CHEM 222 - ORGANIC CHEMISTRY I Fall 2020

Instructor: Dr. Manashi Chatterjee
Email: chatterjeehunterchemistry@gmail.com

Lecture: Synchronous Online via ZOOM (Required)
Tuesday & Friday
1:10 - 3:00 PM
ZOOM Link will be posted on BB Announcement

Recitations: Synchronous Online via BB Collaborate from Recitation BB link (Required)
Please join the Recitation Group that was assigned to you during registration.

Office Hours: Synchronous Online via BB Collaborate from main course BB
Tuesday
4:00 pm – 6:00 pm

Recitation instructor office hours will also be held via BB Collaborate (Recitation BB page), please join office hours regularly. Recitation Instructor Office Hours Schedule will be posted on BB Announcement and BB Collaborate link with be shared on main course BB.

During office hours, the recitation instructors and I will be working with the group of students who join the sessions. Please drop by even if you do not have any questions and learn from questions that are being discussed with your peers.

Recitation Instructors:

Francesca Dorwart: Francesca.Dorwart23@myhunter.cuny.edu
Jessica Malcolm: Jessica.Malcolm19@myhunter.cuny.edu
Mohamed Nur: MOHAMED.NUR87@myhunter.cuny.edu
Dr. Manashi Chatterjee: chatterjeehunterchemistry@gmail.com

Wiley Plus Student Partner: Peer Teaching Assistants will help you with any Wiley Plus related question.

hunterorganicchemistrywileyhelp@gmail.com

Textbook and Course Materials:

1. **David Klein, Organic Chemistry, Third Edition. A complete online version of the textbook is included with WileyPLUS.**
2. **"i-clicker reef",** which will be used for in-class discussions and quizzes.
3. **WileyPLUS online Homework** - register from BB, see separate announcement on blackboard for instructions on how to purchase Wiley Plus.
4. A set of *molecular models* is highly recommended. It is often difficult for students to learn how to visualize a molecular structure in three dimensions. Models will almost certainly help. If you want to take a look at models before buying some, come by my office.
   Type A: These can be purchased at the bookstore - MOLECULAR VISIONS™ Model Kit [MolecularVisions.com] from the Darling Model site OR from Amazon.com

KIT #1B ISBN 978-09648837-3-4 -In a Plastic Bag --Organic, I OR
KIT #1 ISBN 978-09648837-1-0 -Plastic Box -- Organic, Inorg

Type B) **http://hgs-model.com/model/index.html**

Type C) MolyMod **Organic (Student) Set Article Ref: MMS-008 (from Amazon or ebay)**

Note: CHEM 223LB - ORGANIC CHEM I (LAB) *is a parallel but separate course. You must also enroll in 223 RC if you are enrolled in lab. For information on Organic I lab Recitaion: Please contact Alison Domzalski*
ad2459@hunter.cuny.edu
If you have any questions, please contact the lab course coordinator, Dr. Manashi Chatterjee.

Website:
Materials related to this course, including this syllabus, announcements, course documents, exam keys, and grades will be posted on Blackboard.

http://www.hunter.cuny.edu/it/blackboard

Student Helpdesk
studenthelpdesk@hunter.cuny.edu P: 212-650-3624 F: 212-772-5799 **Hunter North, Room 303**

https://hunter.cuny.edu/students/

Be sure to check and update your email address associated with Blackboard. ***It is imperative that you check your Hunter email as well as Blackboard regularly.***

Policy on Testing Software use during Exams and Quizzes:

Proctoring software, which may include the use of browser lockdowns and cameras (Zoom), will be used for examinations in this course.

Online Exams and Quizzes will be administered through Wiley Plus Online HW (using Respondus Lockdown browser which is integrated with Wiley Plus).

Students will be monitored using Zoom. You will need a second device (phone or another computer) that will run Zoom (camera should be turned ON during the entire exam duration).

Please note the Lockdown browser does not work on iPads and devices Chrome OS.

