

# Ensure Students Are Learning: Faculty Descriptions of Innovative Teaching Practices

## Mastery Grading Approach Removes Sense of Penalty in Math

### Innovative Teaching Practice Description:

This practice involves a flipped classroom in which students listen to lectures and complete homework outside of class and demonstrate in class what they have learned through presentations, activities, group work, and engaging in discussions. Students watch video examples of how to solve problems and then complete the corresponding section of their notes packet (which they purchase at the beginning of the term). The notes packet includes two examples for the students to practice while watching the videos. Five additional problems are included in each section, which the students work on as homework and bring to class. Students use email to ask questions of and receive feedback from the instructor. The packets are collected at the time of each exam.

In class, a student will present how to solve a homework problem on the document camera. The instructor keeps track of who presents so that every student presents at some point. The instructor informs students one class session ahead of time that they will walk the class through a problem, so that they have time to prepare. Typically, four students present during each class period. Over the course of the term, students are required to complete eight presentations.

In lieu of traditional grades, students are given a rating of “exceeds expectations,” “meets expectations,” or “needs improvement.” The goal is to show mastery of the concepts. The concepts covered in the course are broken down into broad categories called “big ideas.” For example, the intermediate algebra course is broken into seven categories of math topics, each of which includes multiple concepts. An example concept is “finding the equation of a line.” Students may be tested on this concept 10 different times throughout the term. To be rated as “meets expectations,” students must correctly answer the problem five out of the 10 times. The use of this alternative grading system allows students to identify what they need to work on without being penalized for incorrect responses each time the problem appears on a test; mastery of the concepts is based on the work throughout the term.