

Chemistry 2331H Honors Elementary Organic Chemistry 1

M W F: 9:05 – 9:55

331 Smith Hall

Fall Semester, 2019

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.

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: Vollhardt & Schore, Organic Chemistry, Eighth Edition, W. H. Freeman; Study Guide to book; iClicker;. 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.

Recommended Items: A molecular model set.

Grading

Hour Exams: 4 x 200 point exams

Homework: 10 x 10 point assignments

Class Participation: 50 points (80% participation required for 100% credit)

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.

Scheduled Exam Dates

EXAM 1, Friday, September 27 (Week 4)

EXAM 2, Friday, October 18 (Week 7)

EXAM 3, Friday, November 8 (Week 10)

EXAM 4, Friday, December 6 (Week 14)

Final Exams: The final exam will be held: 1:30 p.m.-3:30 p.m., Tuesday, December 17

Policy on Exams: Exams should be written in black or blue INK or pencil (But no red pen, green pen or other colors). 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.

Regrading: If you have a complaint about the grading of your exam, Fill out a "Request for Regrade" form (available on the website) and upload it on the course site. You must turn in the request for regrade on or before the day of 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.

Homework Assignments: There will be 13 online assignments due on most Mondays 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 due date at 11:59 PM (CST) and will need to be uploaded at the course website. To complete the assignment, upload your homework as a pdf file. Homework will be graded Pass/Fail. Do all the assigned problems and you will receive full credit. You only need to complete 10 out of the 13 assignments to receive full credit.

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 site. For complete, blow-by-blow directions to register your clicker go to <https://it.umn.edu/canvas-students-purchase-register>. This site includes answers to frequently asked questions and technical help via a web link.

Other Course Information

Web Sites and Exam Files:

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

Canvas 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.

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 course site.

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 course 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 **2331HF19** 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.

University Policies

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.

Disability Statement: The University of Minnesota is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations. If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact the DRC at 612-626- 1333 to arrange a confidential discussion regarding equitable access and reasonable accommodations. If you have a documented condition that allows additional time for exams or need other special assistance, you are responsible for contacting the DRC (<https://diversity.umn.edu/disability/>) immediately and schedule to take your exams with a proctor at their office. You need to schedule these well in advance: exam dates are above, so get started right away. Prof. Distefano and the proctors are NOT responsible for students who fail to adequately prepare to use or schedule use of disability services. Neither the TAs nor Prof. Distefano are certified to proctor exams for students with additional needs.

Mental Health and Wellbeing Statement: As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. University of Minnesota services are available to assist you with addressing these and other concerns you may be experiencing. You can learn more about the broad range of confidential mental health services available on campus via <http://www.mentalhealth.umn.edu>

I enjoy interacting with students and what to help you succeed. Hence, you should feel welcome to come talk to me (either during office hours or in a private scheduled meeting) if you are facing any difficult issues. Keep in mind that I am a mandatory reporter, and if that is a concern I can point you in the direction of additional confidential campus resources as necessary.

Policy on “I” Grade: Departmental policy is that a student may request an Incomplete grade only when (a) he/she/they has a University-sanctioned excuse for missing the final exam and (b) he/she/they is passing the course based on all other graded components. Assignment of an I requires that the instructor and student sign a contract, available in the Departmental undergraduate office, stipulating the procedure by which the I grade will be made up (e.g., taking a final exam from

another instructor in the next semester). Failure to successfully complete the procedure outlined in the contract will result in the I being administratively changed by the University Registrar.

Make Up Work for Legitimate Absences: This course is specifically designed to minimize the effects of absences: the built in iClicker “buffer” means that you can potentially miss up to 20% of classes without a penalty to your participation grade.

A student can be excused from one of the four in-class exams for a true emergency, serious illness, or University-sponsored activity. The student should contact the instructor as soon as circumstances allow and appropriate documentation must be provided. If the circumstances are deemed as appropriate for missing the exam, the unweighted average score of all other midterm exams will be used in place of the missed exam. If circumstances lead to a student missing more than one midterm exam, the student should immediately schedule a meeting with me to discuss any available options.

Tentative Course Outline

Week 1: Chapter 1: Structure and Bonding

Week 2: Chapter 2: Structure and Reactivity

Week 3: Chapter 3: Reactions of Alkanes

Week 4: Chapter 4: Cycloalkanes

Friday 9/27 Exam 1

Week 5: Chapter 5: Stereoisomers

Week 6: Chapter 6: Properties and Reactions of Haloalkanes

Week 7: Chapter 7: Further Reactions of Haloalkanes

Friday 10/18 Exam 2

Week 8: Chapter 8: Hydroxy Functional Groups: Alcohols

Week 9: Chapter 9: Further Reactions of Alcohols and Ethers

Week 10: Chapter 10: Using NMR Spectroscopy to Deduce Structure

Friday 11/8 Exam 3

Week 11 Chapter 11: Alkenes: Infrared Spectroscopy and Mass Spectrometry

Week 12: Chapter 12: Reaction of Alkenes

Week 13: Chapter 12/13: Reaction of Alkenes/Alkynes

Friday 12/6 Exam 4

Week 14 Chapter 13: Reactions of Alkynes

Week 15: Review/Introduction to Research in Organic Chemistry

Homework Problems

Chapter	Due Date
Chapter 1: 25, 28, 31, 35, 36, 44, 52	9/9
Chapter 2: 33, 34, 36, 39, 44, 46, 55	9/16
Chapter 3: 15, 22, 27, 31	9/23
Chapter 4: 23, 31, 34, 45	9/30
Chapter 5: 32, 33, 36, 38, 39, 44	10/7
Chapter 6: 38, 42, 47, 49, 50	10/21*
Chapter 7: 25, 26, 28, 37, 49, 50	10/28
Chapter 8: 34, 36, 40, 45, 46, 48	11/4
Chapter 9: 33, 36, 50, 56, 60, 62	11/11
Chapter 10: 35, 37, 39, 48, 59	11/25*
Chapter 11: 41, 54, 61, 62, 67	12/2
Chapter 12: 39, 46, 47, 48, 49, 50	12/9
Chapter 13: 36, 40, 45, 46, 47	12/16

*Note there is a one week break before this.