Policy on Recording Remote Lecture Class & Review sessions:

Zoom Lectures (or BB Collaborate sessions) will be recorded & posted whenever possible (Lectures will not be recorded if internet connection is weak).

Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of Creating a record for students enrolled in the class to refer to, including those Enrolled students who are unable to attend live.

If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image.

Likewise, students who unmute during class and participate orally are agreeing to have their voices recorded.

If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live.

Policy on expectations for Cameras & use Audio in their Synchronous Sessions during Remote Recitation Class and Office Hours:

Please be aware that the recitation instructors in this course will require that the Camera and Audio be on during class sessions to help student engagement.

Other Resources:

The Skirball Science Learning Center is fully online.
https://library.hunter.cuny.edu/skirball-science-learning-center

Prerequisites: "C" or better in CHEM 104 or equivalent or permission of the instructor.
It is suggested that you review your general chemistry notes, especially topics on periodic trends, atomic structure and acids and bases at the beginning of the course.

A student taking a four credits course, that meets for four hours a week, should expect to spend at least an additional eight hours a week on coursework outside the classroom.

Course Objective:

CHEM 222 is the first semester of organic chemistry and is designed to follow a one-year course in general chemistry. It assumes a general knowledge of atomic structure, chemical bonding, acids/bases, reaction stoichiometry, equilibria, transition states, and free energy.

Goals:
The student will develop an understanding of-
1. Bonding and three-dimensional structure of carbon based compounds.
2. Nomenclature of organic compounds
3. Organic chemical reactions and their mechanisms.

OBJECTIVES: At the end of the class the student will be able to-
__ Demonstrate knowledge of the hybridization of the carbon atom

__ Demonstrate knowledge of the three dimensional nature of carbon based compounds
__ Identify and name organic compounds, using the proper nomenclature
__ Draw structures (condensed and structural) of compounds
__ Demonstrate an understanding of chirality and stereochemistry
__ Demonstrate a knowledge of free radical reactions
__ Demonstrate a knowledge nucleophilic substitution reactions
__ Determine which substitution mechanism is operating (S_N1 or S_N2)
__ Demonstrate a knowledge of elimination reactions
__ Determine which elimination mechanism is operating (E1 or E2)
__ Predict the products of reactions
__ Propose a reaction scheme to produce desired product
__ Analyze how stereochemistry affects reaction
__ Apply how IR spectroscopy and Mass spectrometry can be used for structure determination

Most biological processes involve organic chemistry; understanding most biological processes at the biochemistry level requires knowledge of organic chemistry. While the second semester course (CHEM 224) will focus much more on synthetic chemistry and on the organic chemistry of biological processes, CHEM 222 will provide you with a strong introduction to the basic principles of organic chemistry related to process involved in life and society.

- •How to name compounds and how to "build" compounds from their names?
- •How to recognize and predict common bonding patterns; how to predict molecular structure from a formula?
- •How to predict the shapes of organic molecule, including those capable of existing in multiple forms (conformations)?
- •The properties, importance, and reactivity of some common functional groups: alkanes, alkenes, alkynes, alkyl halides, aromatic compounds, alcohols.
- •How to predict whether reactions will occur and how fast they might occur; reaction transition states; reaction intermediates such as carbocations and free radicals?
- •The fundamentals of organic synthesis (how to construct larger, more complex structures through controlled application of organic reactions).
- •The importance of stereochemistry.

Overall, the study of organic chemistry teaches as skill set and a logical pattern of thinking that is prized in many fields.

Grading: Grades will be based on a total of 730 points

Clicker questions	70 pts	(total clicker points will be scaled to 70 pts)
Electronic Homework (WileyPLUS)	70 pts	(total Online HW points will be scaled to 70 pts)
Quiz (3 * 20)	60 pts	
Recitation Participation	30 pts	
Midterms (3 x 100)	300 pts	
Comprehensive Final	200 pts	

Projected letter grade cut-offs: Grades will be based on the Hunter College grading scale.

