

## CHEM 6373: Organic Synthesis, Spring 2012

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Office hours: by appointment and  
whenever my door is open

### Syllabus

Date	Topic		
9-Jan M	<b>NO CLASS</b>	7-Mar W	<i>Mechanisms</i>
11-Jan W	<b>NO CLASS</b>	9-Mar F	Organometallics
13-Jan F	<b>NO CLASS</b>	12-Mar M	Organometallics
16-Jan M	<b>NO CLASS (MLK Holiday)</b>	14-Mar W	Organometallics
18-Jan W	Introduction to Organic Synthesis	16-Mar F	Organometallics
20-Jan F	Strategies for Synthesis	19-Mar M	<b>SPRING BREAK</b>
23-Jan M	Reactive Intermediates	21-Mar W	<b>SPRING BREAK</b>
25-Jan W	Kinetics, Thermodynamics	23-Mar F	<b>SPRING BREAK</b>
27-Jan F	Conformational Analysis	26-Mar M	Organometallics
30-Jan M	Review of Organic Reactions	28-Mar W	Organometallics
1-Feb W	Review of Organic Reactions	30-Mar F	Organometallics
3-Feb F	<b>Exam I</b>	2-Apr M	Organometallics
5-Feb M	Oxidations, Reductions	4-Apr W	<b>Exam III</b>
8-Feb W	Oxidations, Reductions	6-Apr F	Pericyclic Reactions
10-Feb F	Additions to Carbonyls	9-Apr M	Cycloadditions and Cycloreversions
13-Feb M	Additions to Carbonyls	11-Apr W	Cycloadditions and Cycloreversions
15-Feb W	Additions to Carbonyls	13-Apr F	Cycloadditions and Cycloreversions
17-Feb F	Enolates and related topics	16-Apr M	Sigmatropic Rearrangements
20-Feb M	Enolates and related topics	18-Apr W	Chelotropic Rearrangements
22-Feb W	Enolates and related topics	20-Apr F	<b>Exam IV</b>
24-Feb F	Enolates and related topics	23-Apr M	Synthesis
27-Feb M	Enolates and related topics	25-Apr W	Synthesis
29-Feb W	Alkenes and Alkynes	27-Apr F	<b>NO CLASS</b>
2-Mar F	Alkenes and Alkynes	2-May W	<b>Synthesis Project Due by 5 pm</b>
5-Mar M	<b>Exam II</b>		

*Primary notes:* Uploaded Note Packets  
"Modern Organic Synthesis: Lecture Notes," by Boger

*Primary texts:* "Modern Organic Synthesis: An Introduction," by Zweifel & Nantz

*Other useful texts:* "Organic Synthesis," Michael B. Smith  
"Advanced Organic Chemistry, Parts A & B," by Carey and Sundberg  
"Advanced Organic Chemistry," by March  
"Organic Synthesis: The Disconnection Approach," by Warren  
"Classics in Total Synthesis I & II," by Nicolaou

*General:* This course will cover a broad range of material. The lectures are designed to provide a framework for, not a comprehensive discussion of, the topics covered. Lecture notes will be derived from a number of sources, ranging from the sources listed above to current literature.

*Homework:* There will be periodic homework assignments that will be handed out at least one week prior to the due date that is listed on the course calendar. Homework will be graded and returned the following week with its solution set.

*Synthesis Project:* You will be assigned a synthesis project. The project will describe the enantioselective synthesis of an approved natural product. The project will be split into two parts: 1) a powerpoint presentation outlining the retrosynthetic approach and the key steps of your synthesis; 2) an Organic Letters-style report detailing all the steps of the synthesis with references for all the key reactions. You may use any books, notes, journals, etc.

*Exams:* There will be four exams and **NO** final. The exams will be given in class.