

### **CHEM 4400: Directed Study**

#### **1-3 Credit Hours**

*Prerequisite:* Approval of instructor, major area committee and department chair prior to registration.

Up to five hours may be applied to the major area. Special topics of an advanced nature that are not in the regular course offerings.

### **CHEM 4420: Identification of Organic Compounds**

#### **3 Credit Hours**

*Prerequisite:* CHEM 3362

Advanced study of common spectrometric techniques for identifying organic compounds. Emphasis on interpretation of data obtained from Infrared Spectroscopy (IR), Mass Spectrometry and Nuclear Magnetic Resonance (NMR), including two-dimensional NMR.

Notes: This course may be cross-leveled with CHEM 6420

### **CHEM 4430: Advanced Topics in Organic Chemistry**

#### **3 Credit Hours**

*Prerequisite:* CHEM 3362

Advanced topics in organic chemistry as may fit the needs and interest of the students and faculty. Such topics might include stereochemistry, physical organic chemistry, heterocycles.

### **CHEM 4440: Polymer Chemistry**

#### **3 Credit Hours**

*Prerequisite:* CHEM 3362

Topics in modern polymer chemistry including synthesis, kinetics, characterization, and uses.

Notes: This course may be cross-leveled with CHEM 6440

### **CHEM 4490: Special Topics in Chemistry**

#### **1-3 Credit Hours**

*Prerequisite:* Varies depending on topic

Selected special or current topics of interest to faculty and students