A+:	97.5 - 100%
A:	92.5 - 97.4 %
A-:	90 - 92.4 %
B+:	87.5 - 89.9%
B:	82.5 - 87.4%

B-: 80 - 82.4%
C+: 77.5 - 79.9%
C: 70 - 77.4%
D: 60 - 69.9%
F: 0.0 - 59.9

http://www.hunter.cuny.edu/onestop/repository/files/registrar/faculty-pdfs_reg/gradingsystem_reg.pdf

Exams & Quizzes: ***Online Exams and Quizzes will be administered through Wiley Plus Online HW (using Respondus Lockdown browser). Students will be monitored using Zoom.***

- Exams will draw from lecture, text, and assignments/online HW, recitation problems, practice problems to name a few. Molecular models may be used during exams. No other notes, materials, or websites are permitted. No communication of any sort is permitted. **Recitation Quiz will be based on any material covered in class and recitation till the day before you take your quiz. Practice exams will be posted on BB.**
- Exam Dates and Quiz Weeks are posted on the Course Schedule link.
- Exams & Quizzes will be proctored using Zoom. You will need your camera's on during the entire exam and Quiz durations. You will need two devices (2 computers or computer and a phone).
- Missed Exams: **NO MAKE UP EXAMS**: In any class this large, there will be emergencies that cause students to miss exams. In the event of a verified emergency (medical or death in family), the student is to contact Dr. Chatterjee by **email and provide documents.** If, in my judgment, the excuse is valid, ***I will substitute your final exam percentage for the test grade.*** If you miss **more than one test you will have to withdraw**. I will require you to bring a Proof to document your absence for any missed exam. IF YOU MISS THE FINAL FOR A VALID REASON – YOU WILL EARN GET AN "INCOMPLETE" IF YOU MAINTAINED A PASSING GRADE OR BETTER PRIOR TO FINAL IN ALL EXAMS ADMINISTERED IN COURSE. YOU WILL HAVE TO TAKE THE MAKE UP WITH THE INSTRUCTOR WHO WILL BE TEACHING THE FOLLOWING SEMESTER. IF YOU HAVE HAD A FAILING GRADE TILL THE FINAL AND MISSED THE FINAL EXAM YOU WILL EARN - F OR A NCr.
- **Any sharing of questions with peers or tutors will be treated as academic dishonesty.**
- There will be no re-grade on any exams.

Clicker Quizzes:

The PRS i-clickers (Reef) will be used to facilitate classroom discussion and group learning as well as to administer short quizzes during many/most lectures on materials presented in the previous lectures or current lecture.
Please register your clicker on the clicker website. Announcement (steps to register) will be posted on BB.

- During the first AND second lecture, we will use the i-clickers for several short exercises to make sure everyone is ready to use the system. Beginning in the THIRD LECTURE, we will have clicker questions in most lectures, AND THEY WILL COUNT TOWARDS CLICKER POINTS.
- There are no make-ups for missed clicker or if your clicker is not working and you can not join the class.
- Misrepresentation of identity on a clicker quiz is academic dishonesty.

- Points you earn over the semester will be scaled to 70 points. I will scale so that you can miss 10 % of the clicker questions and still earn full points. This will take care of the day you miss class or your clicker did not work.
- i-clicker Reef information is posted on BB Announcement.

Electronic Homework:
Information to purchase WileyPLUS code has been posted on BB as an announcement.

