CHEM 3500: Biochemistry

3 Credit Hours

Prerequisite: CHEM 3361 and CHEM 3361L

This course is a one-semester, lecture-only biochemistry course. Concepts covered include the structure and function of biomolecules, membranes, enzyme kinetics, metabolism and bioenergetics, as well as biological information flow. Intended for chemistry, biology, or biotechnology majors.
Notes: Biochemistry majors are required to take CHEM 3501/L and CHEM 3502.

CHEM 3500L: Biochemistry Laboratory

1 Credit Hours

Prerequisite: CHEM 3362L
Concurrent: CHEM 3500

This laboratory serves as an introduction to biochemistry laboratory techniques and includes biochemical applications of spectroscopy, electrophoresis and chromatography. CHEM 3500L is a laboratory companion to CHEM 3500 and is taken by general chemistry, forensic, professional, and chemistry education track chemistry majors and others needing a one semester biochemistry course with laboratory. This laboratory is not intended for biochemistry majors.

CHEM 3501: Biochemistry I: Structure and Function of Biological Macromolecules

3 Credit Hours

Prerequisite: CHEM 2800
Concurrent: CHEM 3362

Chemistry and biochemistry of macromolecules: proteins, carbohydrates, lipids, and nucleic acids. Introduction to enzymes.

CHEM 3501L: Biochemistry I Laboratory

1 Credit Hours

Prerequisite: (CHEM 3361 and CHEM 3361L) Concurrent: (CHEM 3500 or CHEM 3501)

Introduction to biochemistry laboratory techniques including centrifugation, chromatography, electrophoresis, spectroscopy, and exploration of bimolecular structure using computer graphics.

CHEM 3502: Biochemistry II: Metabolism

3 Credit Hours

Prerequisite: CHEM 3501

A detailed study of enzyme mechanisms, thermodynamics, and major metabolic pathways, including carbohydrate, lipid, and amino acid metabolism.