

CHEM2511K/01 to Substitute for CHEM2510 Fall 2008
SURVEY of ORGANIC CHEMISTRY

Instructor: Jack Duff, MS **Office:** E-232 **Tel:** (678) 915-3603 **e-mail:** jduff@spsu.edu
Office Hours: M, W, F 10:00-11:00 Tu, Th 10:30-12:00 M 1:00-2:00

Required Text: Organic Chemistry, Janis Gorzynsky Smith

Description:

This is the first course in a two-semester sequence covering the fundamental principles and applications of organic chemistry. The first semester lecture may be used as a substitute for Survey of Organic Chemistry.

Expected Learning Outcomes

Upon successful completion of this course, students will be able to

1. understand concepts of hybridization theory and bonding as applied to organic compounds,
2. use curly-arrow mechanisms in reactions
3. identify major organic functional groups and the effect of structure on physical properties,
4. distinguish between conformational, configurational, and constitutional isomers
5. identify and understand the mechanisms of Sn2, Sn1, E2, and E1 polar reactions and the effects of structure, concentration, and solvents on the course of a reaction.
6. know methods of preparation for a variety of organic compounds including halides, alcohols, alkoxides, ethers alkenes and alkynes and predict the reactions of same with a number of given reagents,
7. understand radical chain reactions and predict the product of such reactions,
8. suggest methods of synthesis for organic compounds from the methods learned in the class

Attendance:

Attendance in lecture is expected but not required. You are responsible for any material covered in class or in assigned readings. **Laboratory attendance is not required for substitution for Survey of Organic Chemistry.**

Grading:

Because CHEM 2511K has an associated lab, two grading systems are employed, one for CHEM 2510 students and one for CHEM 2511K students. Lab grades tend to run higher than lecture grades. The lab grades for diligent students tend to bring their grades up. Thus a more generous scale is employed for CHEM 2510, which has no lab. This, as fairly as possible, reflects the added difficulty in taking the 4-credit-hour CHEM 2511K. **Note that CHEM 2511K students must pass the lab to pass the course.**

All students are required to take the Final Exam. The grade for any one of the four exams that is missed or bombed may be replaced by the Final Exam grade. Thus the Final may amount to 40% of your grade. The following point scale will be employed. **No extra-credit assignments or additional points will be given.**

CHEM 2510	Five Exams 75% (15%/ea)	Final Exam 25	Total 100%		
	A	B	C	D	F
	100-90	89-77	76-64	63-50	<50
CHEM 2511	Five Exams 60% (12%/ea)	Final Exam 20%	Lab 20%	Total 100%	
	A	B	C	D	F
	100-90	89-80	79-70	69-60	<60

Honesty:

Academic honesty as detailed in the Student Handbook is expected. The use of calculator programs as crib sheets will be considered cheating. The memories of programmable calculators may be cleared before exams. The use of cell phones or any electronic devices other than calculators during exams will be considered cheating. You generally will not even need a calculator for Organic Chemistry exams.

Cell Phones:

Cell phones must be turned off before you come to class. If you have an urgent need to have yours on, see me before class begins to request an exception be made for you.

Tentative Syllabus Fall 2008:

<u>Subject</u>	<u>Readings:</u>
Structure and Bonding	Ch 1
Acids and Bases	Ch 2
Organic Molecules and Functional Groups	Ch 3.1-3.4
Isomers I. Constitutional vs.cis/trans Stereoisomers	Ch 4.13, Ch8.2
Nomenclature: alkanes, alkenes, alkynes, halides, and alcohols	Ch 4.4-4.6, Ch 7.2, Ch 9.3, Ch 10.1-10.3, Ch 11.2, Handouts
Mon, 9/1 Labor Day Holiday	
Wed, 9/10 Exam I	
Alkanes	Ch 4
Isomers II. Stereochemistry: Conformational vs. Configurational Isomers	Ch 4.9-4.13 Ch 5
Wed, 10/1 Exam II	
Thursday, 10/11 is the LAST DAY TO WITHDRAW W/O ACADEMIC PENALTY:	
Polar Substitution and Elimination Reactions: S _N 2, S _N 2, E2, and E1 Mechanisms	Ch 7 Ch 8 Ch 9.6-9.9, 9.11, 9.13
Fri, 10/24 Exam III	
Alcohols, Ethers, and Alkoxides	Ch 9
Alkenes	Ch 10
Alkynes	Ch 11
Wed, 11/12 Exam IV	
Oxidation and Reduction	Ch 12
Radical Reactions	Ch 15
Wed, 11/26 through Sun, 11/30: Thanksgiving Holiday	
Wed, 12/3 Exam V, Last Day of Class	
Final Exam: TBA	
The Final Exam will be comprehensive of all the material in covered in Organic I.	

Students with disabilities who believe that they may need accommodations in this class or laboratory are encouraged to contact the counselor working with disabilities at (770) 528-7226 as soon as possible to ensure that such accommodations are implemented in a timely fashion.