

How to Study

Jon Ahlquist, ahlquist@met.fsu.edu

Whatever the subject, you will learn faster when you are an active participant and work hard. Practically every semester when I teach MET1010, a student comes to me after the first exam and says, "I don't understand why I did so poorly on the exam. I really thought I understood the material." The first few times I taught MET1010, these stories seemed like fabrications designed to earn sympathy, but I heard the same story so many times that I became convinced the students really believed what they were saying, despite the fact that a little oral quizzing confirmed their lack of understanding.

After thinking about these students who think they understand material when they don't, I've come up with a possible explanation. They may be "armchair students" in the same sense that television has created "armchair judges" of figure skating. These people can judge someone else doing something (a figure skater or a professor), but they can't do it themselves. When they listen to a class lecture, they can tell when it makes sense, but when, in an exam, they are figuratively required to strap on their skates and show their own leaps, they can only jump to conclusions, which are often wrong.

The way to avoid falling flat on your backside in an exam or skating on thin ice with your reasoning is to get lots of practice "doing," not just being a spectator. The following suggestions are designed to do just that. Success requires a lot of time used in focused way.

First, **you must attend class and read your book to do well in this course.** We'll emphasize the most important things in class, but we do not have time to cover everything during class. Some questions on the exams will cover material in the reading that was not mentioned in class. I will not expect you to memorize tiny details, but I certainly will expect you to understand the main points of each subsection in the book.

Second, **you will learn much better if you read each chapter several times in various degrees of depth.** This applies to almost every course you take. The first time you go through a chapter, don't try to read it word for word. Page through the chapter to determine the main topics and how many pages are devoted to each topic. Look at some of the pictures and read their captions. Read the various summaries in a chapter, and look through any study guides at the end of the chapter. (Your MET1010 book by Ahrens has these in abundance. The "Questions for Review" are easier than the "Questions for Thought.") Then, with your book closed, say or write in your own words what the main topics are. Now you are ready to read the chapter word for word. This multi-stage process will probably be spread over 2 or more days. As you read, you may wish to add a few comments in the margin in pencil, but don't use a highlighter pen yet. You should highlight only the most important things, just a few sentences per page, and that

requires knowledge and judgment, which you do not have the first time you read something. I've seen too many students use a highlighter so that it looks like they are trying to change the color of the paper of the book from white to the highlighter color. A highlighter is a great tool, but use it sparingly! Highlight as you review after you have completed your word-by-word reading.

Third, after the multi-stage reading of a chapter, **close the book and write a summary of the chapter, trying to reorganize the information** so that you look at it from a different perspective.

Fourth, **look for examples to which you can apply what you have learned.** This should be fairly easy to do in meteorology, because you can always look up at the sky, because every newscast includes a weather report, and because the weather is so often an item of news: El Nino, global warming, hurricanes, etc.

Fifth, **study with a friend**, so that you can ask each other questions; i.e., form a study group. Also, please visit your instructor during office hours so that you can confirm your understanding. Interaction with others will improve your performance.

Sixth, **ask questions in class and during office hours.** This is a way to check your understanding. Don't be afraid of the instructor! If it is too scary to ask in class, then come during office hours and/or ask via email.

Seven, **live healthy.** Eat a proper diet, sleep regular hours, and exercise at least 3 days per week.

Web resources that discuss study skills

A very nice presentation of study skills that should help you with MET1010 and your other courses is a document called "Study Skills" that you can download from <http://www.westshore.edu/home.php/lcenter/study>. This is from the West Shore Community College in Scottsville, MI. It begins with a description of the Cornell Note Taking Method. This is a commonly recommended procedure for taking notes for any subject. Of course, the Cornell Note-taking Method only works if you are actually attending your classes (EVERY session of EVERY class). My only point of disagreement on the note-taking page lies with the final comment on page 1, which says: "Spend 10 minutes every week in quick review of your notes, and you will retain most of what you have learned." That is not enough time if you are truly reviewing ALL your notes for a course. I agree more with the final statement on page 8 about the "SQ3R Method for Thorough Study" where it says: "More time should be spent on recall than on reading." Pages 5-6 contain useful hints for studying for science classes, but those hints apply to non-science classes as well.