

# Organic Chemistry

## Instructor and Course Description

**Dr. Michael W. Justik**  
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**Office Hours:** T 9AM—12 Noon

**Course Description:** This is a one-semester, comprehensive course that introduces the fundamental principles of organic chemistry including relationships between the molecular structure of organic compounds and their macroscopic properties. The course surveys the organic functional groups, their chemical reactions, mechanisms, nomenclature; stereochemistry, including conformational analysis and chirality.

*And every hour of everyday  
I'm learning more*

*The more I learn, the less I  
know about before*

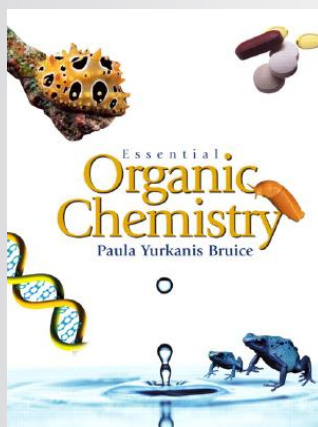
*The less I know, the more I  
want to look around*

*Digging deep for clues on  
higher ground...*

*"Higher Ground" by UB40*

## Text and Course Materials

**Text:** *Essential Organic Chemistry*, Paula Bruice, 1<sup>st</sup> Ed.



**Recommended Materials:** The solutions manual is strongly recommended.

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

**Course Website:** Available on the CHEM 202/203 page of the instructors website:

<http://chemistry.bd.psu.edu/justik/CHEM202.html>

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 55 mark for passing is firm:

A	95-100
A-	90-95
B+	87-89
B	83-86
B-	80-82
C+	75-79
C	65-75
D	55-64
F	Below 55

**Mini-Exams:** 6x70 pts = **420 pts**

**Final Exam** 80 pts  
**500 pts**

The final exam is 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>

**Chapter 1:** Electronic Structure and Covalent Bonding

**Chapter 2:** Acids and Bases

**Mini-Exam 1—January 26<sup>th</sup>**

**Chapter 3:** An Introduction to Organic Compounds

**Chapter 4:** Alkenes

**Mini-Exam 2—February 11<sup>th</sup>**

**Chapter 5:** Reactions of Alkenes and Alkynes

**Chapter 6:** Delocalized Electrons and Their Effect

**Mini Exam 3—February 27<sup>th</sup>**

**Chapter 7:** Aromaticity

**Chapter 8:** Isomers and Stereochemistry

**Mini Exam 4—March 23<sup>rd</sup>**

**Chapter 10:** Substitution and Elimination Reactions

**Chapter 11:** Reactions of Alcohols, Ethers and Epoxides

**Mini Exam 5—April 8<sup>th</sup>**

**Chapter 12:** Carbonyl Compounds I

**Chapter 13:** Carbonyl Compounds II

**Mini Exam 6—April 24<sup>th</sup>**

**Chapter 14:** Carbonyl Compounds III

**Final Exam as scheduled by registrar**

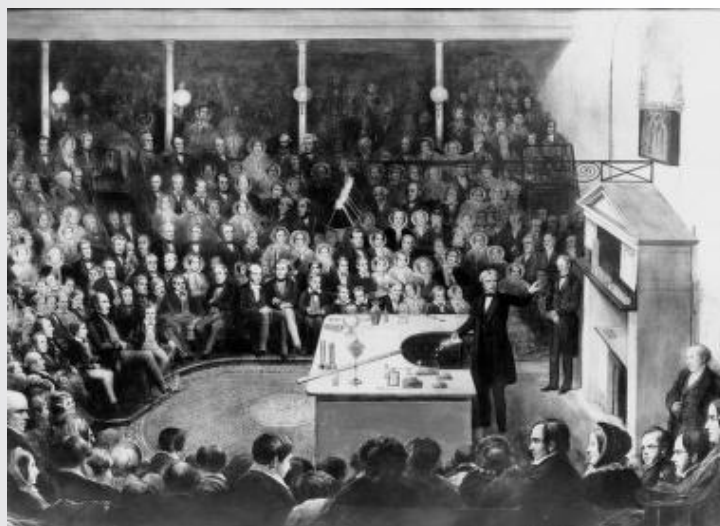
***Exam dates & covered material are subject to change***

Study Guides will be posted one week before each mini exam. These will overview the material as well as help you organize your studying.

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

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 !**