

The CARE (Center for Academic Resources in Engineering) Program at Illinois

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Overview

The Grainger Engineering Library Information Center, in conjunction with the College of Engineering (COE) has established the CARE (Center for Academic Resources in Engineering) program at the University of Illinois at Urbana-Champaign Library. **CARE is an academic learning center that targets the needs of first- and second-year Engineering students at Illinois.** CARE uses most of the fourth floor of Grainger Engineering Library and provides individual and group study space, with co-located programs such as peer mentoring, tutoring, study groups, exam reviews, teaching assistant (TA) and faculty office hours, and workshops.



Figure 1: CARE employs more than 50 students as tutors and peer advisors that offer their tutoring/advising services for over 30 different subjects, 7 days a week.

Objectives

CARE is designed to enhance the student academic experience in a variety of ways and to **better integrate the Grainger Engineering Library into the day-to-day lives of engineering students.** The overarching goal is to increase engineering student retention rates by providing enhanced student services, including increased contact with TAs, focused instructional assistance, advanced collaborative resources and facilities, and better integration with a variety of Grainger Engineering Library services. To this end, a study of security gate counts and visual head counts was performed to identify any measurable impact on library usage and services since CARE was established in the Fall semester of 2011.

Library Space Repurposed

To provide space in the building for CARE to offer services, the Grainger Engineering Library repurposed 3966 square feet of room space including 14 reservable group study rooms, 2 large instructional rooms, and an office for the CARE Program Coordinator.



Figure 2: CARE rooms host a variety of tutoring sessions, exam reviews and open study halls.

The total seating capacity for the CARE area of the fourth floor is 472 with an additional 154 seats available on the east wing for overflow.

