

Chemistry 2301

Elementary Organic Chemistry

M W F: 9:05 – 9:55

STSS 220

Spring Semester, 2016

Instructor: Professor Mark Distefano, 668C Kolthoff, 624-0544, diste001@umn.edu

Office Hours: Monday, 10:00 AM - 11:00 AM; Wednesday, 10:00 AM - 11:00 AM; Thursday, 11:00 AM - 12:00 PM and by appointment. Additional office hours will be scheduled prior to exams. Review sessions will be scheduled the afternoon before each exam.

Teaching Assistants: Teaching Assistants are available for questions in Room 122, Smith Hall. Their office hours will be posted there and will be announced in class. Typically, Teaching Assistants are available in that room 8:00 AM to 6:00 PM on weekdays.

Required Texts: Janice Gorzynski Smith, Organic Chemistry, Fourth Edition, McGraw Hill; Study Guide to book; Access to Connect (can be obtain with purchase of new book or separately); molecular model set. A copy of the book and the solution manual are on reserve at Walter Library in the event that you do not bring your books with you on campus.

Grading

Hour Exams: 4 x 200 point exams

Connect Homework: 10 x 10 point assignments

Class Participation: 50 points (80% participation required)

Final Exam: 350 points

Total: 1300 points

Grading Scale: The A/B border is 88%. The B/C border is 75%. The C/D border is 50%. The borders for +/- grades will be determined at the time grades are assigned (end of semester).

Hour Exams: Four 50 minute exams will be given. These exams will be given during regularly scheduled class times on the Fridays noted below. Students whose last names begin with A-L will take their exam in the regular classroom. Students whose last names begin with M-Z will take their exam in an alternate room to be announced before the exam. You must take your exam in the assigned room. Otherwise, a 10 point penalty may be imposed.

Scheduled Exam Dates

EXAM 1, Friday, February 12 (Week 4)

EXAM 2, Friday, March 4 (Week 7)

EXAM 3, Friday, April 1 (Week 10)

EXAM 4, Friday, April 22 (Week 13)

Final Exams: The final exam will be held: 1:30 p.m.-3:30 p.m., Thursday, May 12

Policy on Exams: Exams should be written in INK (But no red pen). As a rule, no make-up exams will be given. If you know in advance that you will not be able to be present for an exam, please

see me as soon as possible. In the case of short term emergencies (such as illness), you must notify me before the exam to be considered for a change in the grading scheme. If you arrive too late to start an exam (overslept, car trouble, etc.) you should contact me as soon as possible for a possible chance to take the exam after it's regularly scheduled time. No early final exams will be given.

Exam Absences: Missed exams without a documented excuse will be recorded as a zero for that exam.

Homework Assignments: There will be 14 online assignments due every Friday over the course of the semester. Each assignment will be worth 10 points and will contain approximately 5-10 problems depending on difficulty. These assignments will be due on the following Friday at 11:59 PM (CST). You will need to activate your McGraw-Hill Connect Account by registering using the link for our class which can be found in the instructions below (or on the course website) to be able to access the assigned homework. All graded assignments will be listed and submitted on this website. No late homework will be accepted (no exceptions). If you need computer access, there is a computer lab on first floor Walter Library (Room 103) that is for UMN student use. I recommend not waiting till the last minute to complete your homework, as it will take some time to become familiar with the Connect Program, especially the ChemDraw feature. These assignments are for your benefit and are to help you to keep up with the material that we are covering in lecture. You can check your answers online and rework the problems that you have missed. You will be allowed three attempts at submitting your assignments, so you can go back and correct the problems that you got incorrect. While these assignments are not timed, they should take roughly 30 minutes as long as you have already read and understand the material. Your 10 highest scores will be used to compute your score for the online assignments. Due to occasional computer problems with the Connect Program, a score of 80% will be sufficient to obtain full credit for the assignment.

Clickers: Clickers will be used for in-class participation. The required device is the i>Clicker2, and it is sold at the campus bookstore. At the end of the semester, if your clicker is in good condition, the bookstore will buy back your used i>Clicker. You must properly register your clicker to receive credit! Registration is done through the course Moodle site. For complete, blow-by-blow directions to register your clicker go to <http://z.umn.edu/iclickerstudent>. This site includes answers to frequently asked questions and technical help via both a web link and a phone number.

Policy for "I" Grades: An "I" grade of incomplete will be assigned only when a prior arrangement has been made with the instructor. It will only be considered when the final exam cannot be taken and when work to that point has been deemed satisfactory. The "I" can be made up only by taking a regularly scheduled 2301 final exam some time during the next quarter. If the final is not taken and work in the course completed prior to that date is not satisfactory, an F or N grade (reflecting your grading option) will be assigned. Requests for an incomplete will not be considered the day of, or the day before, the final exam.

