

*Instructor:* Dr. K. Schanze, CRB 428A

*Text:* Anslyn and Dougherty, Modern Physical Organic Chemistry

*Lecture:* Tu: 5<sup>th</sup> Per. (11:45 am – 12:35 pm) and Th 5<sup>th</sup>/6<sup>th</sup> Per. (11:45 am - 1:40 pm) in Sisler Hall 340

*First Exam:* Thursday, Mar. 1

*Second Exam:* Friday, Apr. 27

*Office Hours:* Tuesday and Thursday, 2 – 3 pm or by appointment

*e-mail:* schanze.class@gmail.com

*Course www:* on e-Learning link: <http://lss.at.ufl.edu/>

### Course Description

The course will focus on fundamental aspects of physical organic chemistry and organic reaction mechanisms. Topics will include: Structure and bonding, molecular symmetry, stereochemistry, thermodynamics, kinetics and free-energy correlations and concerted reactions.

Homework consisting of assigned problem sets will be assigned many weeks during the term. The due day for the homework will be on Mondays at 5 pm of the week following the day the assignment is posted, and it must be turned in on time in order to receive credit. Late homework will not be accepted.

Students will also complete an assignment during the term that will involve an independent research proposal on a topic in physical organic chemistry. The proposal will be presented to the class in a 15 min session and will also be presented in a 5 page written report.

### Textbook and Outside Reading

Anslyn and Dougherty will be used as a textbook for the course. The book is meant to be a resource to supplement the lectures. Chapters and sections in the book should be read as appropriate to supplement the material discussed in the lecture. Primary references to the literature should be read when they are provided during the lectures. When problems from the text are assigned, reading the respective chapters may help you to answer the questions.

### Grading

Course grades will be determined based on the student's performance in the following areas:

Homework : 20%

Proposal : 20%

Exams (mid-term and final): 30% each

**Professor : K. S. Schanze**  
**Tentative Course Schedule**  
**CHM 6225, SP-2012**

<b>Week</b>	<b>Week</b>	<b>Topics</b>	<b>Book Sections</b>	<b>Problem Sets</b>
1	Jan. 16	MO Theory and Symmetry	Ch. 1, Ch. 14.3	
2	Jan. 23	MO Theory and Symmetry, continued		1
3	Jan. 30	Stereochemistry	Ch. 6	2
4	Feb. 6	Thermodynamics and Conformational Analysis	Ch. 2	3
5	Feb. 13	Conformational Analysis		4
6	Feb. 20	Kinetics	Ch. 7	5
7	Feb. 27	Linear Free Energy Relationships, Isotope and Solvent Effects	Ch. 8	
	<b>Mar. 1</b>	<b>Exam 1 – in class 5/6<sup>th</sup> periods</b>		
	<b>Mar. 5</b>	<b>Spring Break Week</b>		
8	Mar. 12	Kinetics, Linear Free Energy Relationships, Isotope and Solvent Effects, cont'd.		6
9	Mar. 19	Photochemistry	Ch. 16	7
	<b>Mar. 26</b>	<b>ACS Meeting Week – Proposal Topic Due Friday Mar. 30</b>		
10	Apr. 2	Concerted Reactions	Ch. 15	8
11	Apr. 9	Concerted Reactions		
12	Apr. 16	Student Presentations - Props		
13	Apr. 23	Student Presentations - Props		
	<b>Apr. 27</b>	<b>Exam 2 – time TBA</b>		