

Chemistry 4: 121

Organic Chemistry

Spring 2008



Life is full of challenges such as learning to sit, crawl, walk, eat, and master organic chemistry. I will take care of the first four, you take care of the last one.

Professor: Ned B. Bowden

Class Times: TTh 11:30-12:45 in 225 CB.

Tests are scheduled on Wednesdays from 5:30 to 7:00 P.M.

Final exam is scheduled for Monday, May 12th at 7:30 A.M.

Note: I do not have a make-up final. If you miss the final, you have to either take a zero or take the final at the end of the summer '08 or fall '08 session.

Contact Info: 423K Chemistry Building
335-1198
chemistry121@yahoo.com

IMPORTANT: To reach me or set an appointment, please send an email and I will try to respond quickly. **I set up a special email account exclusively for this class, please use the Yahoo address.** I get numerous emails sent to my uiowa account, and I often take a day or two to respond to these email messages. Your education is critical to me, so I set up a special email account on Yahoo so that I know which emails to respond to ASAP. At the conclusion of the semester you may reach me at my U of IA email account.

Office Hours and Problem Solving Mondays

I reserved these time for you and am happy to meet and discuss problems you are having. If these times do not work for you, we will set an appointment by email to meet another time.

My office hours are Monday 4:30-6:00 P.M. and Tuesday 10:00-11:30 A.M. The office hours on Tuesday are in my office.

We will have "Problem Solving Mondays" beginning on January 28th. They will be held every Monday from 4:30 to 6:00 PM. I will bring other organic chemistry books so that we may work through questions that are not in your textbook but cover the same material. I strongly encourage you to come with questions, we can tailor these meetings to cover what you are struggling with.

This time period is specifically designed to give you a chance to work problems with some assistance or to clarify a concept that you are struggling with. You will get the most out of these sessions if you have done the homework, read the chapters, and applied yourself towards learning the material prior to each session. I am holding these sessions in a large lecture hall so that everyone may come and partake. *I want everyone to do well in this class and learn to appreciate some of the depth of organic chemistry.* It is a tough subject for many, but there are unifying concepts that greatly simplify the learning process and allow one to organize their thinking.

For the sake of clarity, these sessions will be held on the following dates.

January 28th
February 4th, 11th, 18th, 25th
March 3rd, 10th, 24th
April 7th, 14th, 21st, 28th
May 5th

These problem solving sessions will also be review sessions for exams.

The room assignment for January 28th will be 225 CB. The rooms for the remaining dates have not been released yet; when they are I will post them on the syllabus that you can find on ICON. In other words, I will update this syllabus with the room assignments and post it on ICON.

Discussion Sections

A TA will lead these discussions. This time is reserved for periodic quizzes, problem solving, discussion of lecture material, and explanations of exam answers. I strongly encourage you to attend these sections as the TA's are excellent and can help you learn the material.

I am often asked if by students if they can attend a discussion section they are not registered for. I understand that nearly every discussion section is filled to capacity, so some of you had to register for a discussion section you may not be able to attend. That stinks! If you were forced to register for a discussion section that you could not attend, feel free to attend one that fits into your schedule. If we have too many people attending a discussion section, we will have to move the room or limit attendance to those already attending.

Teaching Assistants

The TA's are Joe Topczewski (joseph-topczewski@uiowa.edu), Arun Sen (arundhuti-sen@uiowa.edu), and Scott Neff (scott-neff@uiowa.edu). The head TA is Rebekah Richardson (rebmarie1985@yahoo.com). Their office hours have not been set yet due to events beyond their control. When their office hours are set I will update the syllabus on ICON, you can go there to find these office hours.

Joe Topczewski
Arun Sen
Scott Neff
Rebekah Richardson

Where to Find Course Notes

The course notes are located on the ICON course website. You can find the course by going to the main UI webpage and clicking on “current students” then “web-based courses”. You will be able to find the course from that page. *The notes will not be comprehensive; I will add material during class that may include material outside of the book.*

Why Are You in This Class?

