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Course name: Calculus I for the Sciences  
Textbook: Briggs & Cochran *Calculus*  
Number of students: 327

**Course description**

Calculus I for the Sciences is a traditional course taught on campus. It is mathematics for non-maths students. About 70% of the students are chemistry majors, who are not really interested in maths. There is also a lot of diversity amongst the students. Some are very strong students (mostly, international physics students) and some are very weak students (mostly from local polytechnics).

**Assessment**

MyMathLab activities are assigned in two modes:

- Homework: 12 weekly problem sets for practice (15-20 exercises in each), which are not graded. The assignments are available the entire semester and students can use them for revision before the final exam. I'd say about 40% of the students put effort into them and actually complete these problem sets, while another 20% play with it a little, and the remaining 40% never looked at them.
- Quizzes: 3 quizzes, each worth 5% of the total mark. Two of these quizzes were conducted in a computer lab. Students were given about half an hour to complete 3 easy questions. The last quiz was done at home and students had one week with unlimited attempts to complete 5 also easy questions.

**Implementation**

MyMathLab was particularly helpful to provide additional explanations for weak students and to save my time. Before MyMathLab I had to come up with problem sets myself, prepare all solutions, and explain the solutions during tutorial sessions. It took a lot of time and didn't capture the needs of all students - stronger students don't need hints and explanations and weaker ones need more hints and explanations. With MyMathLab everyone can work on practice exercises at their own pace. Now since MyMathLab already comes with hints and solutions, I can do something other than explaining exercises during a tutorial session; I now fill this review time with more interesting activities, like group discussions.

Using MyMathLab was as simple as possible. For the 12 problem sets and 3 quizzes, I just pulled a number of questions from the question bank. For

problem sets I used questions from our textbook, and for quizzes I selected questions from other textbooks.

### **Trends**

I cannot compare a class with and without MyMathLab because the program was just one of many components in a major course redesign. I'm proud to say that no one failed the calculus course; and that the cutoffs for A and A+ are higher than last year although my final exam was more difficult. Without proper comparisons we cannot claim these results are rigorous. Speaking anecdotally, I'm quite happy with the level of my students. At the end of the semester I've personally interviewed the weakest 5% of my students and my conclusion is that their situation is not hopeless. Of course, these students are not fond of mathematics, but they do know the basics.

### **Conclusion**

I would definitely recommend MyMathLab for teaching large courses with emphasis on computation because it saves the lecturer's time, changes the tutors' roles and provides additional help for weak students.