

## Academic Survival Skills

1. **Study Groups.** Work with other students in **Study Groups** (2 or more people). **Study Groups** is the **Number One** Academic Survival Skill.
2. **Read the Textbook Before Class.** It is absolutely amazing how much time you will save, and how much more you will get out of the classroom lectures and activities. You know you will work hard during the semester – you may as well get started by reading the textbook before every class, and therefore being ahead – you will save **SO** much time, and will be “Working Smarter”. **Reading the Textbook Before Class** is the **Number Two** Academic Survival Skill.
3. **Attend Every Class.**
4. **Use Large Quantities Of Paper** (it can be recycled). Much time (and paper) is wasted by doing several steps at one time and trying to cram ones work into a small space. Write clearly, leave plenty of space between lines as you attempt to solve problems, do only one step per line (or at most a few steps), and box solutions.
5. **Do Your Homework Promptly** (soon after the lecture). It can make the homework much easier – i.e., do not wait until just before the homework is due.

## Expert Test Taker Skills

1. Take a quick look at all of the problems to see how long the exam is. This will give you some idea of how fast you need to work to complete the test. Also, if you are not sure how to attack one of the problems, you may realize how to solve it later on by the time you are ready to attempt that problem – your mind will work on it in the background.
2. Start working on the "easiest" problems first by either:
  - A) Look through the test and solve only the problems that are easy for you;
  - or,
  - B) Attempt to do the problems in the order given, but only solve the problems that are easy for you.(Note: a problem is "easy" if you are confident that you can solve it and it will take a short amount of time.)
3. After doing the "easiest" problems on the first pass through the test, do a second pass through the test doing the problems that are the "second easiest".
4. After doing the "second easiest" problems on the second pass through the test, do a third pass through the test doing the problems that are the "third easiest" etc.
5. You should not spend a long time trying to solve a problem. If a problem is taking too much time, or is turning out to be difficult to solve, move on to another problem and go back to the longer or more difficult problems later (by the time you go back to a problem you may have remembered how to solve it).
6. Be sure to write down something for every problem on the test (just writing down the first steps, a relevant equation, or an explanation of the method to be used to solve a problem can yield partial, or nearly full, credit) – **DO NOT LEAVE A QUESTION BLANK!**
7. Do not erase your work. If you wish to try another method or approach, attach additional sheets of paper. You may discover later that your first method was correct (many times students erase the correct answer). Attach all of your work, circle your final work and answer, and (lightly) put a line through the other work.
8. On a physics or engineering exam, begin all calculations with a defining equation, for instance,  $F = ma$  (this step is necessary in order to receive full credit on my exams). This will not only help you to possibly get partial credit, it will lead your thinking to systematically solve problems (the engineering approach).
9. Ask questions if you are stuck - the instructor may help you to get started or remember something.