructional method (traditional and online). Next, a side-by-side comparison of courses offered at ECC in both the online and traditional formats is provided. Finally, improvement rates will be examined to determine how well online courses prepare students for the next course in a series compared with students in the same courses taught in the classroom. Improvement rate is an indicator of academic rigor and quality and is defined as the percentage of enrolled students who pass both a first course and a follow-up course.

The charts below compare success and retention of all online courses offered at ECC and statewide. Success rates for online courses tend to be somewhat lower at ECC, with a 5-point difference in 2006 and 2007, widening to a 7-point difference in 2008 (Fig. 5). Retention rate differences narrowed slightly in fall 2008 to 7 points (Fig. 6). The differences between ECC and state averages are much narrower when comparing all transfer-level courses as a whole (i.e., all instructional methods—charts not shown).

**Figure 5**



**Figure 6**

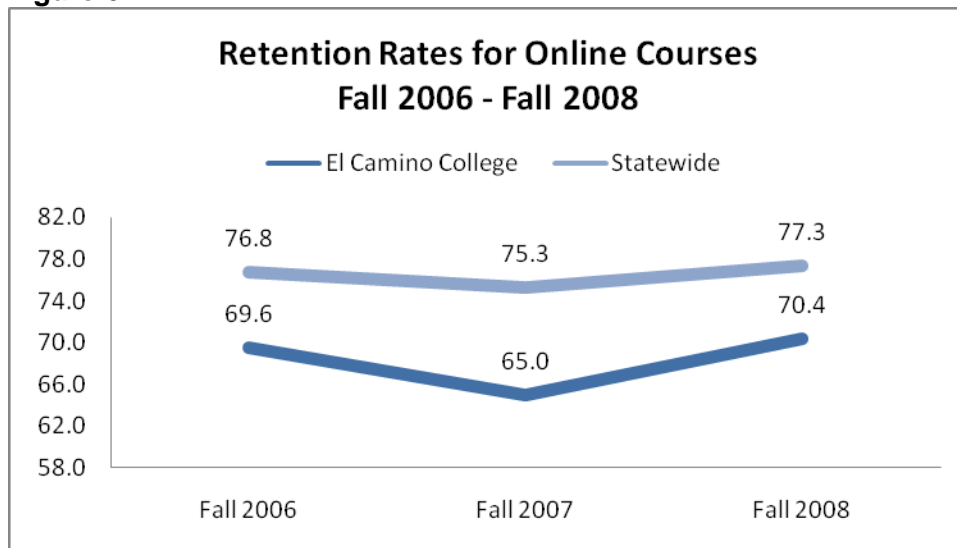


Figure 7 examines students' academic performance in online vs. traditional classes in terms of successful course completion (success rate) and retention in the course. The *success rate* (or percentage successful) is defined as the percentage receiving a C/P or better out of all students enrolled after the drop date (census). *Retention* is the percentage who received a grade (i.e., did not drop or withdraw) after the census date. Overall, online success rates were about 14 points lower than traditional classroom, while online retention was 12 points lower. These figures represent a 1-point improvement over fall 2007 rates.

However, online courses did not perform below traditional courses across the board; courses in several departments performed at or above the level of traditional courses. These include Business 17 and 1B, Economics 1, English 1B, History 1A and Math 40. Online performance at or above the equivalent traditional course are highlighted in bold in Figure 7.

**Figure 7: Student Success and Retention Rates by Course  
Online vs. Traditional Courses  
Fall 2008**

| COURSE  | TRADITIONAL |            |          | ONLINE  |            |          | Difference<br>(Online - Trad) |             |
|---------|-------------|------------|----------|---------|------------|----------|-------------------------------|-------------|
|         | Total *     | Successful | Retained | Total * | Successful | Retained | Successful                    | Retained    |
| ANAT-30 | 182         | 63.2%      | 73.1%    | 38      | 28.9%      | 44.7%    | -34.2                         | -28.3       |
| ANTH-1  | 596         | 66.1%      | 86.7%    | 102     | 54.9%      | 70.6%    | -11.2                         | -16.2       |
| ANTH-2  | 420         | 60.2%      | 82.9%    | 51      | 27.5%      | 41.2%    | -32.8                         | -41.7       |
| ART-1   | 719         | 62.3%      | 87.2%    | 42      | 42.9%      | 73.8%    | -19.5                         | -13.4       |
| ART-2   | 171         | 69.0%      | 84.2%    | 93      | 71.0%      | 75.3%    | <b>2.0</b>                    | -8.9        |
| ASTR-20 | 439         | 57.6%      | 82.9%    | 101     | 44.6%      | 60.4%    | -13.1                         | -22.5       |
| BUS-17  | 98          | 51.0%      | 73.5%    | 40      | 52.5%      | 85.0%    | <b>1.5</b>                    | <b>11.5</b> |
| BUS-1A  | 517         | 52.6%      | 70.2%    | 69      | 39.1%      | 56.5%    | -13.5                         | -13.7       |
| BUS-1B  | 170         | 54.7%      | 71.2%    | 59      | 54.2%      | 76.3%    | <b>-0.5</b>                   | <b>5.1</b>  |
| BUS-20  | 67          | 74.6%      | 79.1%    | 49      | 40.8%      | 53.1%    | -33.8                         | -26.0       |
| CADD-31 | 35          | 85.7%      | 97.1%    | 18      | 33.3%      | 83.3%    | -52.4                         | -13.8       |