Organic chemistry is a beautiful subject! I taught this class before and know that most of you are “pre” students. By this statement I mean that you are premed, prenursing, prepharmacy, prelaw, or another variant. This class is required for entrance into a professional school or is needed to prepare you for a nationwide test. These are all fine reasons for taking this class and I am glad you are here. My goal is to teach you some of the most beautiful parts of organic chemistry in hopes that you may remember it down the road when I am one of your patients in an emergency room, dental office, or pharmacy.

In this class you are going to learn how to think *critically*. Organic chemistry is more than the memorization of a bunch of facts and it is certainly more than applying a few simple rules to get the right answer. **Organic chemistry is 90% science and 10% art**; I can teach you the right rules and how to think about problems in organic chemistry, but you must learn how to apply these rules. This class is considered tough because it is unlike others that you have taken before. You will not have a series of equations from which you may derive answers. You will have a bunch of facts and you must learn how to think critically to solve problems. Therefore, you must learn to think like a detective and piece answers together with everything that you know. I will help you as much as I can to learn these skills.

How to Study for This Class

This class is not one where you can look over the material right before the exam and expect to do well. This class requires constant and diligent effort in order to do well. I compiled a list of suggestions to help you succeed. These are only suggestions, some of you may be naturals at organic chemistry and can get by with less work, but for the other 99% of the class this list will help you get the grade that you want.

1. Study for this class at least one hour a day. Organic chemistry is hard to learn but with consistent effort you can do it. This is a three semester hour class so you should spend six hours a week outside of class learning this material. Some of you will spend more time, others will spend less time depending on your abilities, motivation, and expectations for a grade.
2. Do all of the homework and suggested problems. You will learn from doing the homework, you will learn by struggling with the homework! Learning happens when you are forming questions in your mind and seeking the answers; learning does not happen when you are copying someone else’s work. Your grade in this class depends on your test taking skills so use the homeworks to learn the material.
3. Form study groups.
4. Skim the text before coming to class.

5. Go to the discussion sections and ask questions.
6. Rewrite your lecture notes. You will be surprised as to how much this will help you learn the material.
7. Study with a pencil and paper nearby! You will learn the material best by writing it down in your notebook as you are studying. Most people don't learn well by sight alone, you must use your hands when you study.
8. Read the book. Reread the book. Rereread the book. The class is based on the material in the book so if you are happy with the material in the book you will do well in the class.
9. Study regularly!

What You Should Take Away From This Class

1. The ability to draw mechanisms for simple organic reactions
2. Knowledge of common reactions
3. Understand functional groups and how to convert from one to another
4. Understand how to apply organic chemistry to a variety of fields including most things biological.
5. The ability to name molecules and recognize key functional groups
6. Understand some of the how and why of organic chemistry.

Exams

There will be three hourly exams on the following days:

February 20th: MacBride Hall Auditorium

March 12th : MacBride Hall Auditorium

April 30th: MacBride Hall Auditorium

Leave all textbooks, models, notes, etc. at home or you will be required to leave them in the front of the classroom during the exam. The tests will be a combination of multiple choice and short answer. The exams will be closed book and the short answers should be written in blue or black ink. Exams written in pencil will not be eligible for a regrade. Exams will be returned through the chemistry center (237 CB) as soon as possible. I will announce in class when your tests are available to be picked up. Your grades will be posted on ICON as soon as possible.

Each exam is comprehensive but will emphasize material since the previous exam. Organic chemistry builds on what was learned before, it is important to continually add to your fountain of knowledge. Exams must touch on material that was learned earlier in the semester, but in most instances I will use concepts that we covered since the previous exam. It is wise to review all of the material since Day 1 for each exam.

I will put old exams from other faculty and their answer keys on line. *Old exams are a poor method to determine what your exam will look like.* This is my first time teaching 121, although I taught 122 numerous times, so I do not have a set of old exams to give you. Still, before an exam I will typically tell you what types of questions to prepare for and the old exams from other faculty offer you a chance to look over some types of questions.

