



General Chemistry Study Tips

Chemistry is a much more difficult class than it needs to be if the student is learning essential math skills while enrolled in the course. Every chemistry student should be familiar with the following concepts before setting foot in the chemistry classroom:

Logarithms

Scientific notation

Negative numbers

Writing and solving equations

Fractions

1. **Time commitment:**

Plan on spending around 3-4 hours of study time outside of class for every hour you are in class. Plan to devote a minimum of 9 hours on Chemistry study per week.

2. **Read the textbook:**

Do the assigned reading in an active (not passive) fashion. Always read the book with a highlighter and pencil ready to make notes in the margins or on paper. **Work through the sample problems.** Make notes regarding difficult material that the instructor may need to clarify. At the very least, **BEFORE CLASS**, skim through terms in bold print along with the headings, subheadings, and summary of each chapter. This allows a general review of material which might already be somewhat familiar. Skimming will present a general idea about what new material will be upcoming. Pay special attention to any unclear parts during the lecture and make a notation in the margin of the text—these items will need to be re-addressed during study time.

3. **Attend every lecture:**

New material is covered every session. If a class is missed, there will be a gap in learning. Attendance is necessary to do well in chemistry. During the lecture, try to recognize how the instructor wants topics to be learned, what the specific vocabulary is for the course, and how concepts fit together. Every lecture should be a learning experience, and active mental engagement during lecture time is equivalent to study time.

4. Take notes and think:

- Be an active listener and take notes. If the text was skimmed previously (such as the night before lecture), all material covered in class will be more familiar and easier to understand. Make notes about items that were not fully understood during classtime.
- All illustrations and instructor demonstrations covered in class should be recorded in notes.
- **Review lecture notes as soon as possible after class. This reinforces the concepts previously learned.**

5. Learn most things, memorize occasionally:

Some facts must be learned (memorized) in order to obtain a working “vocabulary” along with quicker access to basic Chemistry fundamentals. Identify key ideas, terms, periodic table locations, etc.—then there will be easier access for certain basic areas leaving time and brain space for the more challenging components of Chemistry.

6. Work the problems and don't get behind!

- Chemistry cannot be mastered by reading the text and reviewing lecture notes ONLY. The only way to determine mastery of information is to work the problems.
- Aggressively tackle problems after all relevant material has been reviewed. Do not look at the solution to a problem until at least 20 minutes of diligent work has been done!
- The best preparation for chemistry exams is working problems through to completion. Do lots of problems, and work them over and over.

7. Use Instructor Office Hours and the ASC Drop-In Chemistry Lab:

Visit the instructor during office hours. These hours are usually listed in the course syllabus and posted on the office door of the instructor. In addition, the Academic Success Center (ASC) offers a Drop-in Chemistry Lab each semester. Please check the ASC link below or call 788-7675 for current Chemistry tutoring availability: <http://uafs.edu/success/academic-success-center>.

8. Begin exam preparation early:

Learning chemistry involves practice, and it cannot be learned the night before an exam. Many students attempt to prepare for an exam by spending hours and hours during the day or two before the test, shoving loose pieces of random information into their heads. To be a successful Chemistry student...

- Practice every day—Reading, Listening, and Working Problems
- Then re-read, make additions to prepared notes, and work more problems

- Re-organize thoughts and ideas
- Ask questions
- Study in one hour increments, take a short break, and begin again by varying the type of study with each increment. Tired of working problems? Make some index cards for vocabulary terms. Weary of index cards? Watch a video. Use multiple types of study resources. Suggested websites are:

<https://www.khanacademy.org/science/chemistry>

<http://education-portal.com/academy/course/general-chemistry-course.html>

- Finally, test yourself. Create a practice exam with questions and problems that may be similar to the exam your instructor will give.

Adapted from: <http://www.departments.bucknell.edu/chemistry/courses/chem211/thoughts.html>