| COURSE       | TRADITIONAL   |              |              | ONLINE       |              |              | Difference<br>(Online - Trad) |              |
|--------------|---------------|--------------|--------------|--------------|--------------|--------------|-------------------------------|--------------|
|              | Total *       | Successful   | Retained     | Total *      | Successful   | Retained     | Successful                    | Retained     |
| CDEV-3       | 472           | 71.2%        | 87.7%        | 62           | 50.0%        | 83.9%        | -21.2                         | -3.8         |
| CDEV-4       | 49            | 83.7%        | 91.8%        | 41           | 73.2%        | 92.7%        | -10.5                         | 0.8          |
| CDEV-9       | 127           | 74.8%        | 89.8%        | 49           | 46.9%        | 81.6%        | -27.9                         | -8.1         |
| CH-1         | 1,198         | 67.0%        | 86.5%        | 175          | 61.7%        | 76.6%        | -5.3                          | -9.9         |
| CIS-13       | 698           | 63.2%        | 78.7%        | 120          | 34.2%        | 55.8%        | -29.0                         | -22.8        |
| DANC-1       | 330           | 67.6%        | 84.2%        | 89           | 53.9%        | 79.8%        | -13.6                         | -4.5         |
| ECON-1       | 613           | 62.5%        | 80.1%        | 51           | 64.7%        | 92.2%        | 2.2                           | 12.1         |
| ECON-2       | 161           | 73.3%        | 85.7%        | 60           | 68.3%        | 86.7%        | -5.0                          | 1.0          |
| ENGL-1A      | 2,571         | 65.1%        | 80.2%        | 118          | 44.9%        | 64.4%        | -20.2                         | -15.8        |
| ENGL-1B      | 377           | 65.3%        | 76.4%        | 29           | 69.0%        | 82.8%        | 3.7                           | 6.4          |
| ENGL-1C      | 960           | 74.3%        | 85.2%        | 104          | 60.6%        | 76.0%        | -13.7                         | -9.2         |
| ENGL-27      | 62            | 54.8%        | 74.2%        | 42           | 69.0%        | 78.6%        | 14.2                          | 4.4          |
| ENGL-84      | 1,123         | 60.6%        | 84.1%        | 53           | 39.6%        | 69.8%        | -21.0                         | -14.3        |
| HIST-1A      | 774           | 59.6%        | 83.7%        | 50           | 60.0%        | 84.0%        | 0.4                           | 0.3          |
| HIST-1B      | 540           | 68.9%        | 89.1%        | 29           | 72.4%        | 75.9%        | 3.5                           | -13.2        |
| HIST-3       | 182           | 66.5%        | 82.4%        | 28           | 42.9%        | 71.4%        | -23.6                         | -11.0        |
| HIST-4       | 62            | 48.4%        | 72.6%        | 25           | 32.0%        | 60.0%        | -16.4                         | -12.6        |
| JOUR-1       | 69            | 65.2%        | 75.4%        | 35           | 45.7%        | 62.9%        | -19.5                         | -12.5        |
| LAW-5        | 183           | 72.1%        | 88.5%        | 38           | 36.8%        | 71.1%        | -35.3                         | -17.5        |
| MATH-40      | 1,422         | 39.9%        | 68.2%        | 34           | 41.2%        | 67.6%        | 1.3                           | -0.6         |
| MUSI-11      | 579           | 59.1%        | 84.5%        | 102          | 55.9%        | 85.3%        | -3.2                          | 0.8          |
| NFOO-11      | 361           | 69.8%        | 82.3%        | 51           | 70.6%        | 74.5%        | 0.8                           | -7.8         |
| OCEA-10      | 354           | 72.6%        | 83.6%        | 24           | 29.2%        | 41.7%        | -43.4                         | -41.9        |
| PHIL-2       | 258           | 60.5%        | 86.4%        | 40           | 30.0%        | 42.5%        | -30.5                         | -43.9        |
| PHIL-3       | 202           | 47.0%        | 75.7%        | 40           | 52.5%        | 57.5%        | 5.5                           | -18.2        |
| PHIL-5       | 57            | 66.7%        | 80.7%        | 23           | 30.4%        | 47.8%        | -36.2                         | -32.9        |
| PHIL-7       | 83            | 72.3%        | 86.7%        | 39           | 30.8%        | 48.7%        | -41.5                         | -38.0        |
| PHIL-8       | 108           | 51.9%        | 68.5%        | 32           | 37.5%        | 62.5%        | -14.4                         | -6.0         |
| POLI-1       | 1,123         | 59.6%        | 80.9%        | 98           | 52.0%        | 81.6%        | -7.5                          | 0.7          |
| PSYC-16      | 33            | 66.7%        | 78.8%        | 45           | 53.3%        | 66.7%        | -13.3                         | -12.1        |
| PSYC-3       | 219           | 67.1%        | 80.4%        | 28           | 42.9%        | 78.6%        | -24.3                         | -1.8         |
| PSYC-5       | 1,202         | 55.2%        | 79.8%        | 144          | 38.9%        | 75.0%        | -16.3                         | -4.8         |
| RE-11        | 92            | 52.2%        | 65.2%        | 26           | 30.8%        | 50.0%        | -21.4                         | -15.2        |
| RE-13        | 24            | 54.2%        | 58.3%        | 38           | 42.1%        | 50.0%        | -12.1                         | -8.3         |
| RE-14A       | 27            | 77.8%        | 85.2%        | 34           | 32.4%        | 44.1%        | -45.4                         | -41.1        |
| SOCI-101     | 650           | 77.1%        | 86.2%        | 91           | 53.8%        | 73.6%        | -23.2                         | -12.5        |
| SOCI-102     | 50            | 68.0%        | 88.0%        | 50           | 30.0%        | 48.0%        | -38.0                         | -40.0        |
| SOCI-104     | 190           | 61.1%        | 80.0%        | 43           | 32.6%        | 44.2%        | -28.5                         | -35.8        |
| THEA-1       | 111           | 72.1%        | 94.6%        | 61           | 37.7%        | 67.2%        | -34.4                         | -27.4        |
| <b>Total</b> | <b>21,110</b> | <b>62.4%</b> | <b>81.4%</b> | <b>2,365</b> | <b>48.7%</b> | <b>69.4%</b> | <b>-13.6</b>                  | <b>-12.0</b> |