WileyPLUS will be a useful practice/study tool, which will be used as an additional learning resource along with Klein's text. Homework will be scaled to 70 pts. You will be able to attempt each question 2 times without penalty and 3 times with a % deduction. You are responsible for completing the assignments by the deadlines (these will show up on the online homework link). You may need to get a little practice using MarvinSketch or the embedded drawing software. Please do not leave to work on the online HW till the due date. The last HW will be due during the last week and will be part of your grade. **Misrepresentation of identity on an online HW & online Exams (whether you pretending to be someone else or sharing passwords) is academic dishonesty.**
Your overall homework grade will be taken by determining what possible homework points that you earned. That is,
homework grade = (your total homework points/maximum homework points possible) * 70
Some questions may have software problems which your instructor will report to Wiley. Please do not get worked up and spend a lot of time in solving such questions to get to 100%. I will try my best to remove these questions or make an announcement as soon as it comes to my attention. Read instructions carefully: drawing all lone pairs, use correct arrows (radical, resonance, curved arrow) and get help if you miss the first two attempts. **To account for problems that have software issues you will be assigned full points on the HW when you score 90% or above and other scores will be scaled accordingly.**

Recitations: Recitations will focus on problem solving and reviewing material that is being covered in class. **Recitation participation is mandatory.** *We may use unannounced quizzes or activities to determine your participation and preparation during recitation.* **We will have i-Clicker questions or Kahoot during recitations to create active learning environment and measure participation**. You will also take three quizzes during recitations. You must only attend the recitation that you are registered for.

NOTE: Attending all recitations does not guarantee full 30 points. Participation does not mean attending all recitations or raising hands to ask questions. In addition to problem solving during recitation, you may be asked to upload a document on BB at the end of recitation. Your recitation instructor will randomly assign this during recitation or find a way to evaluate your performance. A combination of many factors will determine your level of participation and finally determine your recitation points.

Recitation Participation points assigned at the end of course are non-negotiable for change. Your will lose all bonus points that are assigned during the course if you appeal for a grade change based on recitation participation points.

We encourage students to solve problems on white board (from BB Collaborate) during recitations.

Sec 1R01	9:10 - 10:00AM	Tuesday	West Bldg W217	Jessica Malcolm
Sec 1R02	10:10 - 11:00AM	Tuesday	West Bldg W217	Francesca Dorwart
Sec 1R03	9:10 - 10:00AM	Friday	West Bldg W217	Mohamed Nur
Sec 1R04	10:10 - 11:00AM	Friday	West Bldg W217	Mohamed Nur
Sec 1R05	5:10 - 6:00PM	Thursday	West Bldg W217	Dr. Manashi Chatterjee
Sec 1R06	4:10 - 5:00PM	Thursday	West Bldg W217	Dr. Manashi Chatterjee
Sec 1R07	6:10 - 7:00PM	Thursday	West Bldg W217	Francesca Dorwart
Sec 1R08	7:10 - 8:00PM	Thursday	West Bldg W217	Jessica Malcolm
Sec 1R09	5:10 - 6:00PM	Monday	West Bldg W217	Mohamed Nur
Sec 1R10	7:10 - 8:00PM	Friday	West Bldg W217	Jessica Malcolm
Sec 1R11	4:10 - 5:00PM	Monday	West Bldg W217	Mohamed Nur
Sec 1R12	12:10 - 1:00PM	Tuesday	West Bldg W217	Francesca Dorwart
Sec 1R13	4:10 - 5:00PM	Friday	West Bldg W217	Mohamed Nur
Sec 1R14	5:10 - 6:00PM	Friday	West Bldg W217	Dr. Manashi Chatterjee
Sec 1R15	6:10 - 7:00PM	Friday	West Bldg W217	Jessica Malcolm
Sec 1R16	8:10 - 9:00AM	Tuesday	West Bldg W217	Jessica Malcolm
Sec 1R17	6:10 - 7:00PM	Monday	West Bldg W217	Francesca Dorwart
Sec 1R18	7:10 - 8:00PM	Monday	West Bldg W217	Francesca Dorwart
Sec 1R19	4:10 - 5:00PM	Wednesday	West Bldg W217	Dr. Manashi Chatterjee
Sec 1R20	5:10 - 6:00PM	Wednesday	West Bldg W217	Dr. Manashi Chatterjee

WILEYPLUS Resources from BB (in addition to the Online HW)

Please visit the WileyPLUS Reading resources where you will find the entire textbook online, selected videos, solved problems and ORION Adaptive Learning
Research shows that students who have used ORION for just a few minutes per week have shown improved test scores.

