**CHEM 5510 - ADVANCED ORGANIC CHEMISTRY**

**Text**: "Advanced Organic Chemistry", by F. A. Carey and R. J. Sundberg, part B, Plenum, New York, 1990 (4th edition).

**Prerequisites:** One year of organic chemistry

**Objectives:** To present the most commonly encountered organic reactions and their mechanisms. Applications of these reactions in organic syntheses will be emphasized.

**Assignments:** Homework problem sets will be assigned after completing each chapter. Homework will not be collected, but every student is encouraged to try all the assigned problems since exams may include information from these problems. Lecture notes will be based on the textbook and on other sources. Additional journal references related to the material being discussed will also be given throughout the course, it is important to check these references.

**Grading:** Grade evaluation will be based on two exams (30% each) and a comprehensive final exam (40%). Grading scale:

A = 90 - 100%

B = 80 - 89%

C = 70 - 79%

D = 60 - 69%

F = < 60%

The purpose of the course is to further develop the student's knowledge of organic reactions and their incorporation into synthetic schemes. The organization is by reaction type rather than functional groups, with emphasis on mechanistic explanations. Problem assignments, references to the literature and supplementary texts are designed to help the student obtain a foundation in synthetic organic chemistry on which he/she may continue to build if their interests lead in that direction.

Supplementary Materials (in addition to those mentioned in the text):

"Modern Synthetic Reactions" 2nd ed., House, H. O.; W. A. Benzamin, Inc., Reading, Mass., 1972.

"Adv. Organic Chemistry, Reactions, Mechanisms and Structure" 2nd ed., March, J., McGraw-Hill Book Col, New York, NY, 1977.

"Principles of Organic Synthesis" Norman, R. O. C.; Methuen & Co. Ltd., London, 1968.

"Selected Organic Synthesis" Fleming, I., John Wiley & Sons, New York, NY, 1973.

"Synthesis and Reactions in Organic Chemistry" Parkham, W. E., John Wiley & Sons., Inc., New York, NY, 1969.

"Reactions of Organic Compounds" Fuson, R. C., John Wiley & Sons, Inc., New York, NY, 1962.

"Organic Synthesis, Part 1" Trost, B. M. and Vedejs, E., ACS Audio Course Available through Chemistry Department.