CONCORDIA UNIVERSITY
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

CHEM 221 (session 02)
Introduction to Organic Chemistry I

Course outline-Winter 2026

1. General Information

Instructor	Dr. John (Jung Kwon) Oh Department of Chemistry and Biochemistry Faculty of Arts & Science Office: SP 275.09 Email: john.oh@concordia.ca

Course Format	Lectures and labs
Lectures	Tuesday and Thursday, 8:45-10:00 AM
Location	Loyola campus, CC-310
Office hours	Tuesday, 10:00-11:00 AM
Course web page	Course Moodle (www.myconcordia.ca)

2. Objectives

Upon successful completion of CHEM 221, students should demonstrate an understanding of key concepts in organic chemistry including: bonding, structure and nomenclature, stereochemistry, organic chemical reactions and mechanisms. The student is expected to apply this knowledge towards solving problems in organic chemistry.

3. Course Description

Prerequisites: CHEM 205 & CHEM 206
Detailed Course Topics:

- L1-Electrons, Bonds and Molecular Properties
- L2-Molecular Representations
- L3-Acids & Bases
- L4-Alkanes and Cycloalkanes
- L5-Stereoisomerism
- L6-Alkyl halides & Nucleophilic Substitution
- L7-Alkenes & Elimination Reactions
- L8-Addition Reactions of Alkenes
- L9-Alkynes and their Addition Reactions
- L10-Synthesis

Proposed lecture schedule (subjected to be changed)

Week		Tu	Th	Assign	Comments
w1	13-Jan	L1	L1		L1-Electrons, Bonds and Molecular Properties
w2	20-Jan	L1/L2	L2		L2-Molecular Representations
w3	27-Jan	L3	L4	Assign 1	L3-Acids & Bases
w4	03-Feb	L4	L4		L4-Alkanes and Cycloalkanes
w5	10-Feb	Term 1	L5		L5-Stereoisomerism
L8	17-Feb	L5	L5/L6	Assign 2	L6-Alkyl halides & Nucleophilic Substitution
w7	24-Feb	L6	L6		L7-Alkenes & Elimination Reactions
Reading	03-Mar	No lectures			L8-Addition Reactions of Alkenes
w8	10-Mar	L7	Trerm 2		L9-Alkynes and their Addition Reactions
w9	17-Mar	L7	L7/L8	Assign 3	L10-Synthesis
w10	24-Mar	L8	L8		
w11	31-Mar	Term 3	L8/L9		
w12	07-Apr	L9	L10		

4. Course Materials

- **Recommended:**
  - Organic Chemistry 10th edition