Majors Organic Chemistry I Lecture
Department of Chemistry
CHEM-UA.227
Fall Semester, 2022
Monday, Wednesday, and Friday, 11:00 AM to 12:15 PM
Silver Center, Room 102

Instructors
Lecture: Professor Keith Woerpel (825 Silver)
With Veronika Shchepetkina

Format
This class uses problem-based learning to convey the course material. Lectures will be short and infrequent. Although I enjoy lecturing (i.e., hearing myself talk), my experience is that lecturing is not the best thing for your learning. Students will be divided into groups of about four to work on a set of problems together each day. Answers to these problems will be posted on Brightspace after class. The instructors will be available to respond to questions during the class period. Attendance at the problem sessions is expected. I have tried to make the problems fit our time together, but it is possible that some problems may require a little extra time. Please bring questions you have about any problems to the next class period.

Objective
The goal of this course will be to provide a solid foundation in organic chemistry to prepare students for advanced courses in chemistry. Both the "lecture" and laboratory components are designed for chemistry majors, although you do not need to be a major to take the course. You will be treated as majors, however; we will assume that you are taking this course because you are interested in the material and need it for advanced study.

Textbook
M. Jones, Jr., and S. A. Fleming, Organic Chemistry, Fifth Edition, W. W. Norton, New York, 2014. The accompanying solution manual is helpful, too, although be aware that in some cases not all steps for mechanisms are shown in the manual (such as acid-base reactions). Solution manuals should only be consulted after considerable effort is expended to find an answer to any problem, using the textbook, not the manual, as a guide.

Prerequisite
General Chemistry II & Laboratory

Course Content
We plan to cover Chapters 1–12.

Zoom for Classroom, if Necessary
Zoom will hopefully not be needed for class, but if circumstances change, we will use Zoom for classroom meetings. I have used it successfully for a problem-based learning class using Breakout Rooms for each group.
Meeting ID = 981 9100 9829
You will need to authenticate using your NetID@nyu.edu address to join this meeting.

In the event that the course needs to be offered entirely online for a particular class meeting, we will meet synchronously at the standard class time using the above Zoom meeting. Additional instructions about particular details of class meetings or work will be sent to you in the event of a shift to online instruction.
Auditing the Class
Considering the problem-based learning aspect of the course, the responsibilities of students in groups, and the resources available, the course cannot accommodate auditors.

Learning Management System (LMS)
The LMS is NYU Brightspace, which can be accessed through the NYU Home site or Albert. It is meant to work with Chrome. I have not had success with my preferred browser, Safari. I use Chrome grudgingly. Problems will be posted to Brightspace.

Preparation for Class
Students should read each chapter before coming to the first class that discusses that material. Reading is active learning, so it promotes comprehension better than watching lectures or online videos. Because some chapters may take more time than we anticipate, you will need to be attuned to what we are covering in class so you are prepared.

You will need access to the problems for each class period on Brightspace.

Tentative Start Dates for Each Chapter
These dates are subject to change, but this list will give you an idea of our timing.

Chapter 1: September 2, 2022
Chapter 2: September 14, 2022
Chapter 3: September 21, 2022
Chapter 4: September 30, 2022
Chapter 5: October 5, 2022
Chapter 6: October 12, 2022
Chapter 7: October 19, 2022
Chapter 9: November 4, 2022 (note that this chapter is out of order to coordinate with the laboratory)
Chapter 8: November 11, 2022
Chapter 10: November 28, 2022
Chapter 11: December 2, 2022
Chapter 12: December 12, 2022

Problems
In class, we will work problems that guide you through the material in the chapter. You should read the sections of the chapter before coming to class, but you do not need to master it by reading. The problems we do in class will guide you to that mastery. They replace the passive learning of lectures.

Outside of class, you need to do problems for practice. The book provides numerous problems that you can use to practice the skills you learn in class and through your reading. Some of these problems are simple “drill” problems, where repetition will reinforce the content. Others require you to think more analytically, which will deepen your understanding. All three kinds of problems are important.

Problems from the text will be suggested to prioritize the acquisition of important knowledge and skills. Problems from the textbook will form the basis for quizzes to help you stay current on the course material. Please note that all problems in the book should be done: the ones not suggested are also useful, and they have, in the past, also appeared in some form on quizzes and examinations.
Groups
Groups of about four will be formed to work together. Our goal is to have you choose your partners, but we will also be there to help should that be challenging. On Friday, Sept 9, 2022, our third class, please submit the form indicating who you would request as a partner or partners for the problem session. We will have the assignments made by the next class period.

Office Hours
Office hours with Professor Woerpel are planned to be on the 8th floor of Silver (the office if there are only two or three students, a nearby conference space if more students attend). They will be on Thursdays, 1:00-2:00 PM, beginning the week of September 5

If these meetings need to be conducted online for any reason, I will provide a meeting ID for Zoom. You will need to authenticate using your NetID@nyu.edu address to join this meeting.

Periodically, departmental colloquia or other meetings might require the time to be moved, but students will be notified in advance. These hours will be devoted to chemistry. If there are questions of a nature that does not involve chemistry, please make arrangements separately.

Exams
Considering that this course is intended for majors, the examinations will not be the same as for other sections of Organic Chemistry I. The coverage, depth, and schedule will be different. Scores will be curved. We will not have a sense of how the lecture portion of grades will break down until late in the semester when we have sufficient statistics, and knowing a course grade is impossible without getting all of the laboratory grades, which we do not get until the week of Finals. All exams and quizzes will be graded and will count; none will be dropped.