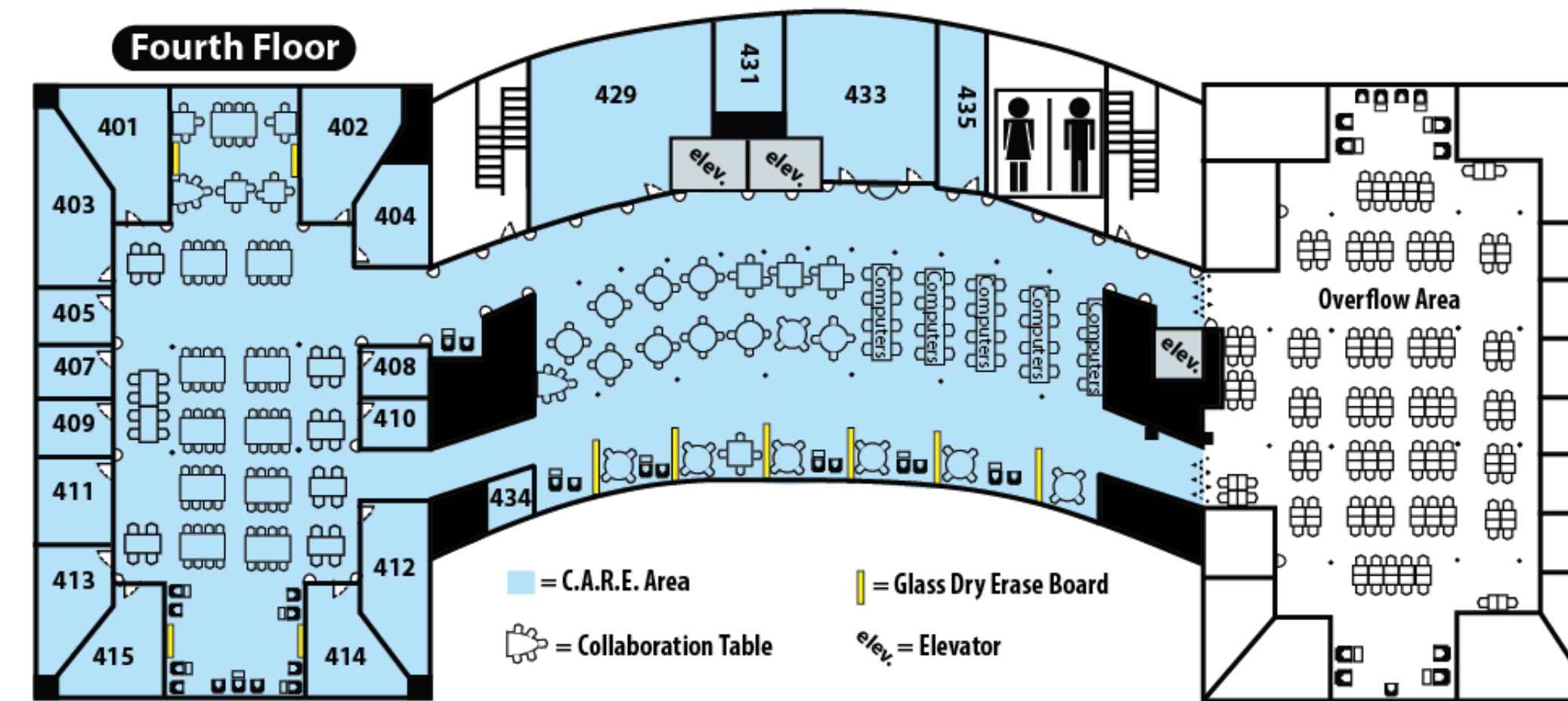
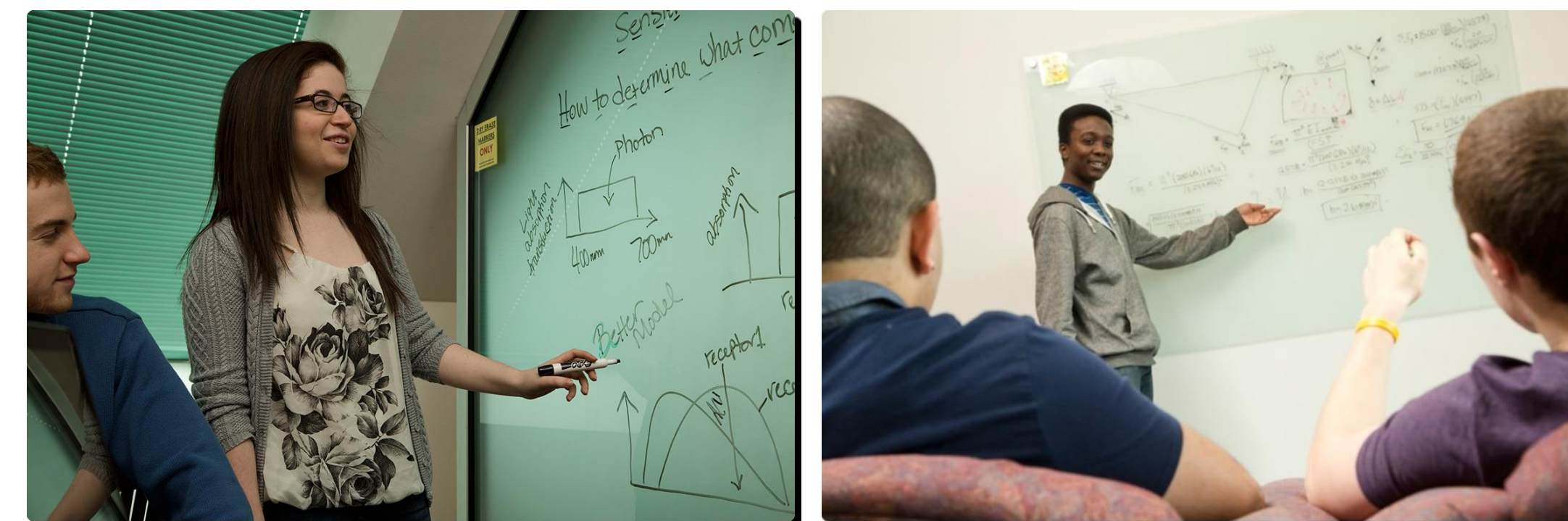


Figure 3: The area highlighted in blue is library space that was repurposed for CARE.

Project Cost

CARE was established with an initial infusion of **\$281k** for computing equipment, projection equipment, furniture, digital signage, and collaboration equipment.



Figures 4-5: Students can utilize 6 double-sided frosted glass partition writing surfaces and 4 glass writing boards purchased for the CARE space.

The project was funded with: **\$65K** from the campus Student Library/IT Fee for collaborative equipment, projector and screen equipment, and furniture; **\$31K** from the campus Student Library/IT Fee for digital signage; **\$60K** from the College of Engineering Student Fee for engineering workstations and approximately **\$125K** of foundation money from the College of Engineering.

Program Services

CARE offers a multitude of programs, workshops, and tutoring services to students. Approximately **5000 students** have participated in over **2142 tutoring sessions, 2452 hours of tutoring and peer advising, and 92 exam review sessions.**



Figure 6: CARE provides tutoring for over 60 courses covering engineering and foundation math and science courses.

The Grainger Engineering Library, Center for Writing Studies, Counseling Center, Engineering Career Services (ECS), and McKinley Health Center are just a few of the campus units that have worked with CARE to **provide over 80 workshops.** These workshops are offered each semester and cover such topics as **library instruction/tours, study skills, effective planning, balancing school and family, stress management, and resume reviews.**



Figures 7-8: Students in the CARE area have access to 14,550 square feet of open study space equipped with glass writing surfaces on the fourth floor center and west.

