



FAST FACTS

Taking Lecture Notes

It's three o'clock in the afternoon. Time for physics lecture again. You enter the lecture hall and take your seat in the last row. Although it's difficult to see the board from up here, you get an excellent view through the window of people playing Frisbee out on the Cut. You take a pen and pad out of your backpack and prop your feet up on the chair in front of you.

The prof begins to drawl in his low monotone. Today's a special review session for the exam scheduled for next class. You slyly reach into your backpack and turn on your tape recorder. Now you can bide your time without worry; you can always play the tape back later if you miss some information during class. You yawn; the heat's making you drowsy....

You're awakened by the sound of voices and shuffling feet. You open your eyes—the lecture's over. You look at the page in front of you. Not too many notes there! In fact, aside from a doodle or two, it's downright blank. Well, there's always the tape. Uh-oh—looks like the batteries died somewhere in the middle.

Can there possibly be a better way?

About college lectures

The college lecture is usually a novel experience to new Carnegie Mellon students. Unlike most high school classes, college lectures can be very large, with two or three hundred people attending. Although in high school the function of a lecture is usually to rehash material already covered in the textbook, college lectures most often provide an extension or enhancement of text material or introduce entirely new material.

Lectures provide rich learning opportunities that can help you in a number of ways: by reinforcing key concepts and principles, demonstrating application of concepts, providing different perspectives of text material and expanding on course topics not covered in the textbook. They also give you the opportunity to take notes that will help you with later study and review. To get the most out of lecture time, you need to make the most of your listening, seeing, thinking and problem-solving abilities, all the while filtering out any number of irritating distractions that may be present. As such, special skills are required for getting the most out of the time you spend in lecture. The lecture experience can be confusing and frustrating if you're ill-prepared.

Tips for a better lecture notetaking strategy

Before the lecture begins

Review. Looking over the course syllabus and notes from the previous class helps you determine the intended focus of the lecture and gives you some background for learning new material.

Read the material that's been assigned. Doing so will help you better understand the material discussed in class—you'll already be familiar with the concepts and vocabulary that are used.

During the lecture

Avoid distractions. If you often find yourself daydreaming out of windows, for instance, don't sit next to one.

Date your notes. It will then be easier to find notes for any particular class when you review later.

Take spacious notes. Use one side of the page only. This allows you more freedom for including additional notes, for inserting textbook references and for reorganizing information later. Leave blank spaces for material you miss or are

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uncertain about; you can ask a classmate or the professor to help fill them in later.

Use your own words. Research shows that we remember information better if it's phrased in our own language. Therefore, translate concepts presented in class into your own words, as if you were explaining them to someone else. Of course, you'll sometimes be forced to use technical language in order to make definitions and concepts clear.

Be sensitive to the lecturer's verbal and visual cues. Phrases such as "chief outcome" and "in conclusion" signal summary topics of primary importance. Tone and pauses can also alert you to important information.

Mark examples in your notebook. Examples, pictures, graphs, problems, etc. presented in lecture are selected for specific reasons, usually because they help illustrate important concepts. Often, examples or problems similar to those given in class later appear on exams, so it's always a good idea to note when these come up in lecture and review them later.

Use abbreviations and symbols. Doing so can greatly speed your notetaking and thereby increase the number of notes you can take during class. If a concept or idea is difficult to explain in words, try symbolizing it using an alternative form, such as a chart or diagram. Of course, be sure that you remember what the abbreviations and symbols mean or they can't help you later.

Recognize a lecturer's pattern and follow it. A lecturer's style—how he or

she presents material and ideas—usually becomes apparent early on and won't change much throughout the semester. Knowing your instructor's lecture techniques will help alert you to the times you should be paying extra attention.

Avoid recording lectures. Unless you have a specific need to use a tape recorder in class, it may be better not to use one. Tape recorders encourage passivity and hence aren't a great alternative to active notetaking. Your schedule is probably already too congested—do you really have the time to listen to your lectures twice? Even if you have a disability that requires the use of a tape recorder, always try to take notes, too. (As a courtesy, always ask the professor for permission to record the class.)

Pay attention to others' questions. Take notes during class discussions or when questions are raised; important concepts are often clarified at these times.

After the lecture ends
Review lecture notes periodically. Research shows that you can forget up to 80% of what you learned in the first 24 hours after a lecture if you don't review. Reviewing periodically keeps information fresh in your long-term memory and helps you integrate new information with old.

Re-organize your notes. Don't just re-write them—categorize and reclassify the information, cluster similar concepts together, look for the overriding concepts behind sample problems, compare and contrast theories, etc.

Synthesize. Look for relationships among material presented in lecture, in discussion sessions, in homework and labs, and in the text. Try to develop a general picture of the material underpinning the course instead of simply memorizing facts and equations. If you truly *comprehend* the course material instead of merely proceeding by rote, you'll be better able to anticipate test questions and to ask informed questions that will help fill gaps in your knowledge. The course will serve as far better preparation for the more advanced classes you'll take; it will form a more sturdy building block in the foundation of your education.



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