The final exam will be comprehensive.

Homework

I will assign weekly homework assignments from ARIS. The homework will be assigned on Friday and due a week and a half later on the second Monday following the assignment at midnight. You can find a link to ARIS on the ICON website for this class or you can go to <http://www.mhhe.com/arisHome/index.php>.

These homework assignments will be similar to the ones that were assigned in freshman chemistry. The homework assignments will be entirely on line, and grading will be instantaneous. I will give multiple short assignments rather than one long assignment per chapter. In lieu of extensions, I will drop your lowest 3 assignment grades.

You will be able to take each assignment as many times as you wish and I will only count your highest grade. Thus, if you are unhappy with your score, you can retake the assignment for a better grade. Any score on a homework set at 90% or higher will be rounded up to 100%. Thus, if you miss 1 out of 15 problems, you will have a 100%. Scores below 90% will be counted as their numeric value.

The homework is meant to help you learn the material, and I hope it will be used as such. It will only be a small fraction of your total grade (10%), but if you use it correctly it can help you do well on the exams which accounts for 85% of your total grade.

Rebekah and I will work together to assign and administer the homework. Rebekah will be the main person in charge of this and you should email her with problems or questions. I take the homework very seriously and feel that Rebekah will do a fine job with it. I will keep an eye on things, but if a problem can not be solved please let me know. Although I will delegate responsibility, ultimately I am in charge.

When you purchased your book, you got a password for ARIS. If you do not have one of these passwords, you can purchase one for \$20 the first time you register. To register you will need the code for the course: **43D-8C-6C6**.

Quizzes

To keep you on your toes, we will have near weekly quizzes to be administered at the beginning of your discussion sections. These quizzes are meant to see that you are learning this material and keeping up with the course. Cramming before exams does not work well in organic chemistry, a more even approach to learning material all semester will help you adsorb and understand it better.

It will be logistically impossible to give make-up quizzes so none will be offered. I will drop your lowest quiz score and allow you to take the quiz in a different discussion section if necessary. I strongly prefer that everyone take the quiz in their discussion section, but you can take it in another section if you must. If it becomes a problem that some discussion sections are full, I will limit entrance to the room to those who are registered and only a few others. If you must miss the quiz, you should contact me with your reason.

Rebekah will also be in charge of the quizzes. We will work together to make sure they are appropriate for this course. If you have a problem with them, please email or see Rebekah first. If you are unsatisfied with her answer, then come to me. I will also make sure that the quizzes go smoothly, so if there is a problem that seems to keep reappearing let me know.

Grading

The College of Liberal Arts and Sciences strongly suggests the following grade distribution.

18% A
36% B
39% C
5% D
2% F

The grade distribution will be close to these values, but it may vary based on class performance. Plus and minus grades will be given, they are left to the discretion of the instructor at the end of the semester.

You will be graded on the three hourly exams, on line homework, quizzes, and a final exam. Your final grade will be calculated as follows.

Homework: 10%
Quizzes: 5%
Three hourly exams: 60%
Final Exam: 25%

Your quiz and test scores will be posted on ICON. I will post the grade distributions for each exam on line so that you know how you did on each exam.

Regrades

If you feel that your test has been graded unfairly you can ask for a regrade. Write the reason for your regrade on the front of the test and **submit it to me or the chemistry center after class within one week after the exam was available to be returned**. The whole exam may be regraded. Regrades are not possible on tests written in pencil or erasable ink.

Make-up exams

Make-up exams will only be provided under exceptional circumstances. A valid, written excuse must be provided **prior to a missed exam to the instructor**. If you are ill, you must provide a written excuse signed by a doctor. If you anticipate having a conflict with an exam, please see me ahead of time. If you miss an exam for unforeseen reasons and have not provided a valid, written excuse to the instructor prior to the exam, you have one week after the exam to provide me with a valid, written excuse. There will only be one make-up exam for each hourly exam.