Collaboration Resources

CARE staff schedule students and TAs into four group study rooms with special collaboration monitors, two instructional rooms, and a large presentation area in the fourth floor west gallery. Over **4,633 reservations were made** for CARE groups into these seven areas between August 2012 and December 2013.



Figure 9: CARE collaboration tables feature a 32" HD monitor where up to five students can plugin to share the screen to collaborate on group projects.



Figure 10: Students can use 4 large 55" HD monitors each located in one of four rooms reserved by CARE staff.

Students have access to 51 dual-monitor Engineering Workstation computers (requiring a special College of Engineering login) in the CARE area. The fourth floor is also covered by a building-wide wireless network.

Impact on Library Usage

Grainger Engineering Library staff track patron visits by recording security gate counts and performing visual head counts periodically throughout the day.

Security Gate Counts

There has been an overall increase in total building patron visits between the academic years (AY) 2009-10 (the year before CARE was established) and 2012-13.

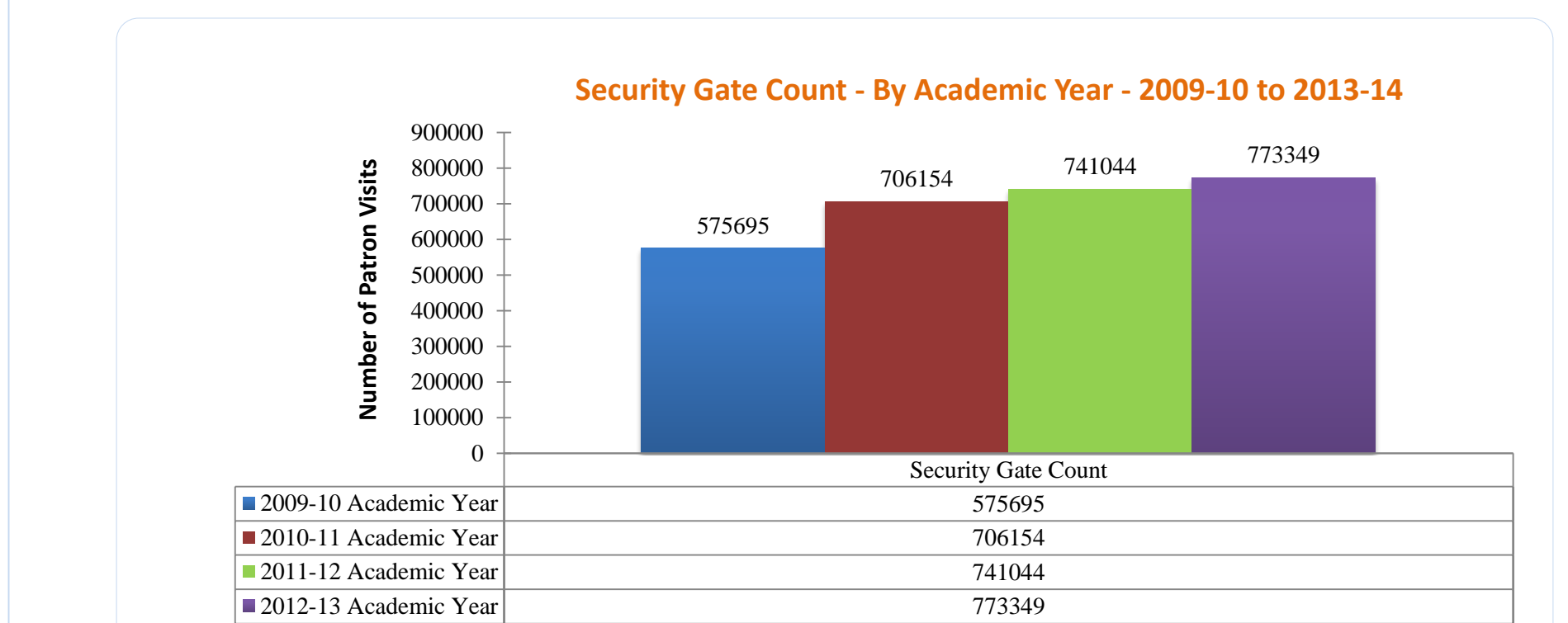


Figure 11: Patron visits increased 22.66% between AY 2009-10 and AY 2010-11 which may be attributed to the 14.33% increase in the number of students who entered the College of Engineering in AY 2009-10.

