CHEMISTRY 222

Dr. Saadein

Spring 2001

TEXT

"Organic Chemistry," 3rd edition, Seyhan Ege

Solution Manual, Organic Chemistry, 4th edition, Seyhan Ege

PURPOSE

Chemistry 222 is designed primarily for chemistry, chemical engineering, biology, pre-medical, pre-dental, pre-pharmacy and pre-veterinarian majors. This course will provide each student with an opportunity to acquire an understanding of:

- -structure, nomenclature, synthesis and reactions of ethers, ketones, aldehydes, amines, carboxylic acids and carboxylic acid derivatives
- -conjugated systems, orbital symmetry and ultraviolet spectroscopy
- -aromatic compounds and electrophilic aromatic substitution
- -carboyhdrates and nucleic acids

EXPECTED RESULTS

Prior to the completion of the course, each student will have an opportunity to demonstrate his/her comprehension of concepts and competence in the topics stated above.

ASSESSMENT PROCEDURES

Each student will complete several hour-long examinations and short quizzes covering the material contained in the required text book and in-class lectures as well as a comprehensive final exam covering the entire semester's material. Each student's exam will consist of both quantitative and essay questions. Each student's exam will be judged by standards of logically organized and presented work--quantitative answers must show the reasoning used and be correct in magnitude and precision. Answers to essay questions must be thorough and demonstrate correct grammar, spelling, and punctuation. Each student will also participate in a laboratory for three hours once a week (see separate description of lab).

working problems on each topic. There are problems within each chapter; all of these should be worked and may be checked with the answers in the solutions manual. In addition, problems at the end of each chapter will be assigned for you to work; you may also check these at the back of the textbook or in the study guide. These problems are for your own benefit only; I do not take them up or check them. You should work problems as you encounter the material. You should also attempt each problem before seeking help from the book, your notes, or the answer. It is not sufficient to be able to follow how a problem is worked; on a test, you will have to work a problem all the way through, and the only way you will be able to do this is if you have worked numerous practice problems.

EXAM SCHEDULE

Hour-exams will be scheduled on Friday afternoons after each chapter (Chapters 10-23) is covered.

FINAL EXAM

There will be a final exam, covering the semester's material. This will be given during the regularly scheduled final exam period.

SCHEDULE

We will cover Chapters 10-23.

Chapter 10	Nuclear Magnetic Resonance Spectroscopy
Chapter 11	Untraviolet-Visible and Infrared Spectroscopy. Mass Spectrometry
Chapter 12	Alcohols, Diols, and Ethers
Chapter 13	Aldehydes and Ketones. Addition Reactions at Electrophilic Carbon Atoms
Chapter 14	Carboxylic Acids and Their Derivatives I. Acyl-Transfer Reactions
Chpater 15	Carboxylic Acids and Their Derivatives II. Synthetic Transformations and Compounds of Biological Interest
Chapter 16	Structural Effects in Acidity and Basicity Revisited
Chapter 17	Enols and Enolate Anions as Nucleophiles I. Alkylation and Condensation Reactions
Chapter 18	Polyenes

80% - 82% B-

60% - 66% D
below 60% F

HONOR CODE

It is assumed that all Oxford College students will adhere to the highest standards of academic honesty and will uphold the Oxford College Honor Code.

On exams, you may not use any material not distributed with the exam itself except for calculators and pencils/pens. Any other material you bring into the room must be left at the front of the room. During an examination, you may not give or receive assistance. On assignments for outside class the work is to be your work alone – you may not give or receive any assistance, and you may use only materials authorized. Since absences and tardies can affect your grade, giving false information regarding absences or tardies is a violation of the Honor Code. Note also that the Oxford College Honor Code expects students to report any violations of the Code they have knowledge of.