

Chem 415 Course Syllabus

Text

Lehninger Principles of Biochemistry; David L. Nelson & Michael M. Cox 3rd. edition.

General Policies

Exams. There will be three midterm exams (October 27th, December 1st and December 22th tentatively) and a final exam. Students are expected to take all exams at their scheduled times. Students will only be excused from an exam for illness or a serious problem in the family. Written proof of the problem, such as a note from a physician, is required. There will be no make-up exams.

Grading. Midterms will be 15% each, laboratory will be 15% and final exam will be 40% These percentages are subject to change.

Cheating. Cheating will not be tolerated. Anyone caught cheating will fail this course and be subject to disciplinary proceedings. Potential outcomes from this include expulsion from the University. Changing your answer on a test after it has been returned, and requesting a regrading of the exam, is cheating.

Laboratories. Full attendance is required.

Course Objectives

We will study the structure and function of the molecules of living cells, with a particular emphasis on carbohydrates, proteins, lipids. Our primary goal is to begin understanding biological processes at the molecular level, and we will use your strong background in chemistry, biology, and mathematics to do so. A second goal is to become familiar with the experimental tools used by biochemists to gain these insights.

Course Content

Carbohydrate structure and function.

Amino acids, Peptides and Proteins.

Enzymes.

Nucleotides and Nucleic Acids.

Lipids.

Biological Membranes and Transport.

Principles of Bioenergetics.

Glycolysis.

The Citric Acid Cycle.