Cheating

Our scientific environment is maintained through the actions of its members and the trust we place in one another. Scientists are expected to remain honest in their words and actions. When this trust is broken the results are often severe and career threatening. One should not cheat on

the false assumptions that 1) no one is harmed if no one is aware of the cheating or 2) it is alright to cheat if you aren't caught. A good scientist will hold themselves to a higher standard where cheating, even if it isn't discovered, is wrong.

With this important responsibility comes the privilege of being a member of a community that values openness and truth. As you are all scientists in training I will expect you to act accordingly and with an upright manner. Anyone caught cheating will flunk this class and will be reported to the administration.

Two Minute Assays

At the end of each class I will ask for a 2 minute essay where you should write your feelings about the past hour. Please tell me what was confusing, entertaining, informative, useful, incomprehensible, or good about the class. This essay is my way of learning what you did or didn't understand and will provide valuable feedback to make the class better. You can write this essay on a piece of scratch paper torn from your notebook and leave it in the container near the door. Please do not sign these assays, they are meant to be anonymous.

Attendance

Attendance is not mandatory but encouraged. I may introduce material outside of the book, you are responsible for learning that material as it **may appear on an exam**.

Course Objective

Organic chemistry books are written such that someone can earn money from their sale, to sell a book it must cover more material than is reasonable for a one year course. We will try to cover as much of the book as possible without going too fast. We will cover the first fifteen chapters, but this may be altered a bit at the end of the semester.

Textbook

Janice G. Smith, Organic chemistry, 2nd edition, McGraw Hill, New York.

Disabilities

I would like to hear from anyone who has a disability which may require some modification of seating, testing, or other class requirements so that appropriate arrangements may be made. Please contact me during my office hours.

Required Announcements

The College of Liberal Arts and Sciences

Policies and Procedures

Administrative Home of the Course

The College of Liberal Arts and Sciences is the administrative home of this course and governs such academic matters as the add/drop deadlines, the second-grade-only option, issues concerning academic fraud or academic probation, and how credits are applied for various graduation requirements. Different colleges may have different policies. Students with questions about these or other CLAS policies should speak with an academic advisor or with the staff in 120 Schaeffer Hall. Also see the CLAS Academic Handbook:

www.clas.uiowa.edu/students/academic_handbook/index.shtml

Academic Fraud

Plagiarism and any other activities that result in a student presenting work that is not his or her own are academic fraud. Academic fraud is reported to the departmental DEO and then to the Associate Dean for Academic Programs and Services in the College of Liberal Arts and Sciences who deals with academic fraud according to these guidelines:

www.clas.uiowa.edu/students/academic_handbook/ix.shtml

Making a Suggestion or a Complaint

Students have the right to make suggestions or complaints and should first visit with the instructor, then with the course supervisor if appropriate, and next with the departmental DEO. All complaints must be made within six months of the incident.

www.clas.uiowa.edu/students/academic_handbook/ix.shtml#5

Accommodations for Disabilities

A student seeking academic accommodations should first register with Student Disability Services and then meet with a SDS counselor who determines eligibility for services. A student approved for accommodations should meet privately with the course instructor to arrange particular accommodations. See www.uiowa.edu/~sds/

Understanding Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. See www.sexualharassment.uiowa.edu/

Reacting Safely to Severe Weather

If severe weather is indicated by the UI outdoor **warning system**, class members will seek shelter in the innermost part of the building, if possible at the lowest level, staying clear of windows and of free-standing expanses which might prove unstable. The class will resume after the severe weather has ended. See the Operations Manual section **16.14. i**.

Student Classroom Behavior

The ability to learn is lessened when students engage in inappropriate classroom behavior, distracting others; such behaviors are a violation of the **Code of Student Life**. When disruptive activity occurs, a University instructor has the authority to determine classroom seating patterns and to request that a student exit immediately for the remainder of the period. One-day suspensions are reported to appropriate departmental, collegiate, and Student Services personnel (Office of the Vice President for **Student Services** and Dean of Students).