

Introductory Organic Chemistry I

Syllabus

Course Number SC/CHEM 2020 3.0 Sections ABC
Term Fall
Session 2020-2021
Prerequisites CHEM 1000 3.00 and CHEM 1001 3.00

Course Director Dr. Hovig Kouyoumdjian (Section A)
Office Hours: MF right after the lectures via zoom or by appointment
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Dr. Christine Le (Section B)
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Dr. Derek Jackson (Section C)
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Meeting Times **Sections A and B**
Lectures:
Mondays 1:00 - 2:20 pm, 80 mins, online via zoom
Fridays 1:00 - 2:20 pm, 80 mins, online via zoom
Tutorial:
Fridays 11:30 am - 12:20 pm, 50 mins, online via zoom

Section C
Lectures:
Tuesdays 5:30 - 6:50 pm, 80 mins, online via zoom
Thursdays 5:30 - 6:50 pm, 80 mins, online via zoom
Tutorial:
Fridays 10:30 - 11:20 pm, 50 mins, online via zoom

NOTE: Examinations will be held online.

Laboratory Labs will be administered online and will start the week of September 21 or 28. More details will be outlined below and during the semester.

Learning Tools

Textbook:

Organic Chemistry by L.G. Wade (**NEW** custom edition for York University) will be supplied by the York bookstore. Included is an access code for the solutions manual online. NOTE: The 9th edition of Wade is identical to the new custom edition.

NOTE: The old custom edition of Wade (orange cover) will no longer be supported however recommended textbook problems will be posted on Moodle as a courtesy.

Online Mastering:

The textbook (as sold by the York bookstore) will come bundled with online access to the publisher's website for online activities. We will be using this access in the form of short quizzes throughout the semester (varied time limits). If you purchased the textbook separately or are using a different textbook, you can buy an online access code from the bookstore separately (\$60). You should not pay more than 60 Canadian dollars for this access code. Instructions on how to use the online system will be covered during class as well as on Moodle. The online access code gives you access to the e-textbook. Bookstore website: https://www.bookstore.yorku.ca/site_textbook_landing_page.asp

*Important note: in case there are delays with your textbooks and/or Mastering Chemistry codes, activate your **14-day free access period** by clicking on your Pearson Mastering Chemistry link on Moodle/e-Class. You can then upgrade the account when you receive the code. Your work will not be lost when you upgrade. Here is how:*
https://eclass.yorku.ca/eclass/pluginfile.php/612663/mod_resource/content/11/Moodle_mastering_Temp%20-%20post.pdf

iClicker REEF Polling

Students are expected to obtain a free iClicker account by clicking on the iClicker link on eClass. Make sure to click on your section's link. Specific details are provided on Moodle. After Sept. 22, 2020, polling questions in class will count toward your mark.

Note: You might be tempted to add the course directly via the iClicker app, however that usually causes us multiple issues with transporting your grades, and sometimes it may result in a zero on the iClickers mark, hence we strongly recommend to delete the course added through the app and to re-add it through the iClicker link in eClass.

Molecular Model Kit:

Not required but extremely useful study aid, and strongly encouraged. Molecular model kits are allowed during regular and final exams. The York bookstore will have kits in stock by two different suppliers.

Lab Manual:

You will get your lab manual as a PDF (will be posted on Moodle/e-Class free of charge).

Study load

Organic chemistry in many ways resembles a new language and you cannot avoid quite a bit of memorizing (vocabulary). It is a very intensive course requiring much practice, and to do well, you have to do a lot of writing – write formulas, write equations, so that you can write complex structures quickly. You cannot learn organic chemistry just by reading about it. A conservative estimate for study time is about **5 hours per each lecture, beginning from day one**. It is important to keep up with the lectures, as they often refer to previously discussed material. It is very easy to fall behind and very

difficult to catch up if you do. It is highly recommended that you go over the chapter prior to the lecture!

