

Study Skills: Strategies for STEM Courses

Confused about Chemistry, Math or Physics, and not sure what to do about it? Here are some tips about studying, homework, and test-taking that you DO NOT want to miss! **Advice directly from the professors themselves:**

Complete your homework to learn the *concept*, not the specific *problem*.

Can you read a problem and understand what *kind* of question it is asking? Can you identify the formula in the problem? Before solving problems, study the concepts and make sure you understand them. Understanding the concept is crucial for working through the difficult problems you will be faced with!

SAMPLE TECHNIQUE: Take a piece of paper and draw a line down the middle. On the left side, work through one step of the problem, and on the right side, explain what you are doing.

TROUBLESHOOTING: Visit your professor or TA and have them *watch* you work out a problem instead of *showing* you how to do it. Your professors will LOVE to hear that you have been thinking about the problems and will be able to pinpoint the exact place you got stuck.

Steps of Problem	Explanation of Each Step
$P_1 \times V_1 = P_2 \times V_2$	Rearrange to solve for P_2
$P_2 = P_1 \times V_1 / V_2$	Plug in numbers to solve

Homework as a Learning Aid:

- Use your homework as a test of the concepts you have learning in class. Write out your homework in an organized way. This can be useful to you as you are trying to master more challenging problems or review of the test.
- Find similar example problems in your textbook.
- Use a different textbook or additional study material to work through the concepts.
- Try to read through a group of problems and see if you can identify their similarities.
- Do a couple problems every day and start your assignment early!

Make a Reference Sheet:

- Extract the key information and formulas so that you can refer to them when necessary. This will also help you to prepare a notecard for the exam, if allowed by the professor.

Attending Class is Extremely Important:

- Prepare for class by looking through your textbook. Skim over the ideas and recognize important concepts.
- Use examples from class as practice problems! Cover the explanation and try to work through them yourself.

Practice Tests are an Important Study Material:

- Take the test in a test-like environment. Use only the resources you will have at the time of the test, and in the time you will be allowed. Don't look at the answers too quickly! Try to work through the problem yourself first.
- Use these tests to figure out what kind of information you are missing and which concepts you do not understand.
- Go through the practice tests and take questions to the TA or professor.
- Look at the chapter objectives for a potential study guide.

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