# Southeastern Louisiana University — Hammond, LA

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| Product Used | MyMathLab |
| Course Name | College Algebra |
| Credit Hours | Three |

**KEY TAKE-AWAY**

Increased engagement in course content through required homework, required lab hours, and MyMathLab-enabled assessments has increased Southeastern Louisiana University's College Algebra success rates—despite increased course rigor and no more partial credit.

## Textbook in Use

*College Algebra,* 8e, Michael Sullivan

## Course Implementation

### Course Design

In spring 2008 Southeastern Louisiana University adopted MyMathLab for its three-credit College Algebra course. The program is used for all course assessments: homework, quizzes, and tests. Students spend two hours a week in technology-enhanced in-class instruction and at least three additional hours a week in a math lab. Peer tutors and faculty are available in the lab for one-on-one instruction for homework and for review of mistakes on quizzes.

In fall 2008, the school implemented a National Center for Academic Transformation redesign with its first large contingent of College Algebra students and in 2009 expanded use of the program to include a five-credit College Algebra course and a three-credit Intermediate Algebra course.

### Assessments

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| 10 percent | Required MyMathLab homework<br>*May be completed from any location, unlimited attempts until due date, use of study aids is encouraged.* |
| 10 percent | MyMathLab quizzes (14 per semester)<br>*Not proctored, may be attempted up to 10 times.* |
| 10 percent | Lab participation |
| 40 percent | MyMathLab tests (4 per semester)<br>*Proctored and taken in the math lab.* |
| 30 percent | MyMathLab final exam<br>*Proctored and taken in the math lab.* |

### Use of MyMathLab

MyMathLab is used for creating and completing homework assignments, quizzes, proctored tests, and the final exam. Homework questions are drawn from MyMathLab's bank of problems. Quiz and test problems serve as a subset of the assigned homework problems.

Students are required to use the eText and are encouraged to take advantage of the program's study aids and interactive features. The Coordinator Course function standardizes assignments across 25 sections of 42 students during each fall semester.

Use of MyMathLab contributes 100 percent to a student's final course grade.

## Results and Data

Table 1 compares student acheivement in fall semesters before and after NCAT redesign. The most significant impacts of the redesign include an increase in retention and progression rates while simultaneously reducing costs by means of larger class sizes and fewer faculty.

- Note the change in the entrance criteria over the five-year span.
- The traditional format offered partial credit and contained little consistency across sections.

| Fall Semester | Delivery Format | College Algebra Course | ACT Score | Number of Students | ABCD | ABC | F | W | F/W |
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| 2005 | Traditional | 160/161 | ≥18 | 1,909 | 51.5% | 40% | 20% | 29% | 48.5% |
| 2006 | Traditional | 160/161 | ≥18 | 2,020 | 50% | 38% | 24% | 26% | 50% |
| 2007 | Traditional | 161 | ≥21 | 1,006 | 60% | 48% | 17% | 23.4% | 40% |
| 2008 | Traditional | 155 repeaters/remediated | 18–20 | 554 | 59.4% | 45.5% | 17.3% | 23.3% | 40.6% |
| | | 155A new freshmen | 18–20 | 861 | 65.6% | 53.4% | 21.8% | 12.5% | 34.4% |
| | Redesign | 161 | ≥21 | 1,056 | 63.5% | 53.5% | 16.5% | 20% | 36.5% |
| 2009 | Redesign | 155 repeaters/remediated | 19 or 20 | 558 | 35.1% | 21% | 32% | 33% | 64.9% |
| | | 155A new freshmen | 19 or 20 | 515 | 52.2% | 35% | 32% | 15% | 47.8% |
| | | 161 | ≥21 | 950 | 61.4% | 48.3% | 19% | 19.8% | 38.9% |

Table 1. Comparison of Student Achievement in College Algebra before and after NCAT Redesign, Fall Semesters 2005–2009 ($n$ =9,429)

Math 155: Students are repeating the course or taking the course following successful completion of a remedial course in intermediate algebra.
Math 155A: Students are in College Algebra for the first time, but Math ACT scores are 19 or 20.
Math 161: Students have Math ACT scores of 21 or above.

- Both Math 160 and Math 161 were college algebra courses. Math 161 is required of business, technology, and science majors.
- The fall 2008 redesign included the elimination of partial credit and absolute consistency across all sections of Math 161.
- Math 155 and Math 155A are five-credit college algebra courses designed to provide more in-class instruction for students with weaker backgrounds. Math 155 was initially taught in a traditional lecture format with workbook assignments counting for 10 percent of the grade and with partial credit given for all assignments.
- Math 155, Math 155A, and Math 161 now cover exactly the same material and have exactly the same standardized assessments via MyMathLab. Placement depends on Math ACT scores.

## The Student Experience

"One thing I hear over and over again is that MyMathLab is actually making students complete their homework, a habit that's uncommon in introductory math classes," says Rebecca Muller, mathematics instructor. "Prior to the program, most of my students wouldn't ask questions about their homework because they either hadn't done it or because they were embarrassed to ask in front of their peers. With MyMathLab, students are required to take the time to properly complete their homework and are given the opportunity to ask questions in the math lab."

## Conclusions

"For probably the first time, all students are engaged in working on homework on a regular basis," says Muller. "The rigor of the homework assigned has increased, and even as we've implemented grading with no partial credit, success rates have increased in the course. Students become more-independent learners by using the program."

*Submitted by Rebecca Muller, Mathematics Instructor*
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