## CHEM 4500K: Methods in Nucleic Acid and Protein Biochemistry

***4 Credit Hours***

*Prerequisite: (CHEM 3501 and CHEM 3501L), and (BIOL 3300 and BIOL 3300L)*

This course covers the chemical aspects of biochemical techniques routinely performed in the study of DNA, RNA, and protein. This course will build upon and complement the information on proteins and enzymes covered in biochemistry courses and the basic understanding of DNA, RNA, replication, transcription, and translation that students learn in biochemistry, genetics and other biology courses. The laboratory component of this course provides an opportunity for multi-week projects that combine methods learned in previous courses with new methods, and as such it serves as a capstone experience in biochemical methodology.

## CHEM 4510: Advanced Topics in Biochemistry

***3 Credit Hours***

*Prerequisite: CHEM 3501 or CHEM 3500*

Topics relating to the chemistry of metabolic processes in living organisms.
Notes: This course may be cross-leveled with CHEM 6510

## CHEM 4620: Advanced Topics in Physical Chemistry

***3 Credit Hours***

*Prerequisite: CHEM 3602*

Advanced topics in physical chemistry with emphasis in such areas as quantum mechanics, statistical mechanics, kinetics, and molecular spectroscopy.

## CHED 3421: Classroom Interactions

***2 Credit Hours***

*Prerequisite: EDSM 1102 and CHEM 3362 and Admission to the Teacher Education Program. Corequisite: SCED 3010, ITEC 3300, INED 3305, INED 4435*

This course examines teachers, students, content, and interactions that lead students to develop conceptual understandings of chemistry. Science teacher candidates design and implement instructional activities informed by their understanding of science learning, then assess student learning. This course includes a 29 hour field experience as introduction to the adolescent learner, the equity imperative and science education reform. This course is restricted to participants in the UTeach program.