

Chem 260: Synthetic Chemistry Laboratory

Course description: Experimental techniques in synthetic chemistry and physical characterization of organic and inorganic molecules. Laboratory tutorials will illustrate concepts and provide practice in structure determination

Course Goals
Develop the ability to follow a literature synthetic procedure
Develop the ability to perform synthetic experiments
Develop the ability to perform purification procedures
Apply physical, spectroscopic and spectrometric methods to the characterization of compounds
Apply physical and spectroscopic methods to the characterization of mixture of compounds
Develop the ability to use analytical and one or more spectroscopic data to assign molecular structure
Develop an understanding of the relevance of isotopes to the characterization of laboratory samples
Develop the ability to apply the relationships between electronic structure and the spectroscopic or magnetic properties of materials
Program Goals
Develop the ability to work competently, independently and safely in a laboratory environment.
Develop the ability to apply mathematics to chemistry.
Develop the ability to disseminate scientific information orally and in writing.
Develop the ability to design, conduct and observe chemical experiments and to record and critically analyze data from chemical experiments.
Develop the ability to use the chemical literature in a critical manner.
Develop the ability to work effectively in a team.
Develop the ability to engage in scientific discussions.
Develop the ability to apply academic and scientific integrity to scholarly and professional endeavors.