

CHEM 6673: Physical Organic Chemistry
School of Natural Sciences
Fairleigh Dickinson University, T-H Campus

General Information:

Semester: Fall 2009
Day/Time: T / 5:25AM – 8:00PM
Room: DH 1152
Prerequisite: Successful completion of undergraduate Organic Chemistry I & II
Instructor: Dr. J. Dougherty, Office DH 4461, Phone ext. 2487; jdough@fdu.edu
Office Hours: T, Th 10:25 – 11:25 AM
Text: Eric V. Anslyn; *Modern Physical Organic Chemistry*, University Science Books, 2006.

Course Description:

Current theories of the structure and reactivity of organic compounds, stereochemistry and modern mechanisms.

Objective:

Upon successful completion of this course, students will have an understanding of the relationship between structure and reactivity of organic molecules including the modern mechanistic basis of organic chemistry. Students will also be adept at consulting the primary literature for more detail on topics of special interest.

Format:

- **Mandatory attendance**
You are expected to attend each lecture. Attendance will be taken and, as shown below, will contribute toward your grade. There will be NO MAKEUP's FOR MISSED QUIZZES or EXAMS. Consideration will be given only in the case of a documented and unavoidable company travel, business obligation, or health issue.
- **Homework**
Homework assignments will be given randomly during the semester and should be completed and, if required, turned in for the next class. All homework submitted will be graded and returned.
- **Quizzes**
Several short quizzes will be given during the semester. The date and general subject areas will be announced a week in advance.
- **Exams**
There will be a midterm exam tentatively scheduled for week 8 (depending on progress made to date) as well as a cumulative final exam given during finals week.

Grading Policy:

Midterm Exam	25%
Final Exam (cumulative)	35%
Quizzes	25%
Attendance	5%
Homework	10%

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Course Outline:

Week #	Expected Topic	Chapter (Anslyn)
1,2	Structure, Bonding and Electronic Theory	1, 14.1, 14.2
2,3	Molecular Strain & Stability	2
4	Acid-Base Chemistry	5
5	Stereochemistry	6
6	Energy Surfaces and Kinetic Analyses	7
7	Thermodynamics and Kinetic Experiments	8
8	Midterm Exam	
9	Catalysis	9
10 – 12, 14	Mechanisms Addition/Elimination Substitution Isomerization	10,11
13	Holiday: Thanksgiving break; FDU closed	
15	Pericyclic Reactions	15
16	Final Exam	

Lecture schedule is subject to change with Instructor notification

Please Note:

- **Academic Integrity:**
Cheating, in any form, will not be tolerated. Students caught cheating will receive a zero for that particular assignment. Flagrant violations may lead to failing the course and/or dismissal from the University. Details regarding FDU's Academic Integrity policy are readily available on-line at <http://view.fdu.edu/default.aspx?id=211>.
- **Electronic Devices:**
All electronic devices including cell phones, MP3 players, etc. should be turned off during lecture and exam periods. You may not use your cell phone as a calculator.