

Product Used **Trigsted MyMathLab**
 Course Name **College Algebra**
 Credit Hours **Three**



KEY TAKE-AWAY

By redesigning College Algebra first with MyMathLab and then Trigsted MyMathLab, LSU–Baton Rouge increased its students' chances of success both in College Algebra and in their subsequent STEM courses.

Textbook in Use

Trigsted Algebra and Trigonometry, 1e, Kirk Trigsted (eText)

Course Implementation

Course Design

Louisiana State University's (LSU's) redesign model requires active participation and increased technology use by its students. Students are required to spend one hour a week in a traditional classroom of 40 students and a minimum of three flexible hours a week using Trigsted MyMathLab in a math lab.

The 275-seat Pleasant Hall Math Learning Lab is open 60 hours a week and is staffed with instructors, teaching assistants, and undergraduate tutors. In addition to putting in the minimum required hours in the learning lab, students can work additional hours in the lab or work at their convenience from a Web-accessible computer.

Assessments

All assessments are taken using Trigsted MyMathLab. The final grade is determined as follows:

- 10 percent Participation (*five percent for class participation, five percent for lab hours*)
- 10 percent Homework (*two lowest of 29 homework scores are dropped*)

- 10 percent Quizzes (*two lowest of 14 quiz scores are dropped*)
- 45 percent Tests (*four tests, lowest is replaced with final exam score if higher*)
- 25 percent Final exam (*departmental, group, cumulative*)

Use of Trigsted MyMathLab

Homework assignments, quizzes, tests, and the final exam are created in Trigsted MyMathLab by course coordinators, thereby ensuring quality control and avoiding course drift.

Homework may be repeated an unlimited number of times prior to the due date. Quiz and test questions come directly from the assigned homework problems. Quizzes may be attempted up to 10 times before the due date and are drawn from a pool of questions with similar objectives. Test questions are also pooled. Tests are proctored, password protected, and taken in the university testing center during a three-day period.

Use of Trigsted MyMathLab contributes 90 percent to a student's final course grade.

Results and Data

A longitudinal view of College Algebra success rates shows that the adoption of MyMathLab, and then Trigsted MyMathLab in spring 2010, contributed to an increase in both the number of students earning an A or B in College Algebra and the percentage of those students successfully passing the next course in the sequence (Trigonometry or Business Calculus).

Figure 1 shows that the percentage of students with MACT scores of between 20 and 24 earning a grade of A or B in

College Algebra increased three percentage points—from 49 percent to 52 percent after the adoption of MyMathLab and then Trigsted MyMathLab.

Figure 2 shows that for those students who earned an A or B in College Algebra, the success rate (a grade of A, B, or C) in the subsequent course (Trigonometry or Business Calculus) within three semesters increased six percentage points—81 percent to 87 percent.

MyMathLab's student-centered approach to learning requires students to put in more time doing math and less time watching mathematics, which is why their learning outcomes are measurably higher.

—Phoebe Rouse, Precalculus Mathematics Director
Louisiana State University–Baton Rouge

“It is important to note that not only has the number of students earning As and Bs increased, the success rate of those students in their subsequent courses has also increased,” says Phoebe Rouse, precalculus mathematics director.

“Trigonometry and Business Calculus are two major STEM

courses—exactly the courses we’re trying to prepare students for. By increasing the number of students who can earn an A or B in College Algebra, we have directly increased their chances at success later in their college career.”

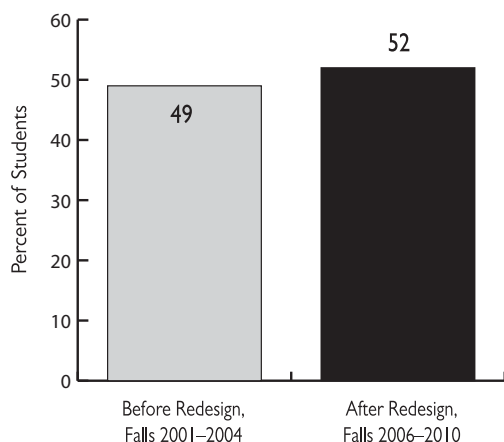


Figure 1. Comparison of the Percentage of Students Earning an A or B in College Algebra before and after Redesign with MyMathLab/Trigsted MyMathLab, Fall Semesters 2001–2010*

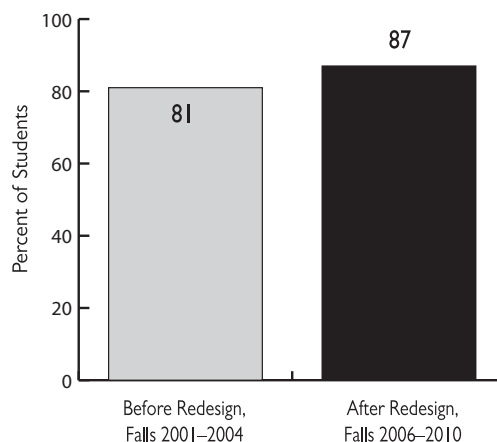


Figure 2. Comparison of Subsequent Success Rates of Students who Earned an A or B in College Algebra before and after Redesign with MyMathLab/Trigsted MyMathLab, Fall Semesters 2001–2010*

*Fall 2005, LSU instituted a drop policy that limits the number of drops allowed, thereby producing more Fs and fewer Ws. Fall 2005 data was omitted due to the impact of Hurricane Katrina.

The Student Experience

Students quickly learn that practice using Trigsted MyMathLab during lab time reaps positive results.

- “MyMathLab was very helpful. I learned so much this past semester. In my opinion, the math lab is the perfect environment for learning math.”

- “I liked being able to work alone on MyMathLab but also having the reassurance of tutors to help when I needed them.”
- “If I hadn’t been required to spend three hours in math lab each week, I would not have spent as much time on math homework and studying.”

Conclusions

One of the goals of redesign was to retain the high rate of student success in College Algebra. Using the current, redesigned program with Trigsted MyMathLab, LSU–Baton Rouge has improved on previous success rates. “In addition to more and more students’ passing college math courses on

their first try, students’ time management skills are improving—two key elements in increasing our students’ odds of graduating within six years,” says Rouse.

Submitted by Phoebe Rouse, Precalculus Mathematics Director
Louisiana State University–Baton Rouge