

CHEMISTRY 380 HONORS ORGANIC CHEMISTRY I

Fall, 2017

Instructor: Jon Tunge, 4033 Malott Hall (tunge@ku.edu)

Chemistry 380 is the first half of a two-semester course in organic chemistry.

Location: 1003 Malott

OFFICE HOURS: By appointment; **Note:** All emails should include CHEM380 in the subject line.

WEB SITE: We will be using the Blackboard program. Go to <http://courseware.ku.edu>. This site will contain the course syllabus, schedule, problem assignments, problem sets and handouts in PDF format that you can download and print. You must have a KU email address or register your email address with KU to utilize the web site and to receive email messages.

COURSE MATERIALS:

TEXT: Required – *Organic Chemistry*, David Klein, 3rd Ed.

iClicker2: Required

WileyPLUS online homework: Available with the WileyPLUS Access Code provided with textbook packages

Solutions Manual: Optional, but useful

Molecular Models: Optional, but useful

iCLICKER REGISTRATION: You will need to register your iClicker2 through your Blackboard account. Go to the CHEM380 page in Blackboard, click on the “Tools” link, go to the bottom of the right column and click “iClicker2 registration.” In the new window, enter your iClicker2 registration number, found below the bar code on the back of the clicker or found on the clicker window when the clicker is turned on. *Do NOT register through iclicker.com, as this does not allow us to match your responses with your name.*

CLASS PARTICIPATION: IN-CLASS CLICKER QUESTIONS: We will use iClicker2 in class on Mondays and Wednesdays. You will gain 2 participation points per class period by answering at least 75% of the clicker questions during that period. Anybody found using two or more iClickers during class will receive zero points (total) for this part of their grade.

QUIZZES: 10 point quizzes will be given in the last half of class on Fridays. The best ten will be used in calculating your final grade. You must be in class for the quizzes. **NO MAKE UP QUIZZES WILL BE GIVEN.**

EXAMS AND GRADING: Your grade will be based upon your performance on the quizzes, hour exams and the final exam. The points will be distributed as follows:

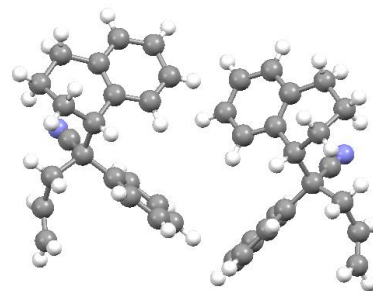
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|--------------------------------|---|-------------------|
| Class Participation (iClicker) | = | 50 points |
| Ten best quizzes | = | 100 points |
| Three hour exams | = | 300 points |
| Final exam | = | <u>150 points</u> |
| Total possible points | = | 600 points |

The hour exams will be given on the following dates (in **2001 Malott**):

| | |
|------------------------------|-----------------|
| Wed., Sept. 20 th | 7:30-10:00 p.m. |
| Wed., Oct. 25 th | 7:30-10:00 p.m. |
| Wed., Nov. 29 th | 7:30-10:00 p.m. |

MAKEUP EXAMS WILL NOT BE GIVEN WITHOUT PRIOR ARRANGEMENT: Please let me know at least two weeks in advance if you have a conflict with the above exam times.

The **FINAL EXAM** (comprehensive) is scheduled for 7:30-10:00 a.m. on Wednesday, Dec. 13th in 1003 Malott.



Graded examinations will usually be available by the second class following the examination. Please carefully check your exams for errors in grading. Any exam requiring regrading should be turned in immediately and you should indicate which questions you wish regraded by circling that question. No grades will be changed unless the exams are submitted for regrading within one week after the graded exams are available.

GRADES: While you can expect that $A \geq 90\%$; $B \geq 80\%$; $C \geq 70\%$; $D \geq 60\%$, your performance will be evaluated relative to the class average. While not receiving letter grades on individual exams may be frustrating, ultimately your grade will likely be higher than that expected based on percentages. You will be informed of the class average on each exam so that you can gauge your standing. If you need more feedback, please stop by to see me.

ACADEMIC MISCONDUCT: Cheating or the appearance thereof, will not be tolerated. This includes, but is not limited to, giving or receiving help on an exam, looking at another student's paper during an exam, or using unauthorized material during an exam. Academic misconduct on an exam warrants a 0 score on that exam and a charge of academic misconduct will be filed with the University. Repeat cheaters run the real risk of being dismissed from the University. Familiarize yourself with published University regulations (see <http://www.clas.ku.edu/undergrad/policies/policies>). The Instructor reserves the right to make and keep copies of individual examination papers.

RECORDING LECTURES: Course materials prepared by the instructor, together with the content of all lectures and review sessions presented by the instructor are the property of the instructor. Video and audio recording of lectures and review sessions without the consent of the instructor is prohibited. On request, the instructor will usually grant permission for students to audio tape lectures, on the condition that these audio tapes are only used as a study aid by the individual making the recording. Unless explicit permission is obtained from the instructor, recordings of lectures and review sessions may not be modified and must not be transferred or transmitted to any other person, whether or not that individual is enrolled in the course.

INCOMPLETES/WITHDRAWALS: Incompletes will only be given in situations where a documented and unavoidable absence keeps you from completing the semester. Additionally, incompletes will only be given if you are passing the course on the date of your last attendance. You will be assigned a "withdraw failing" if you withdraw any time after the second exam and you are not passing the course.

STUDY AIDS: Molecular models are extremely useful for studying conformational analysis and stereochemistry. They are available for purchase in the bookstore and are also available for two-hour checkout in the Science Library. Computer programs for visualizing molecules in three dimensions (ChemDraw and Chem3D) are available via a KU site license.

HOW TO STUDY ORGANIC CHEMISTRY: Success in organic chemistry requires mastering a substantial body of factual information and the use of this information in the solution of problems. To study productively, you should carefully read the text, marking key items to be learned on each page. As you study the text and your lecture notes, train your hand to draw the structures of molecules and write equations and mechanisms. Build models of various structures and learn to translate these three dimensional structures onto paper. Get a large quantity of scratch paper and write, write, write! **Work as many problems as possible, in writing and in full detail.** There is no other way to acquire the skills you will need to succeed in organic chemistry. Organic chemistry is a cumulative subject and the material you learn in the first week of the course will still be used at the end of the second semester of organic chemistry. Even though the problems are not graded, it is extremely important that you work them. Struggle with a problem that you can't solve immediately. Don't give up and look up the answer. Review related material in your lecture notes and in the text. If you still can't solve the problem set it aside and try it again later. In this way you will gradually learn the important material without trying to memorize it. Don't try to memorize the text and cram before exams. If you do, you are courting disaster! An understanding of reactions is essential and although facts must be learned, they will quickly overwhelm you unless you understand the general principles and see the relationships among the facts.

HELP: Help is easily available!

- 1) Use your textbook.
- 2) Email me or come see me.
- 3) Work with a study group. There is no better way to learn than explaining material to your peers

Learning Objectives to be Achieved through Study of Chapters 1-8

Derive structures of organic compounds from systematic names and vice versa
Correlate structure of organic compounds with physical properties including acidity, basicity and bond strength
Understand the dynamic shapes and geometries of organic compounds, including stereoisomerism
Predict the mechanisms of reactions of organic halides and the corresponding products formed
Understand the molecular orbitals used in chemical reactions
Propose reasonable syntheses of organic compounds