# Tips for Success in Chemistry and Physics

- **Go to every class!** Attendance at all lectures and labs is critical for success in science courses. Turn off distractions in class and be actively engaged in the learning process.
- **Ask questions if you have them (be brave!).** Ask in class, after class, email the professor, or stop into office hours.
- **Use resources available** such as SI sessions and Wintrode Tutoring. Your lab TA can also be a great resource. Physics tutors are available – look for flyers in Daktronics Engineering Hall.
- **Utilize professor office hours** if you have questions or need help; schedule an alternate time with them if their scheduled office hours do not work with your schedule.
- **Practice! Practice! Practice!** It is important to know how to use formulas and work chemistry and physics-related math problems. Try to commit to memory common mathematical formulas, metric conversions, polyatomic ions (general chemistry), and functional groups (organic chemistry).
- **Work sample problems** in the text and at the end of each chapter. Make a solid attempt to try these without looking at your notes first.
- **BEFORE CLASS: Read textbook assignments and preview new problems and formulas;** carefully study the key terms and sample problems. Watch any pre-class videos provided (if available).
- **Do not procrastinate!** Often new material will build on previous knowledge, so if you get behind it will be more difficult to learn the new material.
- **Pay particular attention** to all terms, figures, and charts **the instructor puts on the board** or makes reference to in the textbook.
- **Check for accuracy and completeness.** To be sure that the notes are accurate and complete, check the content against the textbook or work with other students in the class. Consider keeping a master notebook where you copy your notes from class, organizing them and looking for any missing pieces or questions you have.
- **Form a reliable study group** for daily or weekly sessions. Talking about problem solutions with other students helps to reinforce the material.
- **Use flash cards** for vocabulary words, chemical symbols, mathematical equations, polyatomic ions, molecular geometry, functional groups (organic), etc.
- **Memory dump.** As soon as you get the test, write down information that you think you may forget such as formulas, symbols, definitions, and steps for solving problems. Note: Some classes provide equation sheets or allow you to have a note sheet for the exam. This will be listed in the course syllabus.
- **Manage your time during the test.** Begin with the questions you know the best. If you don't know how to do a problem immediately, skip it and do the others first. Also, do not change an answer you have unless you are really confident it is wrong – often your first instinct is correct.
- **Always double check your calculations!** Use all of the available time for an exam to review your answers. Think about whether or not your answer makes sense.

- **Show your work!** This is important when taking notes either in class or while following along with a video and is especially important on assignments and exams. The work allows you (and whoever is assessing your work) to follow your thought process. Partial credit can often be awarded for correct work, while an incorrect answer with no work earns no points.

- **Units are important!** Always remember to include units in your work and final answers.

- **Time management.** A general rule of thumb is to spend at least two hours studying outside of class for every hour spent in class. However, for chemistry and physics courses students may need to spend more time.

    - Keep a planner with due dates clearly marked; if at all possible, don't wait until the last minute to complete assignments. The D2L calendar feature can be useful for this purpose (some instructors may use it in their classes) and if you enable notifications, you will get reminders about upcoming due dates.

    - Try to set aside some dedicated time every day (or every other day) to work on chemistry/physics. Spreading studying over the week will work better than trying to cram it all in against a deadline.

- **Schedule study time into your daily routine**! The quality of your study time is as important as the quantity of your study time. Turn off distractions during studying and try to focus for 45-50 minutes at a time and then take a break.

- **Beware of using google or AI!** There is a multitude of information at your fingertips, but you might not yet have the ability to determine the correct context of that information. Utilize your textbook and materials provided by the instructor as resources; weird answers that do not align with material presented in the course are typically red flags for instructors.

- **Utilize resources provided by your instructor.**

    - If the instructor provides videos, watch them! Be actively engaged while watching videos – take notes and pause the video to try and solve problems before they discuss the answer.

    - If the instructor provides PowerPoints or notes ahead of class time, print them out to follow along and add your own notes for clarification.

    - If the instructor provides a study guide, read through it and then do focused practice problems in the area(s) you feel weak in.

    - If the instructor provides review problems, use these as a study tool (work through them like you are taking the test). Often questions on exams are similar to those presented in the review materials.

    - If the instructor offers review sessions, try to attend (or get notes from a friend).

    - If the instructor offers extra credit, do it even if you don't think you need it at the time.

- **Communicate about absences.** If you know in advance about an absence, let the instructor know as soon as possible, especially if the absence involves missing a test, so that alternate arrangements can be made.

- **Review feedback on assignments** so you can learn from any mistakes you make. If you don't understand why you got something incorrect, ask the instructor.

Please note: This information is compiled in conjunction with the Chemistry, Biochemistry & Physics Department.