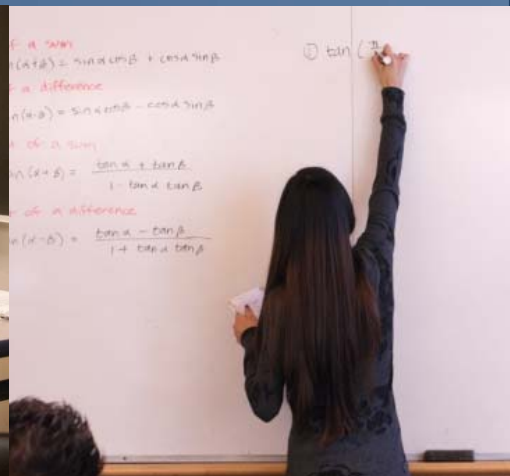


# FIRST-YEAR LEARNING COMMUNITIES

Impact on First to Second Year Retention  
Fall 2011 Cohort



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Undergraduate Education Institutional Research Report

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## Executive Summary

- First year learning communities (FYLC) have a significant influence on student retention into the second year.
  - FYLC participants on campus overall had a retention rate of 90% compared to 87% for non-participants.
  - FYLC participants in BCoE had a retention rate of 90% compared to 84% for non-participants.
  - FYLC participants in CNAS had a 94% retention rate compared to 88% for non-participants.
  - CHASS Connect participants had a 92% retention rate compared to 87% for non-participants.
- First year learning communities have greater benefits on retention for:
  - Women
  - Hispanic students
  - Asian American students
  - First generation students
  - Low income students

## Introduction

First-year learning communities (FYLCs) were established at the University of California, Riverside in the fall of 2002. The initiative started with a small group of 200 students in the College of Humanities, Arts, and Social Sciences (CHASS) and has grown to serve over 1,900 freshmen students across the College of Natural and Agricultural Science (CNAS), Bourns College of Engineering (BCoE), and CHASS as of the fall of 2011.<sup>1</sup> Learning communities on campus are used to promote academic success among freshmen students, to promote a sense of community and belongingness, and to increase retention. FYLCs achieve these goals by creating clusters of students who take the same set of courses together in their first year. The details of each type of learning community are discussed below. Past evaluations of FYLCs find that participation increases student retention. Full reports of past evaluations can be retrieved at <http://irue.ucr.edu/reports.html> under the First-Year Learning Communities tab.

### College of Humanities, Arts, and Social Sciences

The learning communities in the College of Humanities, Arts, and Social Sciences (CHASS) fall within the CHASS FIRST program. CHASS FIRST hosts both single-quarter and three-quarter learning community opportunities designed to challenge and support new students as they transition to the university. CHASS Connect groups students into thematic clusters of three courses from different departments that satisfy breadth requirements. One breadth course is taken each quarter with the same group of students. A graduate student teaching assistant is also assigned to the cluster so students interact with the same TA throughout the academic year. CHASS Connect also employs undergraduate Peer Mentors who are responsible for leading weekly workshops on university life and meet with students to assist them on academic, social



**Learning communities are part of UCR's commitment to helping students succeed.**

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<sup>1</sup> The School of Business Administration (SOBA) admits upper division students and does not have a freshmen learning community.

and personal concerns. Students have the option of living in the dormitories with peers who are participating in the CHASS FIRST learning community programs.

Gateway to CHASS and Fall Transitions are both a one quarter learning community. Students take two courses together in their first quarter, a breadth requirement and their first quarter of English. Students also have contact with Peer Mentors in workshops and for consultation. Students who are Pre-Business majors have the added benefit of living in the dorms with the students in the Pre-Business learning community. The Pre-Business learning community also uses Alumni Mentors to foster connections outside the university while developing networks and skills necessary to be successful in business.

### **College of Natural and Agricultural Sciences**

The CNAS Freshman Scholars Program enrolls students in a majority of their first year courses. Students are clustered into groups of 24 students and stay with that group throughout their first-year CNAS courses. Students are first enrolled into a freshmen academic advising seminar taught by a CNAS Professional Academic Advisor with the support of a faculty member. This course provides an orientation to university expectations, academic and career planning, and gives students the opportunity to select a faculty mentor. Students take the chemistry 1 sequence, mathematics courses, and the biology 5 sequence together. Students also participate in assigned Supplemental Instruction workshops for the above courses twice a week. Supplemental Instruction sessions are led by trained peer mentors in the Academic Resource Center. Students also have the option of living together in the CNAS Scholars living learning community in the dormitories.