Visual Head Counts

There has been an overall increase in the number of patrons utilizing the CARE space. There was an increase of 12.22% between Fall 2011 and Fall 2012 and 5.04% between Fall 2012 and Fall 2013.

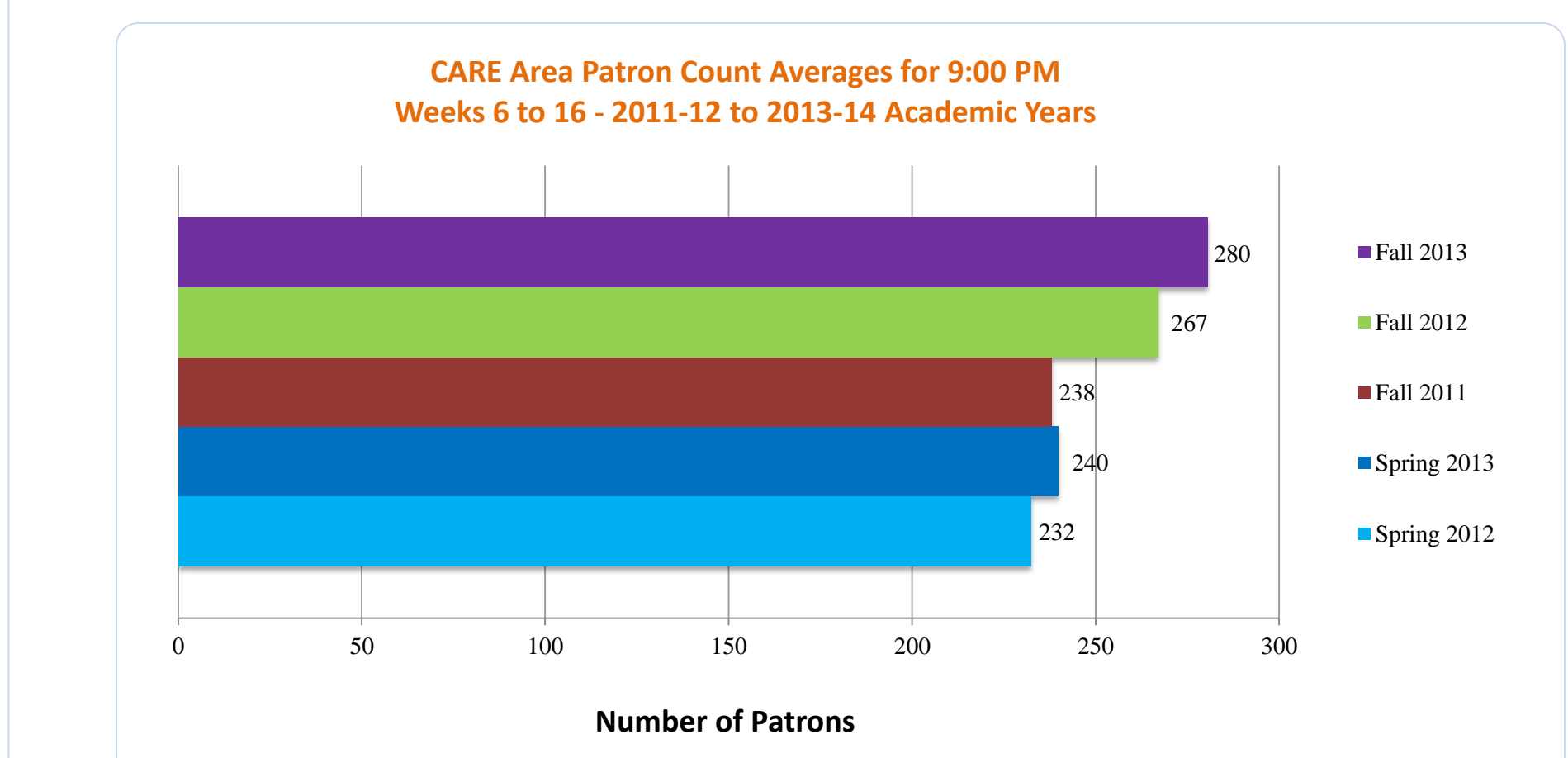


Figure 11: CARE has consistently offered programs at 9 pm since it was established in Fall 2011.

Retention and Conclusion

From the 2011 cohort of first-year Engineering students, 91% continued on to their 2nd year, an increase of 4% from the previous three cohort years which, saw 87% continuing to their 2nd year. The increase in the retention rate and library usage is not solely due to CARE programs but anecdotal evidence points to the success of CARE in improving the numerous aspects of the student experience for engineering students at the University of Illinois at Urbana-Champaign.