CHEM 210

**Fall 2008**

**Lecture:** MWF 10:10—11:00 AM

# Organic Chemistry

## Instructor and Course Description

**Dr. Michael W. Justik**
H32 Hammermill,
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**Office Hours:** MW 12-2 PM

**Course Description: CHEM 210**—Organic Chemistry is the first half of the traditional two-semester organic course. Covered material centers on principles and theories; nomenclature; chemistry of the functional groups; and applications of spectroscopy.

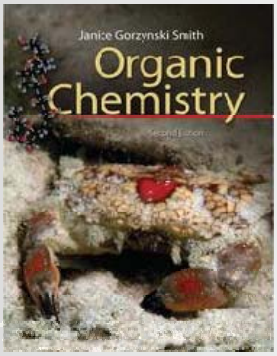
*And every hour of everyday*
*I'm learning more*
*The more I learn, the less I know about before*
*The less I know, the more I want to look around*
*Digging deep for clues on higher ground...*

*"Higher Ground" by UB40*

## Text and Course Materials

**Text:** *Organic Chemistry*, Janice Gorzynski Smith, 2nd Ed.

The Solutions Manual is strongly suggested.




**Recommended Materials:** Use of a molecular model set is strongly encouraged. One will be used to demonstrate concepts throughout the semester.

**Course Website:** Available on the CHEM 210/212 page of the instructors website:

**http://chemistry.bd.psu.edu/justik/CHEM210.htm**

All problem sets and study guides will be posted here, as well as answer keys for the exams.

## Grading and Course Policies

The following grading scale will be used. If the class average falls below a B-/C+ mark, an adjustment *may* be made for grade cutoffs. The 50 mark for passing is firm:

| | |
|---|---|
| A | 90-100 |
| A– | 85-90 |
| B+ | 82-85 |
| B | 78-82 |
| B– | 75-78 |
| C+ | 70-75 |
| C | 60-70 |
| C | 60-70 |
| D | 50-60 |
| F | Below 50 |

**Exams:** 5 x 100 pts = **500 pts**

The fifth exam is the final exam given during the time assigned by the registrar and is cumulative and comprehensive.

**Academic Integrity Policy:**
Penn State and your professor put a very high value on academic integrity, and violations are not tolerated. More information on academic integrity can be found at:

**http://www.pserie.psu.edu/faculty/academics/integrity.htm**

## Tentative Course Schedule

**Chapter 1:** Structure and Bonding
**Chapter 2:** Acids and Bases
**Chapter 3:** Introduction to Organic Molecules
**Chapter 13:** Mass Spectrometry and IR Spectroscopy
**Exam 1—September 22nd**

**Chapter 4:** Alkanes
**Chapter 5:** Stereochemistry
**Chapter 6:** Understanding Organic Reactions
**Exam 2—October 13th**

**Chapter 7:** Alkyl Halides and Nucleophilic Substitution
**Chapter 8:** Alkyl Halides and Elimination Reactions
**Chapter 9:** Alcohols, Ethers and Epoxides
**Exam 3—November 10th**

**Chapter 10:** Alkenes
**Chapter 11:** Alkynes
**Chapter 12:** Oxidation and Reduction
**Exam 4—Decmeber 1st**

**Chapter 15:** Radical Reactions
**Exam 5—Final Exam as scheduled by registrar**

***Exam dates and covered material are subject to change***

**Course guidelines:**
Study Guides will be posted one week before each exam. For each exam you will be given a list of possible mechanisms and synthetic targets

Nomenclature is primarily your responsibility. We will only briefly cover new functional group nomenclature in lecture.

Exams are on Mondays—a study workshop will be given by your professor to review the material for each exam, the scheduling will be up to you but the preceding Friday afternoons and Saturday mornings are the most possible times

It is assumed that you read each chapter before we cover the material and perform the minimum problem sets immediately thereafter.

**Tips for Success:**

Organic chemistry is perceived as one of the most difficult courses taken during an undergraduate degree program, but there are ways to increase your performance and maybe even enjoyment of the course:

- Organic chemistry is more a foreign language than anything else. It must be practiced every day—writing, reviewing and working problems!
- Do not miss any material or "relax" your study habits—this is a sixteen week marathon and every effort is required!
- Study groups are helpful and encouraged—cram sessions are typically not helpful and discouraged!
- After each lecture—rewrite your notes. You will be surprised how well this simple tool works, at least to make sure your notes are legible and organized should you decide to cram!
- Do not attempt to memorize everything—this is a course of concepts and applications! Most wrong answers on exams are convoluted concepts that were memorized
- Students often complain they study and study and never assimilate the material—remember, if you study the ***same way*** each time, you will get the same result for better or worse!
- Increasing the amount you study may have no effect if your study habits are poor

**See Dr. Justik if you have any problems—that is why he is here !**