Lecture Grade
Your scores in the lecture portion of the course will account for 75% of the overall grade for the class; laboratory will account for the remaining 25%. Of the lecture portion, the breakdown of points will be:
Quizzes (15 minutes each): 25% total
Two Midterm Examinations (120 minutes): 25% each, 50% total
Final Examination (110 minutes): 25%

Examination Dates
Please note that we will use two of the Friday exam days, whose schedules were set by the Registrar.
Quiz 1: Friday, September 23, 2022
Quiz 2: Friday, September 30, 2022
Quiz 3: Friday, October 7, 2022
Quiz 4: Friday, October 14, 2022
Midterm 1: Friday, October 28, 2022
Quiz 5: Friday, November 11, 2022
Quiz 6: Friday, November 18, 2022
Midterm 2: Friday, December 2, 2022
Quiz 7: Wednesday, December 14, 2022
Tentative Final Examination Date: We have not been given a final exam date or location by the Registrar, but the tentative date is December 21, 10:00 – 11:50 AM
Exam Policy
If you do not submit a quiz, midterm, or final, a score will be recorded as 0 points unless Professor Woerpel is given written documentation that there was a valid reason for you to miss the assignment. In the case of the final examination, an excused student can take the final examination for Organic Chemistry II in a subsequent semester, and that grade will be used to assign a grade. Although effort has been made to avoid time conflicts, in the case of religious holidays conflicting with assignments, please contact Professor Woerpel; NYU’s policies will be followed (http://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-calendar-policy-on-religious-holidays.html). The best policy in all cases is to let Professor Woerpel know as soon as possible, generally before the assignment, so arrangements can be made smoothly. If advance notice is not possible, please arrange for the excuse within three days of the date the assignment occurred. Exams are comprehensive and closed book. Plastic molecular models are permitted…and encouraged.

Regrade Policy
Those of us who grade assignments sometimes make mistakes. If you feel that we have made an error, use the form (available on the course website) to indicate the specific problem you would like us to focus on, and provide a scientific reason why the question should be regraded. Submit all regrades in writing within one week of exam return. Make no marks on your graded paper. Turn the paper and form in to Professor Woerpel. We will look over the entire paper and repair grading errors. Any marks or modifications anywhere on an assignment that is submitted for regrading will be interpreted as academic dishonesty. Refer to NYU’s policy on academic integrity (https://cas.nyu.edu/content/nyu-as/cas/academic-integrity.html) for the definitions, procedures, and consequences associated with academic integrity issues.

Why work in groups
There are many articles to support the benefits of active vs. passive learning. The following article, written by Annie Murphy Paul, a science journalist, summarizes the current thinking: https://www.nytimes.com/2021/06/11/opinion/brain-mind-cognition.html. I underlined some points in the following quote from her article:

“Problems arise when we do our thinking alone - for example, the well-documented phenomenon of confirmation bias, which leads us to preferentially attend to information that supports the beliefs we already hold. … This bias is accentuated when we reason in solitude. Humans' evolved faculty for reasoning is not aimed at arriving at objective truth…; it is aimed at defending our arguments and scrutinizing others’. It makes sense, [the study’s authors write], “for a cognitive mechanism aimed at justifying oneself and convincing others to be biased and lazy. The failures of the solitary reasoner follow from the use of reason in an ‘abnormal’ context” - that is, a nonsocial one. Vigorous debates, engaged with an open mind, are the solution. “When people who disagree but have a common interest in finding the truth or the solution to a problem exchange arguments with each other, the best idea tends to win,” they write....”

I encourage you to set up outside meetings (Zoom would be safest) to discuss problems outside of class. This strategy may be particularly helpful in cases where one does not finish all the problems or when one wants to discuss the posted answers.

Privacy and Respect
I am sure that there are numerous legal issues related to these topics, but common sense should be useful guidance. We will consider our class as a group of colleagues, and we will treat each other respectfully as fellow professionals.
I have spent considerable time and effort preparing your course materials. You should treat that material as confidential. You are not to share any of the course content with anyone who is not enrolled in this class.

**Safety in the Classroom**
We will abide by NYU’s policies regarding health and safety to reduce the possibility of spreading the coronavirus (https://www.nyu.edu/life/safety-health-wellness/coronavirus-information.html). Please be aware that this information is changing, so make sure that you have the most recent information.

The procedure for meetings and indoor events described on the following site, will be adopted: https://www.nyu.edu/life/safety-health-wellness/coronavirus-information/campus-life/events.html). Appropriate masks must be worn at all times over the mouth and nose (https://www.nyu.edu/life/safety-health-wellness/coronavirus-information/safety-and-health/protective-equipment.html), and note that there will be no eating or drinking in the classroom. In the past, any non-vaccinated person was required to be socially distanced by six feet from others.

If you are not feeling well, please do not come to class (https://www.nyu.edu/life/safety-health-wellness/coronavirus-information/safety-and-health/symptoms-of-covid-19.html#stayHome). You will have access to all of the course materials, so you will not be missing any content. All that you will miss would be the interactions with your peers while you work the problems. Please feel free to generate your own Zoom meetings with your peers to discuss chemistry with them. In fact, I encourage working together outside of class.

I am obligated to ensure compliance. I will ask any violators of these policies to modify their behavior to be in compliance but I will follow other procedures if non-compliance is repeated (https://www.nyu.edu/life/safety-health-wellness/coronavirus-information/safety-and-health/compliance-with-safety-and-health-rules.html).

**Other Policies**
It appears to me that the withdrawal date for Fall 2022 will be December 5, 2022, but you are responsible for checking that this date is correct and consulting with an academic advisor. After this date, students will have to petition their Dean for a late withdrawal. The same date appears to be the date for conversion to pass/fail option, although you should verify that date as well.