Chemistry 252 (Organic Chemistry II) – Fall 2015  
(Pre-requisite: Grade of C or Higher in Chemistry 251)  
Department of Chemistry & Biochemistry  
Queens College – CUNY  
65-30 Kissena Blvd., Flushing, NY 11367

Lecture & Recitation – Tuesday & Thursday (4:20 – 6:10 PM); Remsen 101  
Instructor: Professor Yu Chen, Remsen 206 F  
Email: yu.chen1@qc.cuny.edu  
Tele: 718-997-4132 (Office)  
Office Hours: Tuesday & Thursday 12:15 – 1:00 pm (RE 206)


Ancillary:  
3) Online homework from Sapling Learning (details will be announced in the first lecture on Jan. 28th, 2015).


Accommodations: If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with Dr. Yu Chen immediately.

Examinations: There will be three 100-point mid-term exams, and one 100-point ACS final exam, to be held in class as scheduled below.  
Note*: There is no make-up exam in this course.  
*The final exam will be the American Chemical Society Organic exam. The study guide can be purchased for $21 on-line at http://examsinstitute.3dcartstores.com.

Grades: The online homework from Sapling Learning is counted as 10% in the final grade. The lowest grade of the four exams is counted as 15%; and each of the rest three exams is counted as 25% in the final grade.  
*If a student is ill on a scheduled exam day and cannot take the exam, he/she should provide a medical doctor’s note to Dr. Chen immediately after he/she recovers. Each of the rest three exams he/she takes is counted as 30% in the final grade together with 10% online homework grade.

Grading Scale: ≥ 97 (A+); 90-97 (A); 85-89 (A-); 81-84 (B+); 77-80 (B); 73-76 (B-); 69-72 (C+); 64-68 (C); 60-63 (C-); 50-59 (D); < 50 (F).
**General Guidelines:** You must attend all class examinations and laboratory sessions. In case of an emergency that you are unable to attend a class examination or a laboratory session, a legal valid proof of absence must be presented. In the event that you are unable to furnish a valid proof of absence within reasonable time periods, a zero grade will be assigned for the examination. The use of cell phones is strictly NOT permitted during the class and examinations. You must be able to use Blackboard for accessing the course materials. It is strongly recommended that you use Queens College email account for effective communication with the instructor. Any other specific information regarding the course will be provided by the instructor during the first lecture, scheduled on Aug. 27th, 2015.

**Schedule of Classes and Examinations:**

1. Chapter 15 (McMurry) / Chapter 16 (Baker-Engel) – Benzene and Aromaticity – Aug. 27th (Thur., 2 hrs), Sept. 1st (Tue., 1 hr)
2. Chapter 16 (McMurry) / Chapter 16 (Baker-Engel) – Chemistry of Benzene: Electrophilic Aromatic Substitution – Sept. 1st (Tue., 1 hr), Sept. 3rd (Thur., 2 hr)
3. Chapter 9 (McMurry) / Chapter 15 (Baker-Engel) – Alkynes: An Introduction to Organic Synthesis – Sept. 8th (Tue., 2 hr), Sept. 17th (Thur., 2 hr)
4. Chapter 14 (McMurry) Chapter 15&25 (Baker-Engel) – Conjugated Compounds and Ultraviolet Spectroscopy – Sept. 24th (Thur., 2 hrs), Sept. 25th (Fri. as Tue. 2hrs);
   **Review of Chapters 14-16 and 9, Problem-Solving – Sept. 29th (Tue., 2 hrs)**

First Mid-term Examination – Chapters 14, 15, 16, and 9 – Oct. 1st, (Thur., 2 hrs)

5. Chapter 12 (McMurry) / Chapter 17&25 (Baker-Engel) – Structure Determination: Mass Spectrometry and Infrared Spectrometry – Oct. 6th (Tue., 2 hr), Oct. 8th (Thur., 1 hr);
6. Chapter 13 (McMurry) / Chapter 17 (Baker-Engel) – Structure Determination: Nuclear Magnetic Resonance Spectroscopy – Oct. 8th (Thur., 1 hr), Oct. 13th (Tue., 2hr);
7. Chapter 19 (McMurry) / Chapter 19 (Baker-Engel) – Aldehydes and Ketones: Nucleophilic Addition Reactions – Oct. 15th (Thur., 2hr), Oct. 20th (Tue., 2 hr)
8. Chapter 20 (McMurry) / Chapter 21&22 (Baker-Engel) – Carboxylic Acids and Nitriles – Oct. 22nd (Thur., 2 hrs), Oct. 27th (Tue., 2hrs);
   **Review of Chapter 12, 13, 19 and 20, Problem-Solving – Oct. 29th (Thur., 2 hrs)**

