



Course Description, Prerequisites, Co-requisites, and Competencies

CHM 3200L

Survey of Organic Chemistry Laboratory

2 credits

Course Description: Experiments and exercises will be conducted to introduce students to the basic laboratory techniques that are used in organic chemistry and that re-enforce and illustrate several important topics in organic chemistry. (4 hr. lab)

Prerequisites: CHM 1046 and CHM 1046L with a grade of C or better.

Co-requisites: CHM 3200

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

- Performing experiments that use common 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).
- Synthesizing organic compounds that relate theoretical aspects from the lecture material to the practical aspects of organic chemistry.
- 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.
- Analyzing the structure, properties and reactions of several organic compounds.
- Operating and manipulating volumetric and gravimetric equipment in a manner that achieves both accuracy and precision.

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

- Identifying and applying standard chemistry laboratory safety procedures.
- Properly maintaining a scientific notebook.
- Coming to the laboratory well prepared to perform all scheduled laboratory procedures in a timely manner.
- Identifying commonly recognized hazardous organic substances and their proper disposal.