

<b>Instructor:</b>	Dr. Ronald K. Castellano (Office: Sisler Hall 201A; phone: 352-392-2752)
<b>E-mail:</b>	<a href="mailto:castellano@chem.ufl.edu">castellano@chem.ufl.edu</a>
<b>Required Text:</b>	Eric V. Anslyn and Dennis A. Dougherty, <i>Modern Physical Organic Chemistry</i>
<b>Recommended Text:</b>	F. A. Carey and R. J. Sundberg, <i>Advanced Organic Chemistry</i> , 5 <sup>th</sup> Edition, 2007
<b>Classroom:</b>	107 Matherly Hall
<b>Lectures:</b>	T, 5 <sup>th</sup> –6 <sup>th</sup> periods (11:45 a.m. – 1:40 p.m.); R, 5 <sup>th</sup> period (11:45 a.m. – 12:35 p.m.)
<b>Problem Sessions:</b>	R, 6 <sup>th</sup> period (12:50 – 1:40 p.m.)
<b>First Exam:</b>	R, Feb. 22 <sup>nd</sup> (11:45 a.m. – 1:40 p.m.)
<b>Second Exam:</b>	T, April 24 <sup>th</sup> (11:45 a.m. – 1:40 p.m.)
<b>Office Hours:</b>	T (2:30 – 3:30 p.m.) and W (1:30 – 2:30 p.m.); other times by appointment
<b>e-Learning Website:</b>	<a href="https://lss.at.ufl.edu/">https://lss.at.ufl.edu/</a> (updated regularly with announcements, exam scores and information, supplementary course material, etc.)

**Course Description:**

The majority of the course will focus on fundamental aspects of physical organic chemistry and organic reaction mechanisms. Topics in this area will include: Structure and bonding, stereochemistry, thermodynamics, kinetics, free-energy correlations, concerted reactions, and photochemistry. The final portion of the course will focus on supramolecular chemistry topics and student presentations.

Class periods will be used for lectures, problem sessions, and student presentations. Students will be asked to present the solutions to specific problems. 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. Additional details will be posted on the e-Learning website.

**Prerequisites:**

It is assumed that you are familiar with the core and physical organic content taught in sophomore organic chemistry (e.g., CHM2210/2211) and Basic Principles for Organic Chemistry (CHM5224).

**Textbook and Outside Reading:**

The course notes will serve as the outline for the course material. Chapters and sections in textbooks 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 or as needed to supplement the reading. 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:

*Exams:* 30% each

*Problem sets:* 10%

*Problem session participation:* 10%

*Proposal:* 20%

**Makeup exams and assignments:**

This course administers all conflicts with scheduled examinations in accord with University policy. In cases of allowed absences (which include, but are not limited to, religious observances, participation in official university activities, military obligations, and court-imposed legal obligations), students will be given the opportunity to

take a *makeup exam* provided that the conflict is a) properly documented and b) disclosed to Dr. Castellano *at least one week before* the scheduled exam. Unpredicted absences due to illness or a significant personal/family emergency are not covered under the above conflict exam policy and will be handled on an ad hoc basis. **Late problem set and proposal assignments will not be accepted.**

### **Final Grades:**

Your final grade will be based on a class “curve” that is developed throughout the course. I will do my best to keep each of you informed as to your performance in the class as we go along.

### **Attendance and Classroom Etiquette:**

*I expect you to come to class and be there on time. When you are in class please be respectful of others. Cell phone use is strictly prohibited at all times in the classroom. Please adjust your phone so that it does not ring. If you come late on exam days you will not be given additional time.*

### **Other Important Information:**

- *Disability Resources:* Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.
- *Division of Student Affairs* (Counseling, Dean of Students Office): <http://www.ufsa.ufl.edu/>.
- *UF Grades and Grading Policies:* <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.
- *Lose or find something during class?* Visit the Chemistry lost-and-found (Leigh Hall 214).
- Your well-being is important to the University of Florida. The U Matter, We Care initiative (<http://www.umatter.ufl.edu/>) is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

### **Copyright Notice:**

All handouts used in this course are copyrighted and may not be copied without my expressly granted permission. “Handouts” include all materials generated for this class, which include but are not limited to syllabi, exams, in-class materials, problem sets, or other materials. Only students currently enrolled in the class may make a single copy of this material for their personal use.

### **Student Honor Code**

*The UF Student Honor Code* (see <http://www.dso.ufl.edu/scer/process/student-conduct-honor-code/> for details): *We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”*

Honor Code violations include copying on an exam (or helping another student to copy) and/or turning in an exam for regrading that has been changed since it was graded by the instructor.

***Any student found responsible for an academic honesty violation in this course will be recommended sanctions consistent with the offense.***

**CHM6225 Advanced Principles of Organic Chemistry**  
**Spring 2018 (Section 3550)**  
**Tentative** Course Schedule

Lecture Dates	Lecture Topic(s)	Problem Set*
1/9, 1/11	Structure and Bonding	
1/16	Structure, Bonding, Conjugated Systems, Aromaticity	
1/18	No class	
1/23, 1/25	Reactive Intermediates; Stereochemistry and Conformational Analysis	Set #1 (1/25)
1/30, 2/1	Stereochemistry, Conformational Analysis, and Stereoelectronic Effects	Set #2 (2/1)
2/6, 2/8	Thermodynamics and Kinetics	Set #3 (2/8)
2/13, 2/15	Thermodynamics and Kinetics	Set #4 (2/15)
2/20	Linear Free Energy Relationships and Isotope/Solvent Effects	<b>Exam #1</b> <b>(2/22)</b>
2/27, 3/1	Linear Free Energy Relationships and Isotope/Solvent Effects, etc.	Set #5 (3/1)
3/13, 3/15	Selected Reaction Mechanisms and Pericyclic Reactions	Set #6 (3/15)
3/20, 3/22	Pericyclic Reactions	Set #7 (3/22)
3/27, 3/29	Photochemistry/Supramolecular ChemistryTopics	Set #8 (3/29)
4/3, 4/5	Supramolecular ChemistryTopics	
4/10, 4/12	Proposals	
4/17, 4/19	Proposals	
4/24	<b>Exam #2</b>	

\* Problem sets will be posted at least one week before the associated problem session. Problem sets must be handed in immediately following the problem session on the date shown.