Regrading: If you have a complaint about the grading of your exam, Fill out a "Request for Regrade" form (available on the website) and staple it to your exam. **DO NOT WRITE ON YOUR EXAM.** You must turn in the exam for regrade on or before the day of the next exam. Regraded exams will not be returned until the day after the next exam. For the last hour exam, it must be

turned in on or before the day of the final. When an exam is submitted for regrading, the entire exam will be regraded.

Other Course Information

Web Sites and Exam Files:

We will be using Moodle as the official web site for this class. It will contain useful information about the course and copies of the exam keys.

Moodle can be accessed by going to: www.myu.umn.edu (or through the “myU” portal on OneStop).

My old exams will be posted on that site along with various useful links.

The Connect Homework site created by the book publisher has an electronic version of the book along with additional helpful learning activities.

ChemFoundations: ChemFoundations is a program established in the Chemistry Department to assist students learning chemistry. In the program, undergraduates with a strong chemistry background and graduate students who are interested in teaching careers assist small groups of students. The format of this is similar to a discussion section. More information concerning this will be available once classes have started. A link to this will be posted on the WebVista Site.

Scholastic Dishonesty: “Scholastic dishonesty is any act that violates the rights of another student with respect to academic work or that involves misrepresentation of a student’s own work. Scholastic dishonesty includes (but is not limited to) cheating on assignments or examinations; plagiarizing (misrepresenting as one’s own work done by another); submitting the same or substantially similar papers for more than one course without consent of all instructors concerned; depriving another of necessary course materials; sabotaging another’s work.” – Classroom Grading and Examination Procedures, College of Liberal Arts. If a student is guilty of scholastic dishonesty, they will receive no credit, that is a “0”, for the work involved or an “F” for the course and the incident will be reported to the Scholastic Conduct Committee in which the student is enrolled resulting in a letter written to their file.

Emails to the Professor: In cases of emergencies or special situations it is important that you notify me via email. Due to the large number of students in this course, I cannot answer email questions such as “how do you solve problem 5”. However, if I receive a number of questions about a specific problem, I will answer that question in class. A large amount of material is posted on the moodle site noted above. If you email me questions (such as where is the exam?) whose answers are already posted on the web site, 10 points will be deducted from your grade. When you email me, please write 2301S16 in the subject line. Otherwise, I may not see your email.

My Expectations for Students

1. Come to class
2. Do the assigned problems
3. Work the exams from the previous year

How To Do Well In This Class

1. Come to class. Organic chemistry is a fast paced class. To do well in this class, you must keep up. Lectures will cover material in the book as well as other things that are not.

2. Participate in class. Come to class thinking. Try to follow what is being said in lecture. Don't just copy it down in your notes.

3. Work Problems ! As soon as you can, start working problems. You cannot learn organic chemistry by reading or listening to lecture. To apply the concepts you are learning, you must work problems. When you work the problems, you may get stuck and have to look back at the book or solutions manual to solve it. This is OK, **BUT**, you need to try the same problem at a later date without resorting to this crutch. This is the most frequent mistake that students make. Remember, you will not have the book on the exam. Use the book, but try to solve problems under "Exam" conditions (no book, limited time). If you are honest with yourself, this type of self testing will be a good indicator of how well you know the material and are going to perform on the real test. Another hint: don't look at a problem and do it in you head. Remember, Exams test what is written on the paper, not what is in your head. If you practice writing organic structures ahead of time, you will be faster at it. This means you will have more time to think on Exams. You will also make fewer careless mistakes.

Finally: Remember, contrary to what many people think, science is not a vast array of trivial facts. It is a set of a few concepts that can be used to predict a wide variety of things. In this class, you will learn and apply such concepts. This is what makes organic chemistry so interesting.

Tentative Course Outline

Week 1: Chapter 1: Structure and Bonding

Week 2: Chapter 2: Acids and Bases

Week 3: Chapter 3: Introduction to Organic Molecules and Functional Groups

Week 4: Chapter 4: Alkanes

Friday 2/13 Exam 1

Week 5: Chapter 5: Stereochemistry

Week 6: Chapter 6: Understanding Organic Reactions

Week 7: Chapter 7: Alkyl Halides and Nucleophilic Substitution

Friday 3/6 Exam 2

Week 8: Chapter 8: Alkyl Halides and Elimination Reactions

Week 9: Chapter 9: Alcohols, Ethers and Epoxides

Week 10: Chapter 10: Alkenes

Friday 4/3 Exam 3

Week 11: Chapter 11: Alkynes

Week 12: Chapter 12: Oxidation and Reduction

Week 13: Chapter 13: Mass Spectrometry and Infrared Spectroscopy

Friday 4/24 Exam 4

Week 14: Chapter 14: Nuclear Magnetic Resonance Spectroscopy

Week 15: Chapter 15: Radical Reactions