Chem 342 ~ Organic Chemistry II

Spring 2004

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Office Hours: Monday and Wednesday, 9:00 am - 10:00 am, or by appointment

Required Text: "Organic Chemistry" Fifth Edition, J. McMurry bundled with "Study Guide and Solutions Manual for McMurry's Organic Chemistry" Fifth Edition, S. McMurry.
Optional: Molecular Models available in the Varsity Mart - Highly Recommended!

INTRODUCTION: This course is designed to explore in more details the specifics of the reactivity of various functional groups. The concepts learned in Chem 341 will be reiterated throughout the course. We will learn NMR techniques for characterization of organic functional groups. The reactivity of conjugated alkenes and aromatic compounds will be discussed. The chemistry of alcohols, carbonyl compounds, carboxylic acid derivatives, and biomolecules will be a large part of the class. We will also learn how to carry out multistep organic syntheses.

GRADING: Grading will be based on a 500 point scale (3 - 100 point exams *or* 2 - 100 point exams and 5 - 20 point quizzes, and a 200 point comprehensive final exam). Letter grades will be assigned according to the following percentiles (subject to change):

A	85 - 100	**C**	60 - 74
B	75 - 84	**D**	45 - 59

HOMEWORK: Homework is not required for this course. However, suggested problems will be announced for each chapter. You are ***strongly urged*** to work through the suggested problems as many times as it takes to become proficient with the material. This will take a lot of work on your part, but it will be key to your success in this class.

EXAMS: Three hourly exams (100 points) and a comprehensive final exam (200 points) will be given on the dates specified in the attached schedule. There will be no make-up exams without prior approval of the instructor. If you must miss an exam due to a scheduled university function (athletic event, etc.), the instructor must be notified at least two weeks before the exam date. An alternative exam will only be given *prior* to the scheduled exam date. *Absolutely no make up exams will be given after a scheduled exam date*. Extraordinary circumstances (death, hospitalization, etc.) will be evaluated on a case by case basis.

QUIZZES: Six short quizzes (20 points) will be given throughout the semester. These quizzes will be unannounced and can occur at any time. They are not directly added to your grade total for this course, however, they can be beneficial. Quizzes can only help your grade, not hurt it. The best 5 quizzes out of the 6 will be totaled. This total will replace your lowest hourly exam score if it is higher. *Under no circumstances will there be any makeup quizzes.* Quiz answers will be posted on the class web page. You may keep the quizzes, but scantron answer sheets are not returned.

LEARNING TIPS: Organic chemistry is not hard, but it does take a lot of work. The most important thing you can do to be successful in this class is to stay current and keep up. It just isn't possible to cram for organic chemistry on the night before an exam. Believe me when I tell you that studying an hour or two everyday will be much better than studying for 12 hours on a weekend. It is not easy to absorb all the material in one sitting, and a daily dose will make comprehension much easier.

Learning organic chemistry is very much like learning a foreign language. You need to learn the vocabulary in terms of names, structures, and types of functional groups. You also need to learn the rules of grammar. For example, how an alcohol will react with a halide, etc. Once you learn certain rules, they can be applied to many different reactions. Thus you can construct chemical sentences. There will be a certain amount of memorization required, however, because of the vastness of the subject, learning general trends and rules will be most helpful.

Here are some suggestions:

- Read the chapter ahead before coming to class.
- Ask questions.
- Rewrite your notes after every class.
- Do the suggested problems as many times as it takes to understand the material, then try the other problems in your text.
- Use the Study Guide and Solutions Manual - but try to understand the problems without looking at the answers first.
- Use flash cards to help learn structures, names, and reactions.
- Find a friend or group of students to study with..
- Buy a set of molecular models.
- Utilize instructor and TA office hours.

Special Needs: All students have the right to an environment that is conducive for learning. Any students who need special accommodations for learning or who have special needs are invited to share these concerns or requests with the instructor as soon as possible.

Academic Responsibility: It is assumed that students at NDSU have the integrity to complete examinations on their own. Any student who is found to have acted dishonestly on an exam will receive an F for that exam. A second infraction will result in an F for the course. The policy applied is that of the Code of Academic Responsibility and Conduct as outlined in NDSU University Senate Policy, Section 335: Code of Academic Responsibility and Conduct (http://www.ndsu.nodak.edu/policy/335.htm).

Course Outline

Tentative Class Schedule
(subject to change)

Chapter 13:	Structure Determination: Nuclear Magnetic Resonance Spectroscopy
Chapter 14:	Conjugated Dienes and UV Spectroscopy
Chapter 15:	Benzene and Aromaticity
Chapter 16:	Chemistry of Benzene: Electrophilic Aromatic Substitution
EXAM 1	**Friday, Feb 13** Chapters 13-16
Chapter 17:	Alcohols and Phenols
Chapter 18:	Ethers and Epoxides; Thiols and Sulfides
Chapter 19:	Aldehydes and Ketones: Nucleophilic Addition Reactions
EXAM 2	**Friday, Mar 12** Chapters 17-19
Chapter 20:	Carboxylic Acids
Chapter 21:	Carboxylic Acid Derivatives and Nucleophilic Acyl Substitution Reactions
Chapter 22:	Carbonyl Alpha-Substitution Reactions
EXAM 2	**Friday, Apr 16** Chapters 20-22
Chapter 23:	Carbonyl Condensation Reactions
Chapter 24:	Amines
Chapter 22:	Carbonyl Alpha-Substitution Reactions
FINAL EXAM	**Friday, May 14, 12:30-2:30** Comprehensive - 7:30 - 9:30 am

HOLIDAYS

January 21	Martin Luther King Jr. Holiday
February 16	President's Day Holiday
March 15-19	Spring Break
April 9-12	Spring Holiday