

Syllabus
CHE 260-001 - Organic and Inorganic Chemistry Research Techniques
January-Term 2010

Instructor: Brian O'Brien

Meets: Lecture: Nobel #305 MTWRF 10:30am – 12:20pm
Lab: NHS 301 MWF 1:30pm – 3:20pm

Description: This course will introduce students to advanced experimental techniques in organic and inorganic chemistry. Synthetic techniques will include synthesis of air-sensitive compounds using vacuum line, Schlenk, and/or glovebox techniques, separation and purification methods, and methods from organic synthesis.

A project in scientific glassblowing will also be done. Characterization methods will include multi-nuclear and two-dimensional NMR spectroscopy, IR and UV-vis spectroscopy, and GC/MS. Students will work on their projects in five laboratory sessions per week, with background material covered in lecture as necessary.

Students will learn electronic methods for literature searching in chemistry and related sciences, and will do background reading, including articles from the primary chemical literature. Students will keep detailed laboratory notebooks, and will write laboratory report summaries, one formal laboratory report on their major project, and prepare a poster for a public presentation at the end of the course.