Miami-Dade College

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:

a. 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).

b. Synthesizing organic compounds that relate theoretical aspects from the lecture material to the practical aspects of organic chemistry.

c. 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.

d. Analyzing the structure, properties and reactions of several organic compounds.

e. 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:

a. Identifying and applying standard chemistry laboratory safety procedures.

b. Properly maintaining a scientific notebook.

c. Coming to the laboratory well prepared to perform all scheduled laboratory procedures in a timely manner.

d. Identifying commonly recognized hazardous organic substances and their proper disposal.