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Review Sessions: Special review sessions (1-2 h) will be arranged before midterms and finals. Location and schedule will be posted on the black board and announced in class.

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Incomplete, C/NCr, Add/Drop, Withdrawal*:* An incomplete (IN) grade will only be considered for a student who has completed the majority of the course and is unable to complete the course due to health reasons, military service, hardship or death in the immediate family. The course will follow standard Hunter College policies and deadlines for add/drop, C/NCr, and withdrawing.

Policy on Incomplete grade: Incomplete (IN) grade may be given if a student has a reasonable chance of passing the course but cannot complete it because of a valid reason. In order to be considered for the IN grade, students need to present verifiable proof.

Policy on CR/NC grade:
See the Hunter College Catalog or visit http://md2.hunter.cuny.edu/webgrade/regmemo.jsp for College grading policy on CR/NCr, INC, WU, etc.

CUNY POLICIES Online courses *are subject to the same CUNY policies as Are in-person courses regarding Academic integrity, the acceptable Use of computer resources, equal opportunity and non-discrimination, sexual misconduct, Workplace violence, domestic violence, and Reasonable accommodations for persons with disabilities.*

Academic Honesty:
Any case involving academic dishonesty (see "Code of Conduct" in *Undergraduate Bulletin*) will result in a **failing grade for the student(s) involved** and will be reported to the Director of Student Judicial Affairs. Any student found cheating will be subject to the penalties stated in the Code of Student Conduct; including, but not limited to, a score of zero on exam, expulsion from the class, or expulsion from the University. If a student is accused of cheating in a lecture course in the chemistry department, the student's case will be submitted to the Office of Student Conduct. If the student is found guilty of cheating on an exam, the student will be given an exam grade of 0 but will be allowed to continue in the course. The student will receive an Academic Sanction. The student's grade will be calculated with the zero and the student will be permitted to pass the **course with the highest grade possible grade of C** (if the student does in fact pass the course.

Misrepresentation of identity on an online HW & online Exams (whether you pretending to be someone else or sharing passwords) is academic dishonesty.

Students with Disabilities:
Accommodations are provided for students who are registered with AccessABILITY Services and make their request sufficiently in advance to take exams and final at the accessibility center.
It is recommended that you take **quiz during recitation** so that you do not miss the later half of the recitation problem solving session, but it is your choice.

AccessABILITY information:
"In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical and/ or Learning) consult the ***Office of AccessABILITY located in Access & Technology Center in Room 300, North Building to secure necessary academic accommodations.*** If you have any questions regarding the Office of AccessABILITY, please contact them by phone at (212) 772-4857, email: accessability@hunter.cuny.edu

You will be **only allowed to take exams and finals at AccessABILITY Center on the same day and time when the CHEM 222 class takes their exam.**

Access & Technology Center Hours of Operation: Location: **Room 300, North Building**

http://www.hunter.cuny.edu/access/services-programs/accesscenter

Important Dates:

https://ww2.hunter.cuny.edu/students/academic-planning/academic-calendar/

Synchronous via ZOOM & BB Collaborate
Chem- 222 Online Course Schedule
Chemical Dynamics and Reactivity: Introduction to Organic Chemistry

