

## How to Study Biology

**Why is studying Biology difficult?** The unfamiliarity, volume and speed of information presented in Biology can be daunting for many students. By following the tips below, you can master your Biology course.

**Conceptual understanding is the goal:** Memorization is important with basic information but real learning comes from conceptual understanding. Conceptual understanding in Biology means:

- Seeing the “big picture,” the hierarchical structure of biological systems (e.g. the Calvin cycle is part of the photosystem that is in turn part of photosynthesis).
- Being able to understand how and why biological systems function
- Knowing not just the definition of terms but why they are important in context. For instance, you would be able to define glycolysis and explain the role it plays in the larger process of cellular respiration.

**Embrace visual representations of the information:** In many cases, you will need to copy and draw the diagrams to understand the information. It is difficult to remember how a phosphate group, 5-carbon sugar, and nitrogenous base fit together to form a nucleotide unless you have drawn it several times yourself.

**Do the assigned readings before lecture:** Read and take notes on the assigned material before you come to class. This will enhance your understanding of the lecture and make note taking easier.

**Check your understanding:** After reading a section in the book, ask yourself if you could explain the material to your roommate or a friend. Review questions and quizzes at the end of the chapter are also a great way to check your understanding.

**Convert your notes into study aids:** When studying for exams, do not simply reread your notes. Instead, convert your notes into matrices, concept maps or other visual representations of the material. Rereading your notes is not enough.

**Form a study group:** Working with a small group of students (3-4) will enhance your learning and comprehension. Teaching others is one of the best ways to learn Biology.

**Partner with a tutor:** If you cannot seem to wrap your head around a concept, even after consulting your notes and the textbook, schedule a meeting with the professor or with a tutor in the Academic Success Centers.