Chemistry 5224

Basic Principles of Organic Chemistry

Fall 2013

Instructor: Aaron Aponick, 328 Sisler Hall, 352.392.3484, aponick@chem.ufl.edu

Lectures: Mondays and Wednesdays 8:30-9:20 a.m., 242 Leigh Hall

Problem Sessions: Fridays 8:30-9:20 a.m., 242 Leigh Hall

Office Hours: Tuesdays 8:30-9:20 a.m. and by appointment as needed

Required Texts: *The Art of Writing Reasonable Organic Reaction Mechanisms* 2nd Ed. by Robert Grossman, ISBN 0387954686. Online edition available through the UF Library Website

Strategic Applications of Named Reactions in Organic Synthesis, László Kürti and Barbara Czakó, ISBN 0124297854

Course Objective: To learn the fundamental principles necessary to read, understand, and critique the scientific literature in the field of organic chemistry.

Course Content:

The course consists of two lectures and one problem session per week and is designed to provide an introductory look at the underlying principles that are the foundation of modern organic chemistry. The ability to provide a mechanistic rationale for new and unfamiliar chemical transformations is of key importance to the organic chemist and thus emphasis is placed on solving mechanistic problems using the curved arrow convention.

Grading:

Exam 1	25%
Exam 2	25%
Exam 3 (Final)*	25%
Homework/Project**	25%

Exam Dates:

Exam 1	September 30, 2013***
Exam 2	November 6, 2013***
Exam 3	December 4, 2013***

** The third exam will cover the remainder of the untested material from class and also name reactions. See below for more details; ** The project will involve the presentation of an organic name reaction. A detailed handout will be distributed. ***Exams will be held in the evenings and are scheduled from 6:30-8:30 pm.*

Additional Literature Resources:

Name Reactions by Jie Jack Li
Named Organic Reactions by Thomas Laue and Andreas Plagens
Name Reactions and Reagents in Organic Synthesis by Mundy, Ellerd, and Favaloro

Writing Reaction Mechanisms in Organic Chemistry by A. Miller and P. Solomon

Advanced Organic Chemistry by Jerry March

Web Based Resources:

http://orgchem.chem.uconn.edu/namereact/named.html
http://www.chempensoftware.com/organicreactions.htm
http://www.organic-chemistry.org/namedreactions/

We will roughly follow the AWRORM book, but the notes will also include additional material.

Tentative Schedule:

Monday	Wednesday	Friday
	8/21- Intro/The Basics	8/23- No Class
8/26- The Basics	8/28- The Basics	8/30- Name reactions/Problems
9/2- No Class	9/4- The Basics	9/6- Name reactions/Problems
9/9- The Basics	9/11- Reactions Under Basic Conditions	9/13- Name reactions/Problems
9/16- Reactions: Basic Conditions	9/18- Reactions Under Basic Conditions	9/20- Name reactions/Problems
9/23-Reactions: Basic Conditions	9/25- Reactions Under Basic Conditions	9/27- Name reactions/Problems
9/30- Acidic Rxns Exam 1	10/2- Reactions: Acidic Conditions	10/4- Name reactions/Problems
10/7- Reactions: Acidic Conditions	10/9- Reactions: Acidic Conditions	10/11- Name reactions/Problems
10/14- Reactions: Acidic Conditions	10/16- Pericyclic Reactions	10/18- Name reactions/Problems
10/21- Pericyclic Reactions	10/23- Pericyclic Reactions	10/25- Name reactions/Problems
10/28- Pericyclic Reactions	10/30- Pericyclic Reactions	11/1- Name reactions/Problems
11/4- No Class	11/6- Exam 2	11/8- No Class
11/11- No Class	11/13- Radical Reactions	11/15- Name reactions/Problems
11/18- Radical Reactions	11/20- Radical Reactions	11/22- Name reactions/Problems
11/25- Radical Reactions	11/27- No Class	11/29- No Class
12/2- Radical Reactions	12/4- Exam 3 (Final)	

Assignments:

• Problem sets are due at the end of each problem session.

Attendance at problem sessions is mandatory and will be factored into this portion of your grade.

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.

No cell phones, text messaging, headphones, computers, or other electronic devices are to be used during any class meeting.