Week 0	F	Aug 28	Ch 1	(Review General Chemistry)
Week 1	T	Sep 01	Ch 1	(Review General Chemistry)
	F	Sep 04	Ch 2	(Molecular Representations)
	Monday, September 07 (College Closed)			
Week 2	T	Sep 08	Ch 2	(Molecular Representations)
	F	Sep 11	Ch 14	(IR Spectroscopy Portion)
Week 3	T	Sep 15	Ch 3	(Acids and Bases)
	F	Sep 18	***No Classes***	
Week 4	*T*	Sep 22	Ch 3	(Acids and Bases)
(Quiz I)	F	Sep 25	Ch 4	(Alkanes and Cycloalkanes)
	Monday, September 28 (No Classes)			
Week 5	***T***	***Sep 29***	***Monday Schedule (No Lecture)***	
	F	Oct 02	Ch 4	(Alkanes and Cycloalkanes)
Week 6	T	Oct 06	***Exam-1***	**(Ch-1, 2, 3 and Ch-14-IR)**
	F	Oct 09	Ch 5	(Stereochemistry)
	Monday, October 12 (No Classes)			
Week 7	T	Oct 13	Ch 5	(Stereochemistry)
	Note: Wednesday October 14 - Monday Schedule			
	F	Oct 16	Ch 5	(Stereochemistry)
Week 8	T	Oct 20	Ch 6	(Reactivity and Mechanism)
(Quiz II)	F	Oct 23	Ch 6	(Reactivity and Mechanism)
Week 9	T	Oct 27	Ch 7	(Substitution Reactions)
	F	Oct 30	Ch 7	(Substitution Reactions)
Week 10	T	Nov 03	Ch 7	(Alkenes-Structure and Preparation-Elimination Reactions)
	F	Nov 06	Ch 7	(Alkenes-Structure and Preparation-Elimination Reactions)
Week 11	***T***	***Nov 10***	***Exam-2***	***(Ch- 4, 5, 6 and 7)***
	F	Nov 13	Ch 8	(Addition Reactions of Alkenes)
Week 12	T	Nov 17	Ch 8	(Addition Reactions of Alkenes)
	F	Nov 20	Ch 9	(Alkynes)
Week 13	T	Nov 24	Ch 9	(Alkynes)
	W	Nov 25	Ch 10	(Radical Reactions)
	Note: Wednesday November 25 - Friday Schedule			
	F	Nov 27	***Thanksgiving Holiday***	***(Thr-Nov 26 to Sun-Nov 29)***
Week 14	T	Dec 01	Ch 10	(Radical Reactions)
(Quiz III)	F	Dec 04	Ch 14	(Mass Spectrometry)
	NOTE: Ch-11 will be assigned for self-study			
Week 15	***T***	***Dec 08***	***Exam-3***	***(Ch- 8, 9, 10)***
Week 16	***F***	***Dec 18***	***Final***	**(Comprehensive)**
	Note different time: (11.30 am to 1:30 pm)			

Three quizzes (20 points each) will be held during recitation [Week 4, 8, and 14].
Note all exams and quizzes are cumulative and will require knowledge of previous chapters and general chemistry.

During Quiz Weeks you will take a Synchronous Online Quiz (20 minutes) during your Recitation
Online Exams and Quizzes will be administered through Wiley Plus Online HW (using Respondus Lockdown browser). Students will be monitored using Zoom.

Holidays or No class or Monday/Friday Schedule:

Monday, September 7 (College closed to honor Labor Day)
Friday, September 18 – Sunday September 20 (No Classes)
Monday, September 28 (College closed)
Tuesday, September 29 (Classes follow Monday schedule)
Monday, October 12 (College closed)
Wednesday, October 14 (Classes follow Monday schedule)
Thursday, November 05 (College closed)
Wednesday, November 25 (Classes follow Friday schedule)
Friday, November 27 (College closed)
Thanksgiving Holiday (Thursday-Nov 26 to Sunday-Nov 29)

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Important Dates: (Please confirm the dates on the Hunter college website)

Sep. 1
Last day to drop a full semester course and receive 75% refund
Last day to add a course: Fall registration ends at 11.59 pm

Sep. 8
Last day to drop for 50% tuition refund

Sep.16
First Day of Withdrawal with 'W' Grade (No Refund of Tuition)

Nov. 5
Last Day of Withdrawal with 'W' Grade

This schedule provides a tentative timeline for Fall 2020
Dr. Chatterjee reserves the right to update, modify and make changes as required.
The updated versions will be posted on BB.

Good Luck and Have a Great Semester!!!!!
Please make use of all the wonderful resources that the Hunter College, CUNY has to offer to help you succeed