CHEM 450/CHEM 451 : Biochemistry/Biochemistry Laboratory

Living organisms are construed principally from macromolecules, ie proteins, lipids etc. In addition certain proteins (enzymes) catalyze most of the reactions occurring within cells. This course is designed to deal with the structure and function of proteins (including enzymes, cofactors and antibodies), carbohydrates, nucleic acids (DNA and RNA) and lipids (including membranes structure). All cells require a continual supply of energy in the form of adenosine triphosphate (ATP). This course begins by describing the structure and significance of ATP and explains how ATP is synthesized. The key process of the TCA cycle, oxidative phosphorylation, glycolysis and fatty acid degradation will all be described. The course will also explain how macromolecules such as carbohydrates and lipids are synthesized from simpler precursors.

This course, Biochemistry Laboratory, is meant to reinforce some of the Biochemistry concepts and techniques discussed in the Biochemistry lecture (CHEM 450), as well as expose students to routine procedures, such as TLC chromatography, spectrophotometry, enzyme assays and gel electrophoresis. A basic understanding of Chemistry, Biology is assumed.
Core Course
Credits 4