- Learning Outcomes Upon successful completion of CHEM 2020 3.0, students will be able to:
- Predict hybridization and geometry of atoms within an organic molecule
 - Draw resonance structures for a given compound and assign relative importance
 - Understand trends in Brønsted-Lowry acidity as related to chemical structure
 - Understand bond and molecular dipole moments as related to physical properties
 - Draw organic structures from IUPAC names for a variety of functional groups
 - Draw conformations of various cycloalkanes and predict relative energy states of each
 - Understand stability trends in reactive intermediates such as radical and carbocations
 - Draw accurate representations of organic molecules in three dimensions
 - Understand molecular chirality and other concepts relating to stereoisomerism
 - Draw and predict reaction mechanisms using arrow-pushing depictions
 - Understand a variety of chemical reactions relating to alkenes, alkynes, alcohols and other related functional groups
 - Propose functional group transformations needed to synthesize a target compound

More specific learning outcomes will be provided at the onset of each chapter of material.

Evaluation

Grading scheme for the course (2 options)

Option 1:

Exam 1 (up to 50 min)	5%	Sept. 25, 2020 (Via Mastering Chemistry)
Exam 2 (up to 50 min)	10%	Oct. 9, 2020 (Via Crowdmark)
Exam 3 (up to 50 min)	5%	Oct. 23, 2020 (Via Mastering Chemistry)
Exam 4 (up to 50 min)	10%	Nov. 6, 2020 (Via Crowdmark)
Exam 5 (up to 50 min)	5%	Nov. 20, 2020 (Via Mastering Chemistry)
Exam 6 (up to 50 min)	10%	Dec. 4, 2020 (Via Crowdmark)
Mastering quizzes (best 5 of 6)	5%	Throughout the term
iClickers	6%	Throughout the term
Laboratory (4 labs)	20%	Throughout the term
Final exam (up to 180 mins)	24%	Final exams period (Dec. 9-23)

Option 2:

You could choose not to write the final exam with a condition of **not missing any of the six (6) Crowdmark (CM) & Mastering Chemistry (MC) exams**. The final exam's 24% will be distributed among all six (6) exam (if you miss at least one of the exams, option 2 will NOT be possible. No exceptions!)

Exam 1 (up to 50 min)	7%	Sept. 25, 2020 (Via Mastering Chemistry)
Exam 2 (up to 50 min)	16%	Oct. 9, 2020 (Via Crowdmark)
Exam 3 (up to 50 min)	7%	Oct. 23, 2020 (Via Mastering Chemistry)
Exam 4 (up to 50 min)	16%	Nov. 6, 2020 (Via Crowdmark)
Exam 5 (up to 50 min)	7%	Nov. 20, 2020 (Via Mastering Chemistry)
Exam 6 (up to 50 min)	16%	Dec. 4, 2020 (Via Crowdmark)
Mastering quizzes (best 5 of 6)	5%	Throughout the term
iClickers	6%	Throughout the term
Laboratory (4 labs)	20%	Throughout the term

Pass Requirements: To pass the course you need to have a passing grade on the lecture component (50 % on everything except the lab, so 40% out of 80%) **AND** a passing grade on the lab component (50% on the lab, so 10% out of 20%). Students in lab 99 will have their laboratory component grades transferred from their previous attempt at the course.

Mastering Quizzes Policies

There will be 6 Mastering quizzes in total but only your best 5 will count towards your final grade (to account for illness, technical difficulties, etc.). Time limits may vary slightly depending on the exact content of the quiz but expect to plan 35-45 minutes per quiz attempt. You may attempt each quiz once or twice. If you attempt a quiz twice, you may be presented with different questions. The **average** of your two attempts will be used to determine your quiz mark. If you only attempt a quiz once, then only that mark will be counted.

The marks on individual quizzes will then count as follows:

≥80%:	full quiz credit (1.0% towards final course mark)
60-79%:	half quiz credit (0.5% towards final course mark)
<60%:	no quiz credit

iClickers Policies

In CHEM 2020, 6% of your overall grade in the course will be from the iClicker polling component.

Polling will begin at the start of the course, but will only count for marks after Sept. 22 (the add deadline). This will give you a chance to become familiar with the setup and make sure students who enrol late are not penalized. Until this date passes, you may not see any marks (or percentages) listed when you log in. This is normal.

So technically, starting on the Sept. 24 class (section C) and Sept. 25 class (sections A & B), polling will start to count for marks.

We will drop the lowest two (2) iClickers sessions' grades. Each lecture constitutes one iClickers session (total of 20 sessions between Sept. 22 and Dec 8).

This policy accounts for absences due to **illness, forgotten devices, device malfunctions and dead battery, religious obligations and other unforeseen circumstances**. We will not be accepting documentation for absences related to this course component.