### **Bourns College of Engineering**

The Engineering Learning Community enrolls first year students in sections of mathematics, science, and introduction to engineering courses their first year. Students take their courses with the same group of peers to help foster close academic and social relationships. Learning community participants are invited to social events sponsored by the college and some freshmen-only events. Students participating in the Engineering Learning Community have the opportunity to live in Engenuity Hall, the residential housing option. Students living together in Engenuity Hall have access to upper division students in BCoE as peer mentors and a faculty member in residence.

## **Methodology**

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The analysis compares the impact of participating in a FYLC on 2nd-year retention for the entering freshmen class of 2011. This evaluation is organized along two research questions:

1. Does participating in a learning community increase the probability of a student enrolling at UCR for their second year?
2. Does participation in a learning community increase the probability of enrolling at UCR for their second year for some student groups over others?

## Sample and Data Sources

Data for this study come from fall 2011 third week and fall 2012 third week student enrollment data. The sample includes students who were entering freshmen in fall 2011. The population in the study consisted of the following:

- Treatment Group: 1,967 entering freshmen participating in a learning community in fall 2011.
- Control Group: 1,697 entering freshmen who were not participating in a learning community in fall 2011.

## Results

Table 1 displays the distribution of entering freshmen students in first year learning communities on campus. The first column summarizes the distributions for students participating in any learning community, including the one-quarter experiences supported by CHASS. The remaining columns provide distributions by college learning community. The CHASS learning community column summarizes results for CHASS Connect, the three-quarter first year experience program in CHASS and excludes the one-quarter experiences. Results indicate that over 50% of first year freshmen students at UCR participated in a learning community. Even though approximately 30% of first year freshmen in CHASS participated in CHASS Connect, a total of 51.7% of first year students in CHASS participated in a first year experience program. Overall, the distributions of students are similar between learning community and non-learning community participants.

Figure 1 displays the retention rates for first year freshmen on campus overall and by college. The retention rate for the 2011 freshmen first year cohort was 88%. The college retention rates also cluster around this number. Bourns College of Engineering retained 88% of its first year freshmen, College of Natural and Agricultural Sciences retained 91% of its first year freshmen, and College of Humanities, Arts, and Social Sciences retained 87% of its first year freshmen. When we examine the retention rates by learning community participation, we find that students who participated in a learning community had significantly higher retention rates than first year freshmen who did not participate in a learning community.

The retention rate for first year students who participated in a learning community was 90% compared to a retention rate of 87% for non-learning community participants. These trends are similar within the colleges as well. BCoE learning community participants showed a retention rate of 90% compared to 84% for non-learning community participants. In CNAS, 94% of learning community participants enrolled in the fall of 2012 while 88% of non-learning community participants enrolled in the fall of 2012. Similarly, 92% of first year freshmen who participated in CHASS Connect enrolled in the fall of 2012 compared to 87% of first year freshmen who did not participate in CHASS Connect.

Table 2 displays the results of the logistic regression used to examine what factors contribute to a student's probability of enrolling in a second year at UC Riverside. The results are presented

in terms of odds ratios<sup>2</sup>. The findings indicate that students who participated in a first year learning community were 39% more likely to enroll in a second year at UC Riverside compared to non-learning community participants. In this analysis, we also found that Asian American students were more likely to enroll in a second year at UC Riverside compared to Hispanic students, the reference category for ethnicity. Lastly, we found that a student's high school GPA is a significant predictor of second year enrollment. The higher a student's high school GPA, the more likely they were to enroll in a second year at UC Riverside.

The results thus far have shown that participating in a first year learning community significantly increases retention. The second question posed in this report is whether learning community participation benefits students of various groups more than students in other groups. Figure 2 shows the retention rates for first year students who participated in a learning community compared to students who did not participate in a learning community in the 2011-2012 school year. These results are broken down by student background characteristics and compare the retention rates for students in each group who participated in a learning community to those who did not. We find that female, Hispanic, Asian American, first generation, and low income students show significantly higher retention rates when participating in a learning community compared to their peers who did not participate in a learning community.

