

Course Description

A continuation of CHM 250 with an emphasis on functional group chemistry and bioorganic chemistry. By the end of the two-semester sequence IR and NMR analysis are discussed in detail in conjunction with classical methods of structural determination.

This is an **in-person** course, and your attendance is required. The course also includes significant online elements, such as online quizzes and assignment submissions. Students will need an internet-capable device with a reliable internet connection and a CUNY Brightspace account for the course. Please make sure that you have the email address that you truly access frequently in your Brightspace account profile so that you will receive course-related notifications in a timely manner. If you need help with Brightspace or other technology required for the course, please email: helpdesk@csi.cuny.edu or visit [CSI help desk](#).

Learning objectives

- Students will learn and understand concepts of organic molecules, which include major mechanisms, structures, properties, characterizations, reactions and nomenclatures.
- Students will develop the ability of predicting the results of reactions, identifying principles that correlate structure and of organic compounds.
- Students will learn and be able to apply the concept and strategy of organic synthesis.
- Students will leave with a better appreciation of the logic of creative sciences.

Instructor Dr. Shi Jin Email: shi.jin@csi.cuny.edu

Office hours: 10-10:59 am Monday, 3:30-4:30 pm Tuesday @6S-234 and 8-8:59 pm EST/EDT on Sunday virtually on Zoom. To join my virtual office hours on Sunday, click [here](#) or access the integrated “Zoom” session of our course. (Click on the “Zoom” widget on our course visual table of contents, followed by clicking on the “Zoom – CSI” link). If you would like to attend one of my *in-person* office hours **remotely**, please be sure to email me in advance.

All questions are welcome, in-person or by email. If you are sending me multiple pictures via email, please rotate them accordingly and put them in the intended order into a single Adobe pdf or Microsoft PowerPoint file so that I can directly read the content without rotation. Your email will be addressed within one business day (usually much sooner). Note that if your email is purely about course materials, I may respond it in the form of an announcement or during a live lecture (to benefit all students).

Lecture

Time: 8:00 – 9:55 am EST/EDT on Mondays and Wednesdays (First class: January 27, final class: May 14)

Location: 6S-138

Texts

Organic Chemistry 10th Edition, by F. Carey, ISBN# 978-0073511214.
Solutions Manual for Organic Chemistry, by F. Carey, 10th Edition, ISBN# 978-1259636387.

Safety glasses and a lab coat for the laboratory.

Attendance

This is an in-person course, and your attendance in person is mandatory. Online access/recordings of this course are provided on an 'as is' basis. You are required to sign the attendance form distributed in class. A grade of 'WU' may be assigned to a student who is absent for more than 15% of classroom hours (four class meetings for this course).

Students will need the instructor's permission to attend the class remotely. Any remote attendance without the instructor's permission will be considered an absence.

Grading

Final Exam:	22.5 pts
Regular Exams:	36 pts
Quizzes:	10 pts
Homework:	6 pts
Signature page submission:	0.5 pts
Lab:	25 pts
Total:	100 pts

No makeup exams, quizzes or labs will be given.

The grading policy in the laboratory section will be explained by your laboratory instructor.

Your letter grade of the course will be assigned based on your overall course score (rounded to the nearest whole number) according to the following cutlines:

Course score	Letter Grade	Course Score	Letter Grade
90+	A	65-69	C+
85-89	A-	60-64	C
80-84	B+	55-59	D
75-79	B	0-54	F
70-74	B-		

Final Exam (22.5 pts)

The final exam will be a cumulative in-person exam, covering all topics throughout the semester. You will be allowed to bring a one-page self-prepared cheat sheet. Double-side is allowed, the sheet cannot exceed letter size (8.5X11 inches). Your name must be on your cheat sheet.

Exams (36 pts)

There will be five regular in-person exams, each lasting about 1 hour, scheduled during regular class hours. The tentative exam dates are:

Exam 1:	Mon, 2/24	Exam 2:	Mon, 3/10
Exam 3:	Mon, 3/24	Exam 4:	Mon, 4/28
Exam 5:	Mon, 5/12		

I will drop the lowest exam score for you. If you miss an exam, it will be counted as the drop.

Quizzes (10 pts)

There will be one online quiz each week. All quizzes are open-book, but you must complete a quiz independently. *The first quiz, covering the syllabus, will take place during the first class meeting on January 27.* Quizzes will always start at 9:00 AM, typically during Wednesday classes. Quizzes can be accessed by clicking on the “Quizzes” link on the course navbar. Usually, you will have 6 minutes to work on four to five multiple-choice questions. You are advised to start the quiz as soon as it is available, as the quiz will be automatically submitted once the allowed time is up. In other words, if you start a quiz late, you will lose time for the quiz.

I will drop four lowest quiz scores for you. No additional adjustments/accommodations will be made for absences (for any reason)/technical difficulties. The followings are a few suggestions to minimize the chance of having a technical difficulty:

1. Be sure to have your Brightspace and CSI Wi-Fi account ready before the first quiz.
2. Use “CSI-Student” instead of “CSI-Guest” to connect to CSI Wi-Fi.
3. If you have a Wi-Fi connection issue (unrelated to your Wi-Fi account credential issue) in the classroom, please report immediately to your instructor so it can be resolved ASAP.
4. Take the practice quiz several times to familiarize yourself with the online quiz-taking process.

