

Product Name **MasteringBiology**
Course Name **General Biology I**
Credit Hours **Four**

Key Results Since implementing MasteringBiology, success rates are higher—and have remained higher—and more students are earning final course grades of A.

Text

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Implementation

General Biology I is designed for science majors and includes both a lecture and lab. The course covers the scientific method, cellular and molecular biology, biochemistry, classical and human genetics, virology, and mechanisms of evolution. It is a transfer course, so nonscience majors may also take it. Only about 20 percent of students taking the course are biology majors.

I adopted MasteringBiology in fall 2010 to address the issue of underprepared students. These students' time management skills are poor, and many do not understand how to succeed in a college-level course

While working with students during office hours, I show them how to use MasteringBiology to more efficiently study. For example, I explain how the flashcard tool can be used to create a personalized set of flashcards, thereby saving them time and enabling them to better focus their studying efforts. I also show them how they can download the mp3 tutors so they can listen to a biology lesson on their way to work or in the gym.

My MasteringBiology assignments start with tutorials and coaching activities to get students engaged, and end with multiple-choice questions. They are untimed and some assignments cover multiple chapters.

Assessments

52 percent	Exams (four, drop the lowest score)
48 percent	MasteringBiology homework

The Student Experience

Students like MasteringBiology mostly because they can review past homework assignments in preparation for the exam. I show the Bioflix® in class, which really helps to support the lecture content, and students appreciate the opportunity to watch those videos again on their own time.

In addition, the tutorials and feedback in MasteringBiology help students identify and remediate the concepts they don't understand, thereby allowing them to learn when it's convenient for them.

One student reported the following on an end-of-semester survey: "I really like the MasteringBiology site. I think it's a great tool. The study area is awesome. I actually watch those videos to create a mental picture of all the concepts I have to know."

“MasteringBiology makes it easy to assess student mastery. As a result, I can more accurately determine what to focus on during lecture.”

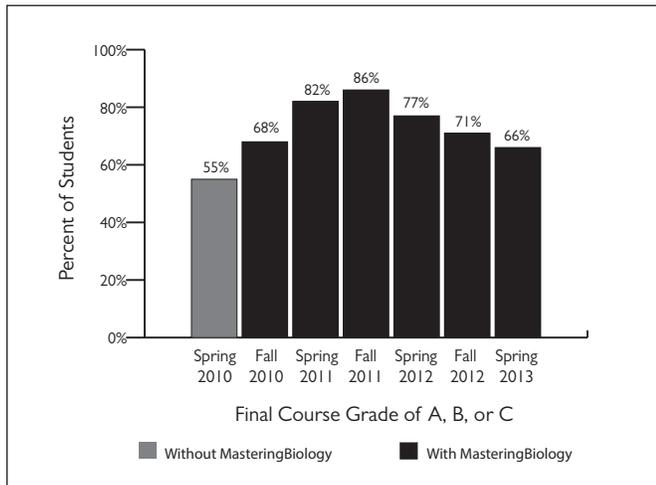


Figure 1. General Biology I Success Rates before and after Implementation of MasteringBiology, Spring 2010–13 (Spring 2010, $n=119$; Fall 2010, $n=85$; Spring 2011, $n=60$; Fall 2011, $n=58$; Spring 2012, $n=60$; Fall 2012, $n=59$; Spring 2013, $n=59$)

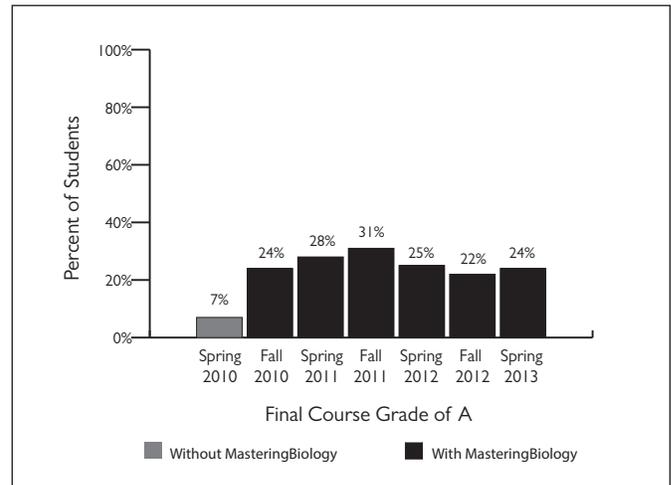


Figure 2. General Biology I Final Course Grade of A before and after Implementation of MasteringBiology, Spring 2010–13 (Spring 2010, $n=119$; Fall 2010, $n=85$; Spring 2011, $n=60$; Fall 2011, $n=58$; Spring 2012, $n=60$; Fall 2012, $n=59$; Spring 2013, $n=59$)

Results and Data

Course results show that since implementing MasteringBiology in fall 2010, success (A/B/C) rates have consistently been higher (figure 1). In addition, the number of students earning an A in the course has significantly increased (figure 2), which indicates that students have a better understanding of the content, something that will help them in future science courses.

Conclusion

MasteringBiology is a great tool—because it helps students engage in course material outside of the classroom, they can grasp the basic concepts on their own. This enables me to do higher-level interactive learning in the classroom and lab, thereby helping students develop a deeper conceptual understanding of the content. In addition, MasteringBiology makes it easy to assess student mastery. As a result, I can more accurately determine what to focus on during lecture.

*Submitted by Warner Bair
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