Exam Policies

There will be no makeup exams. If a student misses the regular exam for **any** reason, the weight of the missed exam(s) will be shifted to the final exam (NO exceptions!). **No documentation is required.** Regrading request information will be made available on Moodle/e-Class after each Crowdmark (CM) exam is returned. The course directors reserve the right to regrade the entire exam, with the new mark being final. **If you miss any of the exams, you will automatically be assessed using option 1** in the evaluation schemes presented earlier.

Students who have a conflict with a religious holiday are required to contact their instructors at least two weeks prior to the affected exams to learn how they will be accommodated. Late requests will likely not be accepted for consideration.

Final Exam Policies

The finals are scheduled for Dec. 9-23. The exact day should be announced mid-October.

The final is optional only if you opt for option 2 in the evaluation schemes presented earlier (you can't miss any exams though!) The missed exam policy will be posted on Moodle/e-Class.

Final grade

Faculty of Science approved letter grades

NOTE: Numerical grades are only guides for assigning of final grades. The course director retains the prerogative on how to use numerical grades to assign letter grades. Exam and laboratory marks are made available to students; however a final numerical mark is not disclosed to the student. There will be no extra credit assignments granted.

Notes on Labs

Assessment of the laboratory component of the grade is as outlined in the lab manual. Not submitting the lab report will result in a grade of zero for a particular lab.

All lab reports must be independently produced pieces of work. Please read the last pages of this syllabus for more information.

Mark distribution: Lab 1 (4%), Lab 2 (4%), Lab 3 (4%), lab 5 (8%). Lab 4 won't be offered.

Lab report 5 is nominally due one week after getting administered. Late lab reports will be penalized at the rate of 10% per day including weekends. Students should upload the completed lab reports to two modules: the Turnitin module on Moodle and on the stand-alone web-based module of Crowdmark. Detailed instructions will be provided closer to the date of submission.

Students should use ChemDraw or chemsketch software to generate the chemical structures for lab reports. This software will also be used for CHEM2021 lab reports. It would be ideal if you could download this software as soon as you receive instructions. Details on how to download ChemDraw will be shared via Moodle/e-Class.

Course Content

The course material follows the sequence of chapters in *Organic Chemistry* by L.G. Wade (subject to change). For a detailed list of textbook sections that we will likely cover, please refer to the relevant document posted on the course website.

Chapter 1	Introduction and Review
Chapter 2	Structure and Properties of Organic Molecules
Chapter 3	Structure and Stereochemistry of Alkanes
Chapter 4	Study of Chemical Reactions
Chapter 5	Stereochemistry
Chapter 6	Alkyl Halides
Chapter 7	Alkenes: Structure and Synthesis
Chapter 8	Reactions of Alkenes
Chapter 9	Alkynes
Chapter 10	Structure and Synthesis of Alcohols
Chapter 11	Reactions of Alcohols

Important Information for All Students:

- Numerous students in Faculty of Science courses have been charged with academic misconduct when materials they uploaded to third party repository sites (e.g. Course Hero, One Class, Chegg, etc.) were taken and used by unknown students in later offerings of the course. The Faculty's Committee on Examinations and Academic Standards (CEAS) found in these cases that the burden of proof in a charge of aiding and abetting had been met, since the uploading students had been found in all cases to be wilfully blind to the reasonable likelihood of supporting plagiarism in this manner. Accordingly, to avoid this risk, students are urged not to upload their work to these sites. Whenever a student submits work obtained through Course Hero, Chegg or One Class, the submitting student will be charged with plagiarism and the uploading student will be charged with aiding and abetting.
- Note also that exams, tests, and other assignments are the copyrighted works of the professor assigning them, whether copyright is overtly claimed or not (i.e. whether the © is used or not). Scanning these documents constitutes copying, which is a breach of Canadian copyright law, and the breach is aggravated when scans are shared or uploaded to third party repository sites. Screen capturing the lecture, tutorial, or any other component of the course also constitutes copying, which is a breach of copyright.
- Students are required to make themselves aware of school policies relating to Academic Honesty and Integrity, Access, Religious Accommodation, Student Conduct and other matters. Plagiarism and other academic offenses will be sanctioned to the fullest extent in accordance with university and Faculty policies.