Homework (6%)

Timely completion of homework assignments is required. Some homework problems will appear in exams (often in a modified form). **Your work must be shown for you to receive the credit.** *Late homework submission will be penalized at 0.1 pts per day per chapter.* The homework assignments for a chapter are due on the date when an exam is given on the chapter. For example, Exam 1 (covering Chapter 13 and 14) will be given on February 24, therefore homework assignments for Chapter 13 and 14 are due on February 24.

The completed homework assignments of a chapter could be submitted in the following ways: **(Email submissions will NOT be accepted.)**

1. Electronically using Brightspace assignment submission function,
2. in-person to the instructor or chemistry department office.

You are strongly encouraged to submit your completed assignments as early as possible so that I may address some mistakes during a lecture. If you prefer to

submit homework assignments electronically, you can start the submission process by clicking “Assignment” link on our course Navbar. Each submission must be a **single file**. The accepted file formats are: pdf, ppt, pptx, doc and docx. Please make sure that each image is rotated properly so that a reader can directly read without rotating. In addition, all images should be arranged into the correct order. Penalty will be applied as shown below for those HW assignment submissions that do not meet the requirements:

- a. If any page is not legible due to out-of-focus/low resolution, a penalty of 0.1 points applies and a resubmission will be required.
- b. A penalty of 0.1 points will be applied to a submission if any pages are not in the correct orientation.
- c. A penalty of 0.1 points will be applied to a submission if any pages are not in the correct order.
- d. A penalty of 0.2 points will be applied to a submission that meets neither orientation nor order requirement.

Signature page submission 0.5%

1. After reading the syllabus, print the “students agreement” page, print your name, sign and date it.
2. You have two options for submitting the signed page: you can either hand the physical paper form to your instructor, or you can upload it electronically on our course website via Brightspace.

To submit electronically, please follow these steps:

- a. Scan/photograph the page into a computer file.
- b. Submit the file as an assignment, which can be accessed by clicking on “Assignments” link on our course Navbar by the deadline. The accepted file formats are: pdf, jpg/jpeg, png, tif, gif, ppt, pptx, doc and docx.
3. The timely submission of the properly dated and signed student agreement page (at the end of this syllabus) is required before you can take any exam.
4. No points for a late submission. It will be due on February 24 at 8:00 am.

Academic Honesty

You must work independently on your quiz or exam. Students who receive or give any help during a quiz or examination are considered cheating and will automatically receive a grade of F for the course.

For all online CHM 256 quizzes, the following rule apply:

You will complete a quiz independently. The use of all resources that don't involve another person (except your instructor) is allowed.

For in-person exams, the following rules apply:

1. **A photo ID is required upon request.**
2. No student is permitted to use anything other than the distributed test sheets and pens/pencils, except with the express permission of the instructor.

3. All electronic devices (including but not limited to: cellular phones, smart watches, laptop and tablet computers) must remain powered off during an exam. A student is considered cheating if he/she is found using an electronic device during an exam.
4. No one is allowed to leave the classroom during an exam.
5. A student can submit his/her test 30 minutes after an exam officially starts.
6. A student will not be allowed to take an exam if he/she is late for 30 minutes or more. The student will receive a zero on the exam.
7. All students must sign the exam sign-out sheet after completing an exam.

Withdraw Policy

According to CSI's Spring 2025 Calendar, the last day to officially withdraw from this course is April 1, 2025.

Students Seeking for Accommodations

- Students seeking accommodations or academic adjustments for disability should contact CSI's Office of Accessibility Services (OAS) which is located in 1P, 101 and reachable at ACCESS@csi.cuny.edu, where our colleagues are more than happy to provide services.
- Students seeking accommodations or academic adjustments for pregnancy, childbirth or related medical conditions should contact CSI's Office of Accessibility Services (OAS) which is located in 1P, 101 and reachable at ACCESS@csi.cuny.edu, where our colleagues are more than happy to provide services.
- Students seeking accommodations or academic adjustments based on status as a victim of domestic violence, sex offense, or stalking should contact CSI's Department of Institutional Equity and Title IX which is located in 1A, 205 or via email at IETitleIX@csi.cuny.edu where Tara Mastrangelo, Director of Institutional Equity and Title IX would be more than happy to assist.
- Students seeking religious accommodations should contact Danielle Dimitrov, Esq., Dean of Students, located in 1A-401 or via email at Danielle.Dimitrov@csi.cuny.edu or phone at 718-982-2335. The Dean of Students and the student will engage in an interactive process with the goal of finding an acceptable accommodation. Consistent with New York State Education Law § 224-a, students who are absent from school because of a religious belief will be given the equivalent opportunity, without any additional fee charged, to register for classes or make up any examination, study or work requirements missed because of such absence on any particular day or days. Dean Dimitrov looks forward to working with all students and faculty members in this process.

