Chemistry 6372; Spring [redacted]

Tu-Thur 8:05-9:25 AM; MS and E
Physical Organic Chemistry (Advanced Organic Chemistry)

[redacted]

Office Office hours M 12.00-1.00 pm and by appointment

[redacted]

Text "Modern Physical Organic Chemistry", by Eric V. Ansyln and Dennis A. Dougherty. These will be available at the bookstore.

Class Attendance REQUIRED. It is expected that you will have read the chapter for class **prior** to coming to lecture. Problem sets are not assigned but you are encouraged to work problems in the text and previous tests, which will be posted. Optional reviews will be given prior to tests in the evenings

Class Notes: I will attempt to post all class notes on the course website, prior to the class.

Topical Coverage

Chapter 1 (review) and 14: Introduction to Structure and Models of Bonding, Advanced Concepts in Electronic Structure Theory (5 Lectures, Jan 7L, 9L, 14L, 16L, 21L)

January 23: Test one on Chapter 1 and 14 (Take home, due 8 AM Feb 5)

Chapter 15: Thermal Pericyclic Reactions (2 Lectures Jan, 23L, 28L)

Chapter 16: Photochemistry (2 Lectures Jan 30L, Feb 4L)

Feb 4: Test 2 on Chapter 15 and 16 (Take home, due 8 AM Feb 11)

Chapter 2: (covered by Dr. Fahrni, not covered again, **but material can show up on tests and quizzes**

Chapter 3 and 4: Solutions and Binding Forces and Molecular Recognition and Supramolecular Chemistry (1 Lecture, Feb 6P)

Chapter 5: Acid-Base Chemistry, structure activity relationships only (1 Lecture, Feb 11P)

Chapter 6: (covered by Dr. Fahrni, not covered again, **but material can show up on tests and quizes**)

Chapter 7: Kinetics (2 Lectures Feb 13B, 18B)

Chapter 8: Isotope Effects and Hammett Parameters (3 Lectures Feb 20B, 25B, 27B)

Chapter 9: Catalysis (2 Lectures, March 4B, 6B)

TEST 3 March 11 (Chapters 3 – 8)

Chapter 10: Organic Reaction Mechanisms Part 1: Reactions Involving Additions and/or Eliminations (4 Lectures, March 13M, 25M, 27M, April 1M)

Spring Break March 18, 20

TEST 4 April 3 (Chapters 9, 10)

Chapter 11: Organic Reaction Mechanisms Part II: Substitutions at Aliphatic Centers and Thermal Isomerizations/Rearrangements (3.5 Lectures, April 8M, 10M, 15M, 17M)

Chapter 12: Organotransition Metal Chemistry: Bonding, Reaction Mechanisms, and Catalysis (2.5 lectures, April, 17M, 22M, 24M)

REVIEW Friday April 25 OPTIONAL

April 29, 2012, 8:00-10:50 AM (50% Chapter ~11, 12, ~50%, comprehensive)

Exams There will be two take home exams and to exams given during the lecture periods and a three-hour final exam.

Exam Schedule

Exam	**Date**		**%**
First	Thursday January 23th	(take home)	15%
Second	Tuesday February 4th	(take home)	15%
Third	Tuesday March 11th		20%
Fourth	Tuesday April 3th		20%
Final	Tuesday April 29rd (8:00)	Comp	30%

Enforced Pre-requisite(s): Introductory organic chemistry

Absence from Exams: A score of 0 will be given for any exam missed without an acceptable excuse. (A letter from an employer or a physician explaining why a student was unable to attend is an acceptable excuse. Having too many exams in one week is not an acceptable excuse).

Grading: The following % scores (based upon total points from quizzes and exams) will guarantee the following grades.

A = 85 - 100 B = 65-84

C^+ = 50 - 64 D = 45-49

Honor code issues

For more information on the Honor Advisory Council and the Academic Honor Code, please visit our website at www.honor.gatech.edu.

Collaboration:

For Homework:

As homework will not be graded, when working on homework, you may work with other students in the class.

For Quizzes/Tests:

Cheating off of another person's test or quiz is unethical and unacceptable. Cheating off of anyone else's work is a direct violation of the GT Academic Honor Code, and will be dealt with accordingly.

You may use old tests to help you study.

"Use of any previous semester course materials is allowed for this course; however, I remind you that while they may serve as examples for you, they are not guidelines for any tests, quizzes, homework, projects, or any other coursework that may be assigned during the semester."

For any questions involving these or any other Academic Honor Code issues, please consult me, or www.honor.gatech.edu."