

FIRST-YEAR FAST FACTS

Week 3 Absorbing It All

Understanding the Material

• Studying & Study Groups • Taking Tests

“You have to be able to apply the knowledge. The professor might give it to you for one example, but you have to learn the material enough to be able to apply it to other situations.”

–Stuart, Design

“You may find that it takes more time to study than you thought. Start by assuming it will take longer to learn something than you think.”

–Omar, Statistics

FACULTY FEEDBACK

“A professor isn’t there to make you learn, but to facilitate learning. Ultimately, you are responsible for your education. A course and its professor are there to identify the important subject matter, organize it, place it in context and present it in a thoughtful and interesting manner. But whether or not you get the most possible out of the course is up to you. Students need to take the initiative in studying, digesting the course’s material and asking good questions.” –Professor, Art

“Studying is like building a building,” says one sophomore. “If you don’t have the right foundation –going to class, doing the readings –your ‘building’ will collapse.” With homework due in every course and tests approaching, now is a good time to make sure you have a strong foundation for the rest of the semester.

Understanding the Material

Different kinds of courses will require different kinds of approaches to understanding. The comprehension and study strategies that are required may differ as well.

Take a different approach.

First-year students soon realize that studying in college isn’t just about memorization; rather, it’s learning how to apply, practice, and synthesize the material. Following are some tips on approaching college-level material:

- *In some courses, it’s important to be able to define key terms; in others, it’s more important to be able to explain your reasoning or apply learned concepts to new problems. If you’re puzzled, ask your professor or TA for advice about how to best approach studying the subject.*

- *Use the course syllabus as a framework for studying. When you see what’s coming next, you’ll understand the purpose of what you’re studying now.*
- *Pay attention to course goals and objectives, usually stated in the syllabus but sometimes spelled out by the instructor in class. You can use these goals and objectives to help you make sense of what is happening throughout the semester, and understand how it will all add up to the intended result.*
- *Look for connections between different units in the course. Try to see how the different parts go together to make a whole.*
- *Don’t expect to always understand the lecture in real time—take good notes, review them, try to do the problems. The concepts you didn’t understand in class may suddenly dawn on you once you’re back in your room.*
- *Make sure you understand the current topic before you go on to the next one. In most courses, concepts and skills build upon each other. If you haven’t mastered the first lesson, you will have even more trouble with subsequent ones.*



Absorbing It All

FACULTY FEEDBACK

“Try to work on each course each day. Even if there is nothing due you can read over notes or reread the book. Actors, musicians, and athletes would never spend 12 hours a day before the event or competition getting ready. They prepare in measured efforts over a period of time. If it works for them, why not try to use a similar strategy for your courses?”

—Professor, History

“One problem I had coming into CMU was learning how to study properly. I never really needed to study in high school, as most of the material was not too difficult, and I had covered many of the topics beforehand. When I first came here, however, that was not the case, and I was caught off guard during the first few weeks of class. Eventually, I did learn some study techniques, and it really made a world of difference. This semester, I am doing better than ever before, and am much happier because of it.”

—Glenn, Business Administration

“Group study is one significant things that helped through hard courses. Basically, at CMU I found out that you cannot survive by yourself.”

—Bill, Mechanical Engineering

“I don’t work in groups very well, but when the study groups started getting together, I found it very helpful. We all keep each other focused.”

—Heidi, Mathematical Sciences

Studying and Study Groups

From where you study to when you study to whether or not to study in a group, discovering early on what works for you will make the process easier and more effective.

Decide where and when to study.

Where you study can be as important as how and for how long you study. Try to find a few quality study places where you won’t be disturbed — a favorite corner of the library, a dorm lounge, an empty classroom or even your own room during certain times of the day. But be aware that when you study in your dorm room, you are sending yourself mixed signals. Are you there to eat? To sleep? To play? It’s best to study in a place where that’s all you do.

If possible, try to study regularly in the same place at the same time. Your brain will cognitively associate that place with learning, and will prepare you to do so. Come prepared with the necessary materials. Plan regular breaks (typically 10-15 minutes for every hour of work) and plan rewards for yourself in return for getting things done.

Know how to study.

You may have heard the adage “Study smarter, not harder.” That is good advice for any student, but particularly when time is precious. Everyone develops his or her own study style, but some methods can be useful to most anyone:

- Try to review lecture notes within 24 hours of the lecture. Always

review material from the previous lecture before going to the next class.

- Occasionally stop and quiz yourself and orally summarize what you have just read or reviewed.
- Use mnemonic devices for memorization. This trick works for memorizing lists of items that are not processes or are unrelated (like learning the order of the planets).
- Plan regular breaks. Studies show that taking breaks helps you retain what you’ve just absorbed.

Two (or more) heads are better than one.

You’ve probably at one time or another been a member of a team for something — a sport, or a school or community project. If so, you know that working together can produce results that just weren’t possible if done by one person alone. It’s the same for group study. You can still work on your own, but when you need that extra insight or little bit of explanation about what the heck Professor X was discussing in yesterday’s class or how to do a homework problem, turning to your peers can help tremendously. Many students have found that preparing on their own and then meeting with a group even once a week helps them to understand the material better and feel more engaged in class.

Form a group.

