

# University of Wisconsin–Stout

**Course Names** Beginning Algebra, Intermediate Algebra

**Credit Hours** Two, Four

**Semesters Covered** Fall 2004–Spring 2008

**Type of Data Reported** Retention



## Textbooks in Use with MyMathLab

*Beginning Algebra*, 5e, 2009, Martin-Gay; *Intermediate Algebra*, 4e, 2005, Martin-Gay; *Algebra and Trigonometry*,

3e, 2007, Blitzer

## MyMathLab Course Structure

### Course Design

Beginning Algebra meets twice a week for a total of two hours; Intermediate Algebra meets four times a week for a total of four hours. MyMathLab homework is scheduled and due each class day. It may be done at any location, but all quizzes and tests are taken in the classroom or lab with a proctor. Students may work ahead.

### Assessments

*Beginning Algebra*

- 5 quizzes, 2 tests in MyMathLab, plus one quiz outside MyMathLab, each with an accompanying practice quiz/test available in MyMathLab
- 21 MyMathLab homework assignments

### *Intermediate Algebra*

- 7 quizzes, 4 tests in MyMathLab, each with an accompanying practice quiz or test available in MyMathLab
- 42 MyMathLab homework assignments
- 5 homework assignments outside of MyMathLab

### MyMathLab Implementation

Use of MyMathLab contributes 90 percent to each student's final course grade and includes homework, proctored tests, and quizzes; prerequisites for some homework and tests; the Individual Settings feature; and the Coordinator course feature. Grades are not imported from other sources.

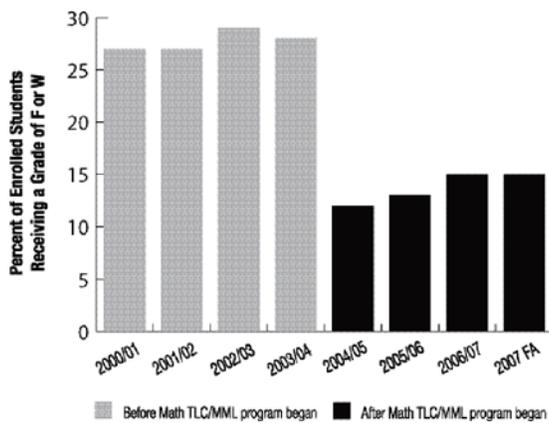
## MyMathLab Course Results

The cornerstone of UW-Stout's math program is daily computer-graded homework that counts significantly (about 25 percent) toward the course grade and is continually monitored by the classroom instructor, who actively intervenes as soon as a student shows signs of falling behind. What distinguishes this curriculum from exclusively online courses is the blending of online homework and tests with required daily classroom sessions in a dedicated, technology-enhanced classroom/tutor lab complex. Another key factor is a new tutoring service dedicated exclusively to supporting Beginning Algebra and Intermediate Algebra students.

Since its inception in fall 2004, the Math Teaching and Learning Center (TLC) has served 2,140 students. During this time, the combined failure/withdrawal rate for the 501 students who have taken remedial Beginning Algebra under the new system has decreased by 55 percent (from 29 percent to 13 percent). See Figure 1.

Results in the Intermediate Algebra course show a less dramatic, 39 percent reduction in nonpass rates (17.8 percent for 1,639 students over seven semesters versus 29 percent pre-Math TLC). See Figure 2.

MyMathLab's tracking features reveal that 95 percent of students are submitting all homework assignments, earning for them an average score of 92 percent. Students are spending an average of 95 minutes on each day's homework assignment—a figure for which no previous comparison data exist but which most teachers of these courses anywhere would find astonishing. Attendance rates now average 94 percent for Intermediate Algebra and 85 percent for Beginning Algebra. From 150 to 200 students visit the tutor lab per week compared with the 75 to 80 tutoring sessions per semester logged by the campuswide, free tutoring service for students in these two courses before the program began.



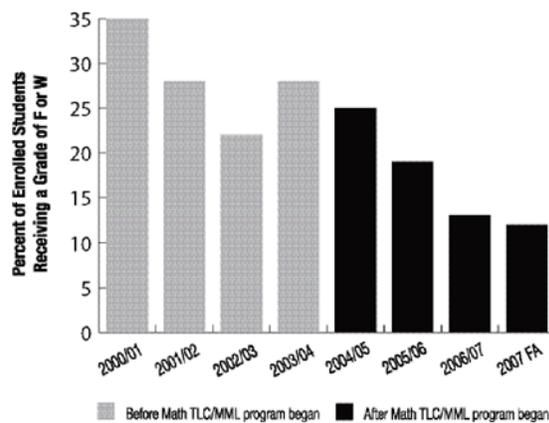
**Figure 1. Year-by-year data of the percent of students receiving failure or withdrawal grades in Beginning Algebra**

In addition to passing these two courses at unprecedented rates, students are registering greater engagement and satisfaction with the learning experience—despite the greater demands placed on them. On an anonymous and voluntary survey distributed to Math TLC students at the end of each semester, 91 percent of respondents indicated that they learned as much as or more than they expected to learn coming into the course; 84 percent said they'd be likely to take a course using this structure again. And despite the prominence of online homework and learning tools, students still rated *my teacher* as the top factor influencing their learning out of seven choices (online homework, online help, lectures, tutors, my teacher, open lab, textbook)—strong evidence that the personal interaction

## Conclusions

When asked about her view of the future of mathematics instruction vis-à-vis her experience with MyMathLab, Jeanne Foley, director of UW-Stout's Math Teaching and Learning Center, replied with the following.

“Technology will become the universal course delivery medium. There will still be a market for so-called brick-and-mortar universities and on-site rather than online classes—despite the accelerating growth of online universities and online course work at traditional institutions. It is especially the students who struggle with math and who are taking remedial or introductory math classes who most need the hands-on support of a live teacher in a real classroom. There is a real synergy between the benefits offered by MyMathLab and the face-to-face interactions between students and their classroom teacher and tutors.



**Figure 2. Year-by-year data of the percent of students receiving failure or withdrawal grades in Intermediate Algebra**

this program provides in the classroom and lab is an essential feature distinguishing this approach from strictly online and even most hybrid course structures.

Written responses to student survey questions are typified by this verbatim quote: “This class completely changed my views on math. Before this class I hated math and never wanted to do it. I hated math even in grade school! After this course I *love* math and am considering a math minor. I'm even thinking of being a tutor in the Math TLC next year. I would never have imagined *me* teaching and helping others with math.”

“Students' learning habits have changed tremendously in the past 10 years. Although it does seem that students' attention spans for lectures and their ability to focus for extended times on traditional assignments have diminished, their willingness to spend one or two or sometimes even three hours a day on interactive homework like the MyMathLab exercises has increased. Students in UW-Stout Intermediate Algebra classes are spending an average of 95 minutes a day on their MyMathLab homework—far more than they spent when these courses were taught traditionally.”

*Submitted by Jeanne Foley, Director, Math Teaching and Learning Center  
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