CHEM 352L: Organic Chemistry Laboratory II

This detailed course description provides information about course topics & content. It is not a course syllabus. Summer 2013 course syllabi are updated in the spring, and may not be available until summer classes begin.

Instructor Information

Instructor	Email	Course Format	Number of Credits
Paul Smith	pjsmith@umbc.edu	Lab	2

General Information

Course Format Other

Delivery Format

In-Person

Prerequisite /Co-requisite:

CHEM 351L (pre), CHEM 352 (co)

Course Materials

Currently Used Materials

- Williamson, K.L. and Masters, K.M. "Macroscale and Microscale Organic Experiments" (6th ed.), 2011, customized for UMBC

Course Objectives/Learning Outcomes:

CHEM 352L is the laboratory complement to CHEM 352. Students will gain practical experience on a variety of topics covered in CHEM 352, with particular focus on chemical synthesis and spectroscopy. Students successfully completing the course will:

- be familiar with modern spectroscopic methods used to determine the structures of organic compounds, including basic theory and instrumentation, and the interpretation of spectra.

- have acquired practical experience carrying out a variety of important synthetic transformations.

- be comfortable with common methods of separation and purification used in the organic chemistry lab, including crystallization, distillation and extraction.

- be familiar with chemical approaches used to identify organic compounds.

Potential Topics Covered:

Experiments to be performed include:

IR and Mass Spec

NMR, unknowns

Spectroscopym unknowns

Williamson Ether Synthesis

Diels-Alder Reaction

Nitration of Methyl Benzoate

Oxidation of Cyclohexanol

Hydrobenzoin from Benzil

Dyes and Dyeing

Solution Phase Amide Synthesis

Solid Phase Amide Synthesis

Aldol Condensation

Instructions for Visiting Students

Visiting students must provide evidence of completion of the equivalent of CHEM 351L with a grade of "C" or better. Students must be enrolled in CHEM 352 concurrently.