

# Studying for Chemistry - How YOU Can Be Successful!

## Reading Your Text

Read assigned material BEFORE going to class. The text information will provide you with the background for the material covered in class.

Read paragraph by paragraph. Try to understand the first paragraph before going on. If you read a paragraph and cannot figure out what part of it means, mark it and ask about it in class. Continue to read, but realize that you will need to comprehend the parts you do not understand and that some sections that you may find challenging may be laying the foundation for other important sections of the same chapter.

After class, go back over the text and apply what you learned in class to what you read.

The textbook often gives balanced chemical equations to serve as *examples* of how most or all of the elements in a specific family act or react. The equations are given to create generalities about the entire family of elements, or at least most of the elements in the family, not for just one specific element.

## Classroom Lectures

Your professor will organize the daily lectures so that they should seem logical and easy to follow. Although you are able to follow the lecture, realize that you must study the material very carefully every day in order to assimilate it so that it becomes part of *your way* of thinking about chemistry.

The professor will give examples that are intended to help you recognize relationships between concepts. Pay attention to the questions the professor asks because these questions will help you consider what relationships you need to comprehend. These are the same kinds of questions you will have to ask yourself as you work on study/homework problems and test questions.

Take careful and complete notes in class, and review them as soon after class as possible. Preferably, for example, go over Monday's notes on Monday.

Instead of reading the notes over and over, it is better to write down the notes or to hand copy them in a format that will be memorable for you.

Ask your professor if it is all right for you to tape record the lecture. If so, you can play back the lecture to fill in gaps in your notes and fill in those gaps in writing. Also, if you are an auditory learner, you can listen to the lectures as many times as necessary to ensure better learning.

Always compare the text to your lecture notes or lecture tape. Sometimes your professor will think differently from the textbook or express things differently and you should definitely check with the professor if you find a discrepancy between the text and the lecture. Often your professor will expand upon the topic in the textbook and provide information that may not appear in the textbook at all.

If your professor has created a website for the course, take advantage of it by accessing it for each chapter. The professors in some courses may expect you to check the course website perhaps as often as once a day.

Ask questions in class or after class.

## Study Tips

Use the background you have from high school chemistry to help you recognize terms, but remember that you still need to study even if the terms are familiar. College courses typically expect a significantly greater depth of understanding of the same topics that you covered in high school.

Do *all* the homework problems assigned. If you work with a group to study, it is helpful for you to get a clue from a friend or from the book to help you solve a problem. However, realize that you need to go through the problem later to be certain that *you* know how to work it without any help since help will not be available during a test.

Break problems into parts. Sometimes the whole problem is overwhelming, but if you break it into parts, you can figure it out a step at a time. Often, diagramming a problem on paper or visualizing it in your mind may help lead to a solution.

Forming a study group is an excellent idea. Chemistry at The University of Memphis is not set up to be competitive. Anyone who makes an A will receive an A. Often there are classrooms available after 1:00 in Smith Hall Chemistry Building. Dr. Barbara Bekis in the Educational Support Program will create opportunities for SI (Supplemental Instruction), and we will help those of you in CHEM 1110 form study groups this semester.

Free individual and group tutoring is also available through the Educational Support Program (ESP). Go to Mitchell 217 or call 678-2704 to arrange for a tutor.

The Chemistry Department operates a Help Center as well. It is run by faculty members and graduate teaching assistants/lab instructors. The Help Center is located in Room 229 of Smith Chemistry Building and the schedule is located on the door and in the chemistry office (Room 213); it is usually open 9:00-4:00 Monday through Thursday and 9:00-2:00 on Friday. This is an excellent place to go to ask questions about the content of the course, so take your book and notes with you. It is also a good place to do homework because you may ask questions about the homework as such questions arise. However, if you need clarification on something your instructor said in class or lab that is specific to your class, such as the date for a test or whether or not a certain problem was assigned for homework, ask your instructor directly.

## Additional Pointers

You should recognize the following:

Periodic Table and symbols of elements

The difference between terms like a “substance” as we use it in everyday English and as it is more precisely applied in chemistry; and as in “*mixtures* of substances” (see more on this below)

You should know what *atoms*, *molecules*, and *ions* are.

Chemistry requires facility with college algebra (MATH 1710 is a pre-requisite course).

Be careful not to confuse everyday terms with more specific chemistry meanings. For example, “strong acid” does not mean an acid that is powerful or damaging/dangerous, but one that is 100% efficient as an acid in water. An acid that is damaging or “powerful” is called “corrosive.”

Chemistry deals with relationships among things, mathematical and physical.

Chemistry should be studied like a new language. The vocabulary of chemistry is extensive and specific; therefore, it requires daily studying.