CHEM 3512L: Biochemistry II Laboratory

1 Credit Hours

Prerequisite: (CHEM 3501 and CHEM 3501L)

Concurrent: CHEM 3502

A laboratory course designed to provide students with training in essential tools of practical biochemistry, important for success in industry and graduate school. This laboratory combines the foundational concepts and techniques from Biochemistry I Lecture and Laboratory and applies them to a student-led research project.

CHEM 3601: Quantum Chemistry and Spectroscopy

3 Credit Hours

Prerequisite: CHEM 2800

Concurrent: PHYS 2212

This course provides an introduction to quantum mechanics and its application to selected chemical systems, atomic structure, chemical bonding, atomic, rotational, vibrational, and electronic spectroscopy.

CHEM 3601L: Quantum Chemistry and Spectroscopy Laboratory

1 Credit Hours

Concurrent: CHEM 3000 and CHEM 3601

This course introduces students to laboratory methods of quantum chemistry, spectroscopy, and the formal reporting of experimental results.

CHEM 3602: Thermodynamics and Reaction Kinetics

3 Credit Hours

Prerequisite: CHEM 2800

Concurrent: PHYS 2212

The primary emphasis of this course is on chemical thermodynamics, reaction kinetics and dynamics, and statistical thermodynamics. The course includes physical and chemical properties of real and ideal gases, the laws of thermodynamics and their application to physical and chemical systems, treatment of phase equilibria and chemical equilibria, and extends the application of quantum mechanics to thermodynamics in the development of statistical thermodynamics.

CHEM 3602L: Thermodynamics and Reaction Kinetics Laboratory

1 Credit Hours

Concurrent: CHEM 3000

This course introduces students to laboratory methods of thermodynamics and reaction kinetics, and the formal reporting of experimental results.