## Conclusion

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Findings in this report suggest that participation in a first year learning community has a significant and positive impact on student retention even when controlling for student background characteristics. We also found that learning communities appear most beneficial for female students, students of Hispanic or Asian descent, and first generation and low income students.

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<sup>2</sup> An odds ratio of 1.00 indicates an equal probability of enrolling or not enrolling for a given group. An odds ratio over 1.00 indicates a group is more likely to enroll in their second year and an odds ratio below 1.00 indicates a group is less likely to enroll in their second year. Significant odds ratios have been starred. Non-significant results indicate there is no difference in the probability of enrolling or not enrolling for a given group.

**Table 1. Summary Statistics**

	All Students		BCoE		CNAS		CHASS*	
	LC	Non-LC	LC	Non-LC	LC	Non-LC	LC	Non-LC
All Students	53.6%	46.3%	63.6%	36.7%	52.3%	47.7%	30.4%	69.6%
Female	55.1%	54.0%	17.4%	16.8%	55.5%	61.3%	71.0%	59.8%
Male	44.9%	46.0%	82.6%	83.2%	44.5%	38.7%	29.0%	40.2%
Hispanic	41.5%	37.0%	34.6%	41.4%	29.7%	37.5%	51.5%	35.7%
White	11.8%	13.8%	13.4%	14.3%	10.9%	15.9%	13.0%	12.6%
Asian American	37.8%	42.1%	44.9%	38.9%	53.7%	38.3%	21.6%	44.8%
African American	6.9%	5.5%	5.7%	3.9%	4.1%	6.1%	12.5%	5.6%
Native American	0.4%	0.2%	0.0%	1.0%	0.2%	0.0%	0.0%	0.1%
Unknown	1.6%	1.4%	1.4%	0.5%	1.4%	2.2%	1.4%	1.2%
First Generation	59.9%	58.0%	48.0%	59.6%	54.7%	60.5%	70.8%	56.3%
Non-First Generation	40.1%	42.0%	52.0%	40.4%	45.3%	39.5%	29.2%	43.7%
Low Income	58.4%	55.5%	50.9%	57.6%	53.9%	57.8%	65.7%	53.9%
Non-Low Income	41.6%	44.5%	49.1%	42.4%	46.1%	42.2%	34.3%	46.1%
Living On Campus	74.6%	72.5%	74.6%	72.9%	70.0%	68.0%	73.4%	74.7%
Living Off Campus	25.4%	27.5%	25.4%	27.1%	30.0%	32.0%	21.6%	25.3%
Mean HS GPA	3.55	3.57	3.57	3.65	3.70	3.71	3.47	3.47
Mean SAT Math	541	540	593	579	595	546	490	529
Mean SAT Verbal	503	505	523	508	532	511	490	502
Mean SAT Writing	509	511	520	510	543	516	491	508
N	1967	1697	350	203	559	509	431	985

\*Students in the LC group are in CHASS Connect. The other first year experience programs in CHASS are held for 1 quarter instead of 3. If considering other first year experience programs, 51.7% of CHASS first year students are in a Learning Community and 48.3% are not.

