

## DEVELOPING GOOD STUDY HABITS

You and I each have responsibilities in this course. My responsibility is to teach the material to you, which I do through lectures and by making myself available to help you outside of class. *Your responsibility is to study.* Neither I, nor anyone else, can study for you. You will not learn from even the best teacher if you do not study.

One of my primary responsibilities to the university and to you is to ensure that our class time is used as optimally as possible. For example, for the sake of the class as a whole, I might not answer every question asked in class. The following example will illustrate. Suppose the class comprises 30 students. If my answering one question helps only 20% of the students, then 24 students do not benefit! Instead of answering that particular question in class, the time might have been better spent if I covered a more difficult concept, thereby benefitting most of the students. This is where another of your responsibilities comes in — *to seek help outside of class when you need it.*

Successful study requires practicing the following:

- ♣ *attending all lectures and taking good notes*
- ♣ *reading and studying the text*
- ♣ *reading and studying the lecture notes and handouts*
- ♣ *working through and successfully completing all homework assignments*

Many students err by doing only one or two of these and neglecting the others. As examples,

- § Some students study from the lecture notes but not from the text (or *vice versa*). If it were enough to merely study from one but not from the other, then either the text or the teacher is unnecessary. However, although the lectures and text often overlap, they also supplement one another; therefore you should study from both to successfully learn the material.
- § Some students try to do the homework without studying (or *vice versa*). This does not facilitate full learning as one does not generally learn concepts in this way.
- § Regarding regular attendance, consider that missing four lectures is to miss one-tenth of the semester; missing eight lectures is to miss one-fifth of the semester.

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### SO HOW DO I DO IT?

The main goal of many students is to finish the homework on time. Students who study this way usually do little more than 1) try to do the homework, and then 2) study a day or two before the exam. When the final exam arrives, the student remembers little and instead of reviewing, the student ends up cramming, which is an *extremely ineffective* way to study.

An effective way to study is to study *before* and *while* you do the homework. I recommend students adopt the following study habits. By doing so you will be simultaneously making more efficient use of your time and preparing for exams (including the final) more effectively. Former students who adopted these habits have attested that both their understanding and grades improved, in my course and others. Perhaps the two worst habits are: 1) falling behind in class, and 2) not studying properly. Therefore, you should be *proactive* (by staying on schedule) rather than *reactive* (trying to get caught up). By staying on schedule, you will find it easier to prepare for exams. Furthermore, students who study properly should never have to cram, but merely review, for exams.

**To monitor your progress in developing good study habits, check the following items as they become habits for you.**

*More...*

▷ **Begin studying the material (lectures and text) the same day it is presented.**

- ⊕ The material will be fresh in your mind, and doing so will help keep you from falling behind.
- ⊕ If you don't study immediately, the subsequent lectures will make little sense, and you'll continue falling behind. Ultimately either you'll never get caught up, or you'll have to cram.
- ⊕ Reading is not the same as studying. *Studying involves careful and contemplative reading.*
- ⊕ Study and work through the teacher's examples and the text's examples yourself.

▷ **Begin doing the homework immediately after it is assigned.**

- Ω The material will be fresh in your mind, and doing so will help keep you from falling behind.
- Ω You should have an assignment successfully completed before it is due, or before the next assignment is given. If not, you are falling behind and not properly preparing for the next exam.

▷ **On weekends, review the week's material and redo the week's homework.**

- Σ The benefits are twofold! You are simultaneously 1) keeping the material fresh in your mind, and 2) preparing for the next exam. Consequently, when the next exam comes, you shouldn't have to stay up late cramming! A brief review should do the job.
- Σ This will also help you determine any difficulties or questions you might still have, giving you time to get help before the exam.
- Σ You will find the problems easier to do the second time, and you will have greater confidence on exams.

▷ **Are you able to complete all homework problems successfully without assistance? If not, you are not prepared for an exam.**

- Ψ Some students err by believing it is enough to complete *some* of the homework problems successfully. I often hear individuals say something like "*I don't understand why I'm failing the course. I'm able to work through half to two-thirds of the homework problems.*" — without realizing that such performance is failing.
- Ψ Some students err by relying on aid (from notes, the text, or another person) to complete the assignments, without acknowledging such dependence. This is especially true of a student whose main concern is to finish the homework rather than to learn the material. Relying on aid to finish a problem means you haven't learned the material and might not be prepared for an exam.
- Ψ A typical student generally performs poorer on exams than on homework. A student who averages 80% on homework, for example, will typically score lower on exams.
- Ψ When studying, your ultimate goal should be *to be able to do all homework problems successfully without aid.*
- Ψ Completing all assignments successfully without aid will increase your confidence on exams.

▷ **Remember to also study the material.**

- ⊖ Although successfully completing all homework is crucial, doing so still might not fully prepare you for exams. You also should be reading and studying the material (notes and text) to fully understand the principles and concepts. What works for one problem might not work for another, so understanding the concepts is important.

▷ **Use the "Study Buddy" system.**

- ≡ Study regularly together, but your goal should not merely be to complete the homework. Your goal should be to work and learn *together and from each other.*
- ≡ Quiz each other and challenge each other to improve. Don't quit until each member of your circle fully understands the concepts and how to do the problems. Challenge each other to explain their steps and also to use proper mathematical notation.
- ≡ Be very careful not to pick up bad habits from each other. And don't quit until each member of your circle fully understands the concepts and how to do the problems.

▷ **Get help early if you need it.**

- ☺ If you struggle with a problem or concept and simply can't get it, seek assistance.
- ☺ Don't wait until a day or two before an exam to get help. Get help early enough to allow time to work through several problems to ensure that you understand the concepts.

**Finally, you alone are responsible for learning the material and for your performance.**