

## **June 2007 - Michael Sheehy, Mathematics and Physics – Teaching Tip**

This is an idea that was just recently brought to my attention by Michael Orrison at Harvey Mudd College who wrote an article which was published in Dec. 2006 issue of FOCUS, the newsletter of the Mathematical Association of America.

At the beginning of a course, we all hand out a standard course syllabus, which at least in my case has grown over the last couple of years. It should answer many of the questions that students should have. What are the grading policies? When are office hours? How many exams will there be? And so forth. The last thing that you probably want to hear is some advice on (gulp!) making your syllabus even bigger, but that's what I am about to do.

There is one question that students never ask at the beginning of the semester, which I feel that they should. That question might go something like, "As the instructor, what advice do you have for someone who wants to be successful in this course?" I want my students to succeed so at the beginning of each course, I try to give them a handful of generic bits of advice: start your homework early, make sure to read the book, and don't hesitate to ask questions in class. Of course, very few students pay attention to this on the first day and the advice is usually forgotten before the first week has finished.

Michael Orrison suggests that the advice could be more effective if it were coming from former students of the course instead of from me. Would they now pay attention? After all, as far as my students were concerned, the comments of former students would come with built in legitimacy. Moreover, they might have some good ideas that I haven't thought of myself. So on the last day of my Differential Equations class I asked them, "What advice would you give to a future DE student so that the student could be successful in my course?" I received some very good responses (and a couple of bad ones). Here are some examples:

I believe that in order to be successful in your course, one should do all the homework on time. This way, you get the opportunity of participating in class and the chance to correct mistakes.

Honestly I think they just have to study every section and everything new constantly and never wait until the night before to study for the test. The material is not so bad; it is just remembering all the steps. That is what I did, I kept reviewing what we were learning and that is how I understood the material a lot better.

The advice is rather simple: Do the homework. If you cannot master the material with the number of problems given, do more. ODE is mastered through repetition and becoming accustomed to the material presented.

At the end of this semester, I will ask all of my classes to provide advice for future students, and I will make sure to share what I feel are the most important tips with those future students. I will put it in writing and hand it out the first day with the syllabus. I think that they are more likely to listen to those who have preceded them than are to me. If they listen, it will lead to better results and in the long run will save me a lot of time since I won't have to deal with the consequences of students not following that advice.