Second Mid-Term Examination – Chapters 12, 13, 19 and 20 – Nov. 3rd (Tue., 2 hrs)

9. Chapter 21(McMurry) / Chapter 22 (Baker-Engel) – Carboxylic Acid Derivatives: Nucleophilic Acyl Substitution Reactions – Nov. 5th (Thur., 2 hr), Nov. 10th (Tue., 1 hr);
10. Chapter 22 (McMurry) / Chapter 23 (Baker-Engel) – Carbonyl Alpha-Substitution Reactions – Nov. 10th (Tue., 1 hr), Nov. 12th (Thur., 2 hrs);
11. Chapter 23 (McMurry) / Chapter 23 (Baker-Engel) – Carbonyl Condensation Reactions – Nov. 17th (Tue., 2 hr), Nov. 19th (Thur., 2 hr),
12. Chapter 24 (McMurry) / Chapter 20&27 (Baker-Engel) – Amines and Heterocycles – Nov. 24th (Tue. 2hr); Dec. 1st (Tue., 2 hr)
   **Review of Chapters 21-24, Problem-Solving – Dec. 3rd (Thur., 2 hrs)**
**Third Mid-Term Examination – Chapters 21-24 – Dec. 8th (Tue., 2 hrs)**

13. Introduction of Chapter 25 (McMurry) / Chapter 24 (Baker-Engel) – Biomolecules: Carbohydrates and Chapter 26 (McMurry) / Chapter 26 (Baker-Engel) – Biomolecules: Amino Acids, Peptides, and Proteins – Dec. 10th (Thur. 1 hr)

**Review Session for Final Examination, Problem-Solving – Dec. 10th (Thur. 1 hr)**

**FINAL EXAMINATION – Chapter 1-24 (McMurry) – Date: TBA**

*: A thirty minute recitation will be held in class after the lecture of each chapter.

**FROM: Sapling Learning - Organic Chemistry Question Sets**

Sapling's chemistry questions are delivered in a web browser to provide real-time grading, response-specific coaching, improvement of problem-solving skills, and detailed answer explanations. Dynamic answer modules enable one to interact with 3D models and figures, utilize drag-and-drop synthetic routes, and draw chemical structures - including stereochemistry and curved arrows. Altogether, Sapling is cheaper than a tutor, provides more value than a solutions manual, and goes beyond a mere assessment exercise to give a learning experience.

We will be using Sapling Learning for graded homework. To get started:

1. Go to [http://saplinglearning.com](http://saplinglearning.com) and click "US Higher Ed" at the top right.
2. a) If you already have a Sapling Learning account, log in and skip to step 3.
   b) If you have a Facebook account, you can use it to quickly create a SaplingLearning account. Click the blue button with the Facebook symbol on it (just to the left of the username field). The form will auto-fill with information from your Facebook account (you may need to log into Facebook in the popup window first). Choose a password and timezone, accept the site policy agreement, and click "Create my new account". You can then skip to step 3.
   c) Otherwise, click "create account". Supply the requested information and click "Create my new account". Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.
3. Find your course in the list (listed by subject, term, and instructor) and click the link.
4. Select your payment options and follow the remaining instructions.
5. Work on the Sapling Learning training materials. The activities, videos, and information pages will familiarize you with the Sapling Learning user environment and serve as tutorials for efficiently drawing molecules, stereochemistry, etc. within the Sapling Learning answer modules. These training materials are already accessible in your Sapling Learning course.
6. • Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments.
   • During sign up - and throughout the term - if you have any technical problems or grading issues, send an email to [support@saplinglearning.com](mailto:support@saplinglearning.com) explaining the issue. The Sapling
support team is almost always more able (and faster) to resolve issues than your
instructor and TAs.
• To optimize your Sapling Learning experience, please keep your internet browser and
Flash player up to date and minimize the use of RAM-intensive programs/websites while
using Sapling Learning.