

Practical Nuclear Magnetic Resonance Spectroscopy

Course number: F419

2 credits Offered Spring semesters

Prerequisites: CHEM 321 or instructor permission

Location:

Lectures will be in REIC 207

Labs will be in REIC 136 for NMR time and REIC 132 will be available for some reactions and sample preparation.

Meeting time:

Lecture: Tuesday: 1:00 PM - 2:00 PM

Lab: Scheduled by the students as needed. Should average 3 hours per week, and not exceed 42 hours for the semester.

Dr. Carl Murphy, office: REIC 136; Phone: 474-5545;

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Office Hours: Mondays and Fridays: 11:45 am-12:45 pm or by appointment.

Organic Structures from 2D NMR Spectra, L.D. Field, Wiley, 2015 first edition ISBN: 1118868943 (\$70.24 on amazon).

Students will be trained in the basic operation of multiple NMR instruments. The class will begin with a few lectures on theory and operation of the NMR instruments. Homework assignments will reinforce lecture material and provide practice in spectral interpretation. Students will spend much of the class time getting hands-on experience on the NMR. The second half of the class will be student-driven NMR-based research projects. At the end of the class, students will present their projects to the rest of the class.

To provide students with a working background on Nuclear Magnetic Resonance, train them to be independent users of the NMR, and allow them to explore aspects of the NMR with a research project.

Students should leave this course with a basic understanding of NMR. They should also be able to safely operate the NMR instruments for standard NMR experiments