\* Represent total grades or notations based on census day enrollment.

In order to evaluate the academic rigor of online courses, students in courses that were offered both online and in the classroom in Fall 2007 were tracked through a subsequent course. If the academic rigor of online courses at ECC is similar to that of classroom courses, then the improvement rate should be higher (or not much lower) than the difference in other performance rates between the two instructional methods, such as success rates. Figure 8 highlights 3 courses offered in fall 2007: Business 1A, English 1A and Real Estate 11. These were the only fall 2007 courses that functioned as prerequisites and had online enrollments of more than 25 students.

Success rates in each of these courses are compared with the difference by method provided in the column to the right under “success.” In addition, passing students were tracked to determine if they passed a course for which the fall 2007 course was a prerequisite. The percentage of enrolled students also passing the subsequent course is the *improvement rate*. The method difference for improvement rate is also provided in the far right-hand column. Negative differences (online lower) are in *italics*; positive differences (online higher) are in **bold**.

Overall, the three courses have a combined success rate 20 points below their traditional counterparts, with a smaller difference (17 points) in the improvement rate. Real Estate students, although smaller in number, had a higher success rate online. In terms of improvement, the online rate was *higher* for both Business 1A and Real Estate 11; more students in the online courses enrolled and succeeded in a higher course compared to students in the traditional classrooms. The English 1A improvement rate had the same difference as its success rate, also suggesting that the online format is not lacking in the rigor to prepare students for the next course in the series (and may possibly have more).

**Figure 8: Success and Improvement Rates by Course  
Online vs. Traditional Courses (Selected Courses)  
Fall 2007**

| COURSE               | Method      | Count | Successful |     | Improvement |     | Diff. (Onl - Trad) |            |
|----------------------|-------------|-------|------------|-----|-------------|-----|--------------------|------------|
|                      |             |       | N          | %   | N           | %   | Success            | Improvem't |
| BUS-1A               | Online      | 28    | 12         | 43% | 11          | 39% |                    |            |
| BUS-1A               | Traditional | 511   | 264        | 52% | 137         | 27% | -9%                | 12%        |
| Business-1A Total    |             | 539   | 276        | 51% | 148         | 27% |                    |            |
| ENGL-1A              | Online      | 111   | 42         | 38% | 13          | 12% |                    |            |
| ENGL-1A              | Traditional | 2,359 | 1,494      | 63% | 870         | 37% | -25%               | -25%       |
| English-1A Total     |             | 2,470 | 1,536      | 62% | 883         | 36% |                    |            |
| RE-11                | Online      | 50    | 21         | 42% | 9           | 18% |                    |            |
| RE-11                | Traditional | 138   | 49         | 36% | 19          | 14% | 6%                 | 4%         |
| Real Estate-1A Total |             | 188   | 70         | 37% | 28          | 15% |                    |            |
| Total Online         |             | 189   | 75         | 40% | 33          | 17% |                    |            |
| Total Traditional    |             | 3,008 | 1,807      | 60% | 1,026       | 34% | -20%               | -17%       |
| Three-Course Total   |             | 3,197 | 1,882      | 59% | 1,059       | 33% |                    |            |

## CONCLUSION

Overall, online course offerings are spreading into new departments and expanding dramatically each year, representing the fastest-growing instructional method at ECC. However, a performance gap still remains in most departments between traditional and online instructional delivery methods. Preliminary analysis using improvement rate suggests that presuppositions of a lack of online rigor are unfounded. As enrollment and course offerings continue to expand, online improvement rate comparisons will be repeated.