Course Schedule

The following is a tentative outline of the lecture schedule for CHM 256. It is strongly recommended to read the corresponding part of the textbook before a class to prepare. Since every later chapter is built upon the foundation of earlier chapters, it is imperative to get a good start and not fall behind at the beginning.

Date	Topic/Reading	Assignment
1/27, 2/3, 5	Electrophilic and Nucleophilic Aromatic Substitution /Chapter 13	Chapter 13 HW assignments
2/5, 10, 18	Spectroscopy /Chapter 14	Chapter 14 HW assignments
2/18, 19	Organometallic Compounds /Chapter 15	Chapter 15 HW assignments
2/24		Signature page due
2/24	Exam 1 (Chapter 13, 14)	HW assignments for Chapter 13 and 14 due on February 24
2/24, 26, 3/3	Alcohols, Diols, Thiols and Phenols /Chapter 16 and 23	Chapter 16 and 23 HW assignments
3/5, 6, 10	Ethers, Epoxides, and Sulfides/Chapter 17	Chapter 17 HW assignments
3/10	Exam 2 (Chapter 15, 16, 23)	HW assignments for Chapter 15, 16 and 23 due on March 10
3/10, 12, 17	Aldehydes and Ketones: Nucleophilic Addition to the Carbonyl Group/Chapter 18	Chapter 18 HW assignments
3/19, 24	Carboxylic Acids /Chapter 19	Chapter 19 HW assignments
3/24	Exam 3 (Chapter 17, 18)	HW assignments for Chapter 17 and 18 due on March 24
3/26, 4/2, 7	Carboxylic Acid Derivatives: Nucleophilic Acyl Substitution/Chapter 20	Chapter 20 HW assignments
4/9, 21, 23	Enols and Enolates /Chapter 21	Chapter 21 HW assignments
4/28	Exam 4 (Chapter 19, 20)	HW assignments for Chapter 19 and 20 due on April 28
4/28, 30, 5/ 5	Amines /Chapter 22	Chapter 22 HW assignments
5/7, 12, 14	Carbohydrates/Chapter 24	Chapter 24 HW assignments
5/12	Exam 5 (Chapter 21, 22)	HW assignments for Chapter 21 and 22 due on May 12
HW assignments for Chapter 24 due on the final exam day.		

NOTE: Not every chapter of the book will be covered to the same extent. Certain topics will be emphasized, others will not be discussed or just briefly.

Homework Assignment for CHM 256

It is essential that homework assignments are done conscientiously since they contribute greatly to an understanding of the course material. It is better to do the homework problems by writing them out in detail than scanning them all superficially. It is recommended that you work on those in-chapter HW problems (they are relatively easier than end-of-chapter problems) as early as possible after the corresponding sections have been covered in the classroom so that what you learned in the classroom can be solidified by solving HW problems. Some of HW assignment problems will appear in an exam.

Text: Organic Chemistry, 10th Edition, F. Carey

Chap 13	1, 3, 5, 6, 7, 9-13, 16-19, 22-24, 26, 33 (a-f, h-o, q, r), 35, 37, 39, 40, 42 (c, e), 44, 47, 52, 53, 55 (c, d, g, h), 56, 59
Chap 14	1, 3 - 12, 16, 18, 20, 22-26, 30, 32 (a, b, d), 33-36, 40-42, 48-50, 58
Chap 15	1, 2, 4, 5, 12, 22, 26, 27, 29
Chap 16	1, 2, 3, 5, 7, 8, 9, 10, 12, 13, 15, 20, 22, 23, 24, 26, 27, 29, 31, 36, 37, 40
Chap 17	2, 3, 5, 7, 10, 17, 20, 21, 26, 27, 28, 32, 34, 36, 38, 39, 40, 42, 44, 45
Chap 18	1, 2, 5, 8, 11-14, 16-20, 30 (a-d), 31, 32 (a-e, g), 33-37, 39, 41, 42 (a-f), 43-50
Chap 19	1, 4, 7, 8, 9, 11, 12, 15, 16, 18, 19, 20, 25, 29, 31, 32
Chap 20	1, 2, 4-8, 10, 12, 14-23, 25-27, 31, 32, 35, 37, 42, 43, 45 (a-d), 46, 48-50
Chap 21	2, 4, 6, 7, 9-17, 19-29, 32, 33, 36, 38, 44, 46-50, 52, 53 (a-c), 54, 55, 57
Chap 22	2- 4, 6, 11-15, 17, 18, 29, 30, 35, 36, 37, 39, 41, 42, 45, 47, 48, 52, 54, 59
Chap 23	4, 7, 8, 9, 13, 15, 16 (a, b, e, f, g, I), 30, 35(a)
Chap 24	1-7, 9, 10, 12, 13, 15, 17, 19-22, 24

Student's Agreement

I have read the syllabus for CHM 256 Spring 2025 and I agree to abide by all policies and requirements stated in the syllabus.

Print Name: _____

Signature: _____

Date: _____