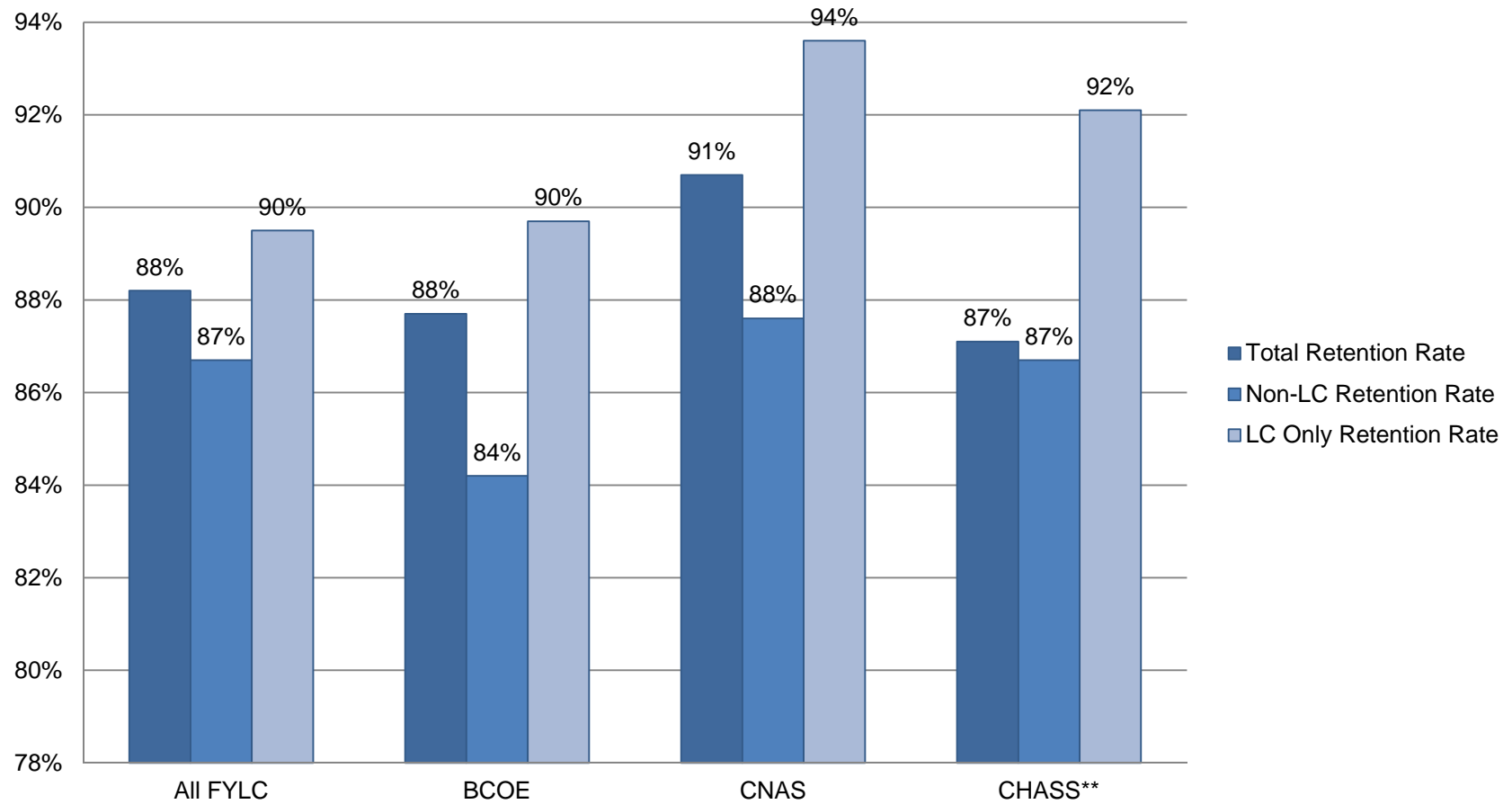
**Table 2. Logistic Regression of Retention on First Year Learning Community Participation** **N=3664**

	Odds Ratio (Std. Error)
First Year Learning Community	1.39* (0.14)
Female	1.22 (0.14)
Male	Reference Category
Hispanic	Reference Category
White	1.16 (0.21)
Asian American	1.36* (0.32)
African American	1.38 (0.32)
Native American	0.58 (0.47)
Unknown	0.76 (0.29)
BCoE	0.89 (0.14)
CNAS	1.10 (0.15)
CHASS	Reference Category
First Generation	0.95 (0.12)
Non-First Generation	Reference Category
Low Income	0.90 (0.11)
Non-Low Income	Reference Category
Live On Campus	1.00 (0.12)
Live Off Campus	Reference Category
High School GPA	2.29* (0.40)
SAT Math	1.00 (0.00)
SAT Verbal	1.00 (0.00)
SAT Writing	1.00 (0.00)
Constant	0.15* (0.10)

\* Indicates statistically significant at the 0.05 level.



