

You learn best by doing. Therefore, you will learn the most as you actively read your textbooks, do practice exercises, and complete homework assignments. You learn the least by listening to me talk. In particular, some of the topics in this course are quite complicated and it is impossible for me to really teach them to you, especially in the brief time we have together in class. You need to learn them by thinking deeply about them on your own, reading examples, solving problems, and applying the ideas. I can help you in this process, but it is a process you must go through.

Learning takes effort, but effort alone isn't always enough and is sometimes counterproductive. Sometimes collaborating with others is much more productive. This includes the instructor, the Help Center/Math Lab, upper-class students, and your classmates. Don't be afraid to seek the advice of others. The most successful people do this. Your goal in doing this should be to learn the material, not just solve a particular homework problem. And you need to stay within whatever boundaries your professors have provided.

Here is an example from my life. When I was an undergraduate I took an independent study course in vector calculus. I spent many hours trying to comprehend the material and I was just stuck. I went to the professor to ask some questions, but I was so lost that what he was telling me didn't make a whole lot of sense. I left and continued to try on my own to learn, but I just didn't get it. I went back to the professor a second time and made it clear to him that I just wasn't getting it at all. He explained several fundamental concepts to me and after less than half an hour I finally was beginning to understand. From then on the course was very straightforward. I simply had a few fundamental misunderstandings and once they were cleared up I was able to proceed. It would have been nearly impossible for me to finish the course on my own. In other words, simply working harder was not going to work in this case. I was successful because I realized my limitations and sought help when I needed it (and because of my hard work).

In summary, you should be ready and willing to work hard, with your goal to master the material, not simply finish assignments, and seek help when needed. The more you master the material from this course, the easier many of your future courses will be. Work smarter, not harder.