

**215. Quantum Chemistry (3)**

Prerequisite: graduate standing. Seminar on recent advances in quantum mechanics; chemical bonding, and atomic and molecular spectroscopy.

**220. Theoretical Inorganic Chemistry (3)**

Prerequisite: Chem 110A-B. Seminar on theoretical inorganic chemistry emphasizing structure and bonding of inorganic and coordination compounds; valence bond, molecular orbital and ligand field theories; correlation of structure and reactivity.

**225. Separation Methods in Chemistry (3)**

Prerequisite: Chem 106, 110A-B, 128, 129. Seminar and laboratory on the theory, application, and literature of various separation methods for organic and inorganic analysis. (2 lecture, 3 lab hours)

**226. Advanced Analytical Chemistry (3)**

Prerequisite: Chem 106, 110A-B, 111. Theory, application, recent developments and literature of organic and inorganic analysis.

**230. Advanced Organic Chemistry (3)**

Prerequisite: Chem 128, 129. Seminar on recent advances in organic chemistry including reaction mechanisms and synthetic applications with references to current literature.

**235. Physical Organic Chemistry (3)**

Prerequisite: Chem 110A-B, 128. Seminar in applications of modern theoretical concepts to the chemical and physical properties of organic compounds.

**240T. Topics in Advanced Chemistry (1-3; max total 6 if no area repeated)**

Seminar covering special topics in one of the areas of chemistry: analytical, biochemistry, inorganic, organic, physical.

**256. Biochemistry of Nucleic Acids (3)**

Prerequisite: Chem 150 or 155. Seminar on the chemistry and biology of nucleic acids and their role in living systems.

**257. Structure and Function of Enzymes (3)**

Prerequisite: Chem 150 or 155. Seminar on the isolation, characterization and mechanism of enzymes; enzyme-coenzyme complexes.

**280. Seminar in Chemistry (1; max total 2)**

**290. Independent Study (1-3; max see reference)**

See *Academic Placement—Independent Study*.

**298. Research (2-6; max total 6)**

Prerequisite: permission of instructor. Independent investigations of an advanced character for the graduate student with adequate preparation. (May include conferences, laboratory, library.)

**299. Thesis (4)**

Prerequisite: see *Master's Degrees—Thesis Requirement*. Preparation, completion, and submission of an acceptable thesis for the master's degree.