

# CHEM 450 : Biochemistry

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.

**Core Course**

**Credits 3**