## Augusta State University

## Augusta, GA

Product Used
Course Name
MyMathLab

Credit Hours
College Algebra
Three

KEY
TAKE-AWAY

Both on-ground and online ASU students benefit from MyMathLab's active learning activities. By accommodating different learning styles and varied levels of preparedness, the program eases math anxiety and enables students to take control of their learning.

## Textbook in Use

College Algebra, 7e and 8e, Michael Sullivan

## Course Implementation

## Course Design

College Algebra is delivered both on-ground and fully online. The on-ground course includes three hours of lecture per week in a traditional classroom and required MyMathLab homework. The online course includes required discussions via the university's course management system and MyMathLab homework, quizzes, and tests. Both courses employ a departmental paper-and-pencil final exam.

## Assessments

On-ground College Algebra
20 percent Required MyMathLab homework
50 percent Tests
There are five tests each semester.
Tests are paper and pencil and are graded by the instructor.
30 percent Departmental final exam The exam is paper and pencil and is graded by the instructor.

## Online College Algebra

5 percent Discussion
10 percent Required MyMathLab homework
10 percent MyMathLab quizzes
15 percent MyMathLab tests
60 percent Departmental final exam The exam is paper and pencil, is taken on campus in a proctored classroom, and is graded by the instructor.

## Use of MyMathLab

Students in the on-ground College Algebra course use MyMathLab for homework and are encouraged to use its Study Plan and other online resources. Students in the online course use the full breadth of the program: homework, quizzes, tests, Study Plan, videos, and the eText.

Use of MyMathLab contributes 20 percent to an on-ground student's final course grade and 35 percent to an online student's final course grade.

## Results and Data

Table I and Figure I compare grade distribution, ABC grades, and drop/fail/withdrawal (D/F/W) rates before and after MyMathLab implementation in on-ground College Algebra courses. Table 2 shows grade distribution after MyMathLab implementation in online College Algebra courses. For both course formats, data indicates significant success in both $A B C$
rates and D/F/W rates. On-ground pass rates increased from 55 percent to 61 percent; and D/F/W rates decreased nearly 25 percent: from 40 percent to 31 percent.

|  | Before MyMathLab Adoption |  |  |  | After MyMathLab Adoption |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grade | Summer 2005 | Fall 2006 | Spring 2007 | Fall 2007 | Spring 2008 | Summer 2008 | Fall 2008 | Spring 2009 | Fall 2009 |
| A | $28 \%$ | $20 \%$ | $12 \%$ | $12 \%$ | $21 \%$ | $28 \%$ | $19 \%$ | $08 \%$ | $20 \%$ |
| B | $03 \%$ | $14 \%$ | $20 \%$ | $17.5 \%$ | $11 \%$ | $36 \%$ | $22 \%$ | $35 \%$ | $17 \%$ |
| C | $28 \%$ | $17 \%$ | $23.5 \%$ | $25 \%$ | $21 \%$ | $12 \%$ | $25 \%$ | $15 \%$ | $17 \%$ |
| D | $03 \%$ | $00 \%$ | $03 \%$ | $9 \%$ | $07 \%$ | $08 \%$ | $06 \%$ | $08 \%$ | $10 \%$ |
| D/F/W | $38 \%$ | $49 \%$ | $41.5 \%$ | $36.5 \%$ | $39 \%$ | $16 \%$ | $28 \%$ | $35 \%$ | $37 \%$ |

Table I. On-Ground College Algebra Grade Distribution and D/F/W Rates before and after MyMathLab Implementation ( $n=333$ )

|  | After MyMathLab Adoption |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Grade | Summer 2007 | Fall 2008 | Summer 2009 | Fall 2009 |
| A | $0 \%$ | $8 \%$ | $14 \%$ | $14 \%$ |
| B | $20 \%$ | $0 \%$ | $21 \%$ | $14 \%$ |
| C | $20 \%$ | $8 \%$ | $14 \%$ | $21 \%$ |
| D | $13 \%$ | $12 \%$ | $4 \%$ | $7 \%$ |
| D/F/W | $47 \%$ | $72 \%$ | $46 \%$ | $43 \%$ |

Table 2. Online College Algebra Grade Distribution and D/F/W Rates after MyMathLab Implementation $(n=96)$


Figure I. Average ABC and D/F/W Rates before and after MyMathLab Adoption in On-Ground College Algebra

## The Student Experience

According to Deltrye Eagle Holt, assistant professor, implementing MyMathLab in on-ground College Algebra shifted the course from the traditional sage-on-the-stage format to one that is more active and student centered. "MyMathLab provides students with immediate feedback and assistance," she says. "As a result, they get more practice, complete more homework, and appear to experience less math anxiety and frustration.
"My students are more willing to ask questions in class than they were before using MyMathLab, and the questions are better phrased and more specific," says Holt. "They need less review and are willing to discuss more challenging problems."

MyMathLab gives Holt's students more control over their learning. Because they can review as much as they need to, they better understand the concepts presented in class and are more prepared to move ahead. The program's multimedia learning aids accommodate every learning style and level of preparedness: fast learners can progress quickly, and those who need additional help can move at a slower pace. Some students may even complete the entire course online.

## Conclusions

Holt and other mathematics faculty are pleased with the progress MyMathLab has helped them make across delivery formats. By adding required MyMathLab homework as well as making available the program's breadth of learning resources, Holt and other faculty are finding that their students are taking control of their learning and experiencing more academic success.

- More students complete homework.
- Students are better prepared for class.
- Pass rates have increased.
- D/F/W rates have decreased.

Submitted by Deltrye Eagle Holt, Assistant Professor Augusta State University