A summary of these policies can be accessed at

<http://www.yorku.ca/secretariat/senate/committees/ascp/documents/CourseInformationForStudentsAugust2012.pdf>

You will be asked to digitally sign on the agreements below in Moodle.

- **Academic Honesty Agreement:** I understand York University's *Senate Policy on Academic Honesty* and will abide by this policy.
- The full policy can be found at: <https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>
- I acknowledge that academic honesty requires that I do not cheat (attempt to gain an improper advantage in an academic evaluation), plagiarize, aid and abet others in academic dishonesty, nor attempt or actually alter, suppress, falsify or fabricate documents.
- Suspected breaches of academic honesty will be investigated, and charges shall be laid if reasonable and probable grounds exist and lead to the range of penalties described in the guidelines of the policy.
- **For this term, all assessments (including lab reports and tests) will be held online. They are intended to be individual pieces of work. Collaborating with other students is not permitted. Please note the**

instructors have full access to Chegg and other similar websites and will be used if needed to prosecute academic misconduct.

- Please note online proctoring software may be used in this course. Any decision on this matter will be clearly communicated to all students before an assessment.

Note: Ignorance of this policy is not an acceptable excuse for academic misconduct.

- **Online Access Agreement:** This term, CHEM 2020 is being run as a fully online course. It is our expectation that you are prepared and have access to the necessary hardware and software to complete the course properly.

The following is a list of requirements of what you will need in order to complete the course.

- ***A working, stable internet connection (high speed greatly preferred)***
 - You will be attending lectures remotely using Zoom Webinar which requires uninterrupted internet access. We will also be using Moodle, Crowdmark and iClicker Cloud to administrate all assessments in this course which require stable internet connections. We can't accommodate if you run into technical problems relating to your internet connections.
- ***Access to the email account linked to your Moodle profile***
 - Online assessments through Crowdmark will only be sent to the email address linked to your Moodle account (where you receive your course announcements). If you don't know which email account this is, or if you wish to change it, edit your Moodle profile and do so there.
- ***A document scanning app capable of producing pdf files***
 - Your lab reports, tests and exams need to be submitted to us in pdf format only. This will require you to write your answers on paper, then digitally capture your work in pdf using a document scanning app. Both Apple and Android phones contain native scanning apps that should be used. We will not accept camera photos as they tend to be too large in file size, rotated incorrectly, taken at an improper angle and suffer from many image artifacts.
 - A sample assessment will be given early in the semester to allow you to practice a submission and to become familiar with our expectations.
 - Failure to submit your work properly may result in it not being graded.
- ***A note to students who may be using a tablet computer with a stylus to annotate provided pdf files***
 - Computers such as the Microsoft Surface are able to annotate pdf files using a stylus. Unfortunately we've run into issues with Moodle and Crowdmark whereby depending on the program you use to annotate your pdf files, the annotations become lost when uploaded for grading.
 - If you wish to use a tablet computer with a stylus it is your responsibility to make sure your annotations show up after you upload, otherwise we can't accept it and it will be treated as a missed assessment as per the course syllabus.

Important announcements:

1- Several platforms will be used in this course (e.g., Moodle/eClass, Zoom, etc.) through which students will interact with the course materials, the course director / TA, as well as with one another. Please review the syllabus to determine how the class meets (in whole or in part), and how office hours and presentations will be conducted. Students shall note the following:

- Zoom is hosted on servers in the U.S. This includes recordings done through Zoom.
- If you have privacy concerns about your data, provide only your first name or a nickname when you join a session.
- The system is configured in a way that all participants are automatically notified when a session is being recorded. In other words, a session cannot be recorded without you knowing about it. Technology requirements and FAQs for Moodle can be found here - <http://www.yorku.ca/moodle/students/faq/index.html>

2-This course may require the use of online proctoring for examinations. The instructor may use an online proctoring service to deliver the exam(s), which would be administered through the Learning Management System (e.g. Moodle, Canvas, etc.). Students are required to have access to minimum technology requirements to complete examinations. If an online proctoring service is used, students will need to become familiar with it at least five days before exam(s). For technology requirements, Frequently Asked Questions (FAQs) and details about the online proctoring service visit – <https://bold.info.yorku.ca/remoteproctoring/>. Students are required to share any IT accommodation needs with the instructor as soon as they are able.