Some groups can be formed as casually — and as easily — as asking around your dorm. Others just naturally form from people



Absorbing It All

“I just walked up and down the hall in my dorm, asking ‘Does anyone know how to do #24 in the physics homework?’ and a study group just all of a sudden got together. We study in our lounge.”

—Marta, Chemistry

“I learned that I get the most out of working with a group only after I have studied the material on my own. The entire group benefits if each person can add something to the whole.”

—Jun, Economics

“Don’t form study groups with your best friends. And don’t depend on your boyfriend or girlfriend to be your study buddy.”

—Leslie, Psychology

“Some of my professors have put sample exams and papers on the web. It really helped me to refer to those to see what I could expect and what was expected of me.”

—Kelly, Physics

“To study for exams, I take notes on my notes. That becomes a study sheet. I spend half of my time using that to study and half on practice problems.”

—Miklos, Materials Science

“My first test was awful. I got a C, but had the knowledge for an A. I didn’t get it because I was too anxious. Things picked up after that. Then felt more sure of myself.”

—Christine, English

you sit near in class. Professors can also help in forming study groups. Just remember: If your group isn’t working for you for some reason, you can always switch to another one.

Make the most of the group study.

Just because you’re gathered in a certain place for a certain amount of time with members of your study group doesn’t mean that studying is actually taking place. To make the most of your group study time:

- *Don’t make the group too large*, four to six is a good number.
- *Come prepared*. Do the readings, do the homeworks, review the lecture notes. Don’t just come looking for answers; arrive ready to give some as well. (One way to share the work is to have each member of the group be responsible for explaining certain problems or sections of a chapter, though all members should be least familiar with the material the group will cover. Another idea is for each member to bring five possible test questions.)
- *Change to a more responsible — and productive — group* if you find that you are always prepared but other members of the study group are always not.
- *Structure the time*, and avoid turning study time into social hour. It’s likely that you will make friends or at least become friendly with members of your study group, and it’s certainly okay to chat a bit, but be sure you get some work done too.

Taking Tests

Remember in high school when your math/history/biology teacher told you exactly what was going to be on the test? Well, it’s a little different in college...

Be prepared.

- Test-taking anxiety often stems from not being prepared. The simple solution to that is to *get to the root of your test anxiety by getting the root of your study problems*. Fear of the unknown is another anxiety-producer. Combat that by understanding what will be tested, what percentage of your course grade the test comprises, the type of test to be given and how long you’ll have to complete it.
- *Begin studying for tests on the first day of class* by keeping up with assignments and readings, and attending class and taking notes.
- *Go to review sessions or see your professor or TA*. To get the most out of these resources, go in with specific questions.
- *Read lecture notes and re-do a sampling of the homeworks* (exam questions often come from assignments). Make sure that you even do the kinds of problems you got right, to make sure you still know the material.
- *Do the problems from your previous tests and any old ones that the professor makes available*. Doing lots of practice problems increases speed during the test.
- *Make yourself a review sheet based on a very condensed version of the lecture notes*.
- *Don’t pull an all-nighter studying the before a final—the sleep will*

FACULTY FEEDBACK

“You’ve probably crammed for tests before and done well. Chances are, however, that you ended up getting stressed out, and didn’t retain the information after you unloaded it onto the test paper. Tests are designed to be a comprehensive measure of what you’ve learned so far in the course. It’s difficult to re-learn that much material the night before the test. Regular review and a planned approach will help you keep relaxed and help you retain the information in the long-run.” –Professor, Business Administration

TIP

Keeping up with the homeworks will most likely produce good exam results. However, it could be that you don’t have the necessary background knowledge to do well in the course. Talk to your professor about this. You may want to drop the course or transfer into a more basic course.

improve your grade more than staying up all night studying will.

Know what to expect.

- *Know what type of exam will be given, and bring all necessary materials you’ll need for taking the exam.*
- *Arrive a few minutes early to get a good seat and reduce anxiety.*
- *Know how long you’ll have to complete the test, and budget your time.* Read through the exam briefly and jot down some notes that you will later incorporate into your answers.
- *Stay relaxed, confident and focused.* Tell yourself that you are prepared and will do well. Don’t waste time by looking at the clock and checking to see how others are doing.
- Some people who are prepared for tests still get very anxious. For those students, techniques like deep breathing can help.
- *Read the questions very carefully.* Begin by answering the easy questions then the ones with the highest point value. The last questions you should answer are the ones with the lowest point value, are the most difficult or take the longest.
- *Ask the professor or the TA if you are unclear about something.*
- *If you don’t know the full answer, you can put down what you do know.* Most professor give partial credit.
- *Plan before writing during essay exams.* Make a brief outline by jotting down the key terms you want to discuss, then get straight to the point with an introduction, then key points with examples,

statistics or quotation, then a concluding paragraph that summarizes your main points.

- Review your test before you turn it in. Make sure you have answered all the questions, and proofread for spelling, grammar or punctuation mistakes. Check math for careless errors.

Learn from the test.

- *Learn from quizzes and tests.* Were you able to apply the concepts you learned to unfamiliar problems. Were you surprised by the depth of knowledge that was expected of you? Be prepared for that the next time.
- *Analyze your test-taking strategies to help you prepare for the next test.*
- *Keep a file of old tests to help you study for upcoming ones.*