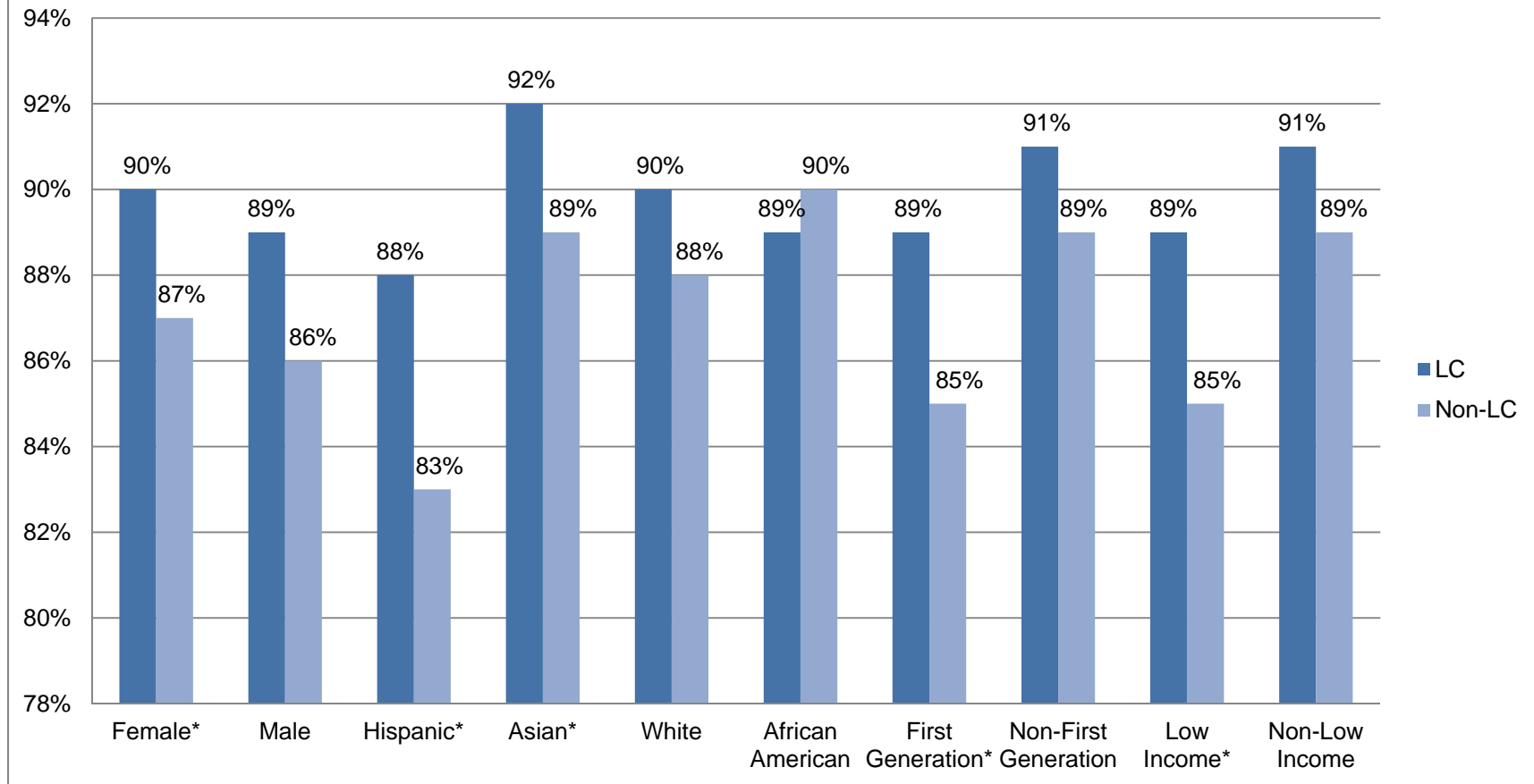
**Figure 1. Retention Rates for First Time Freshmen by College: Fall 2011**



\*All Non-LC and LC Only Retention Rates are significantly different from each other ( $p < .05$ ).

\*\*Retention rates are for CHASS Connect.

**Figure 2. Retention Rates for First Time Freshmen  
by Background Characteristics: Fall 2011**



\* Indicates LC retention rate is significantly different from Non-LC ( $p < .05$ ).