

## Identification of Organic Compounds

Chemistry 357

Section: D100

Term: 1999 Fall

Instructor: Dr. M. Pinto.

Office: C-8078.

### Discussion Topics: General Course Description:

Basic principles of infrared, ultraviolet, nuclear magnetic resonance and mass spectroscopy as applied to the identification of organic compounds. Separation, purification and spectroscopic identification of six unknowns, four of which will be supplied as binary mixtures.

3 x 1 hour lectures for 8 weeks, 1 x 4 hour laboratory period for 12 weeks.

### Week Topics Chapter

Week 1/2. Proton magnetic resonance spectroscopy. Ch. 4.

Week 3. Carbon magnetic resonance spectroscopy. Ch. 5.

Week 4. Infrared spectroscopy/Ultraviolet spectroscopy. Ch. 3.

Week 5. Practice Problem Sets and MIDTERM EXAM. Ch. 7.

Week 6. 2D NMR spectra/chromatography. Ch. 6.

Week 7-8. Mass spectrometry. Ion fragmentation. Ch. 2.

Week 9. FINAL EXAM.

## Identification of Organic Compounds

Grading: 50% Exam and problem sets.

50% Laboratory.

Required Texts: Silverstein & Webster, "Spectrometric Identification of Organic Compounds".  
6th Edition 1998. Publishers - J. Wiley & Sons.

Recommended Texts: None

Materials/Supplies: None

Prerequisite/Corequisite: Prerequisites: CHEM 282 and CHEM 286( or 250 and 255).

Notes: None

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