



### **Course Description**

#### **CHM2200L | Survey of Organic Chemistry Laboratory | 1.00 credit**

Experiments and exercises will be conducted to introduce students to the basic laboratory techniques that are used in organic chemistry and that reinforce and illustrate several important topics in organic chemistry. Prerequisite: CHM1046 and CHM1046L; Corequisite: CHM2200. Course Competency

### **Course Competencies**

**Competency 1:** The student will demonstrate knowledge of various experimental methods, procedures, and analyses used in organic chemistry by:

1. Performing experiments that use standard laboratory techniques (e.g., melting and boiling point determination, refractive index determination, distillation, extraction, recrystallization, drying, vacuum and gravity filtration, refluxing, chromatographic and spectrophotometric analysis)
2. Synthesizing organic compounds that relate theoretical aspects from the lecture material to the practical aspects of organic chemistry
3. Using the chemical literature (e.g., CRC Handbook of Chemistry and Physics, Merck Index, and Material Data Safety Sheets [MSDS]) to find and interpret information about chemical reagents
4. Analyzing several organic compounds' structure, properties, and reactions
5. Operating and manipulating volumetric and gravimetric equipment to achieve accuracy and precision

**Competency 2:** The student will demonstrate knowledge of laboratory safety and good laboratory practices by:

1. Identifying and applying standard chemistry laboratory safety procedures
2. Properly maintaining a scientific notebook
3. Coming to the laboratory well-prepared to perform all scheduled laboratory procedures promptly
4. Identifying commonly recognized hazardous organic substances and their proper disposal

### **Learning Outcomes**

- Communicate effectively using listening, speaking, reading, and writing skills
- Use quantitative analytical skills to evaluate and process numerical data
- Describe how natural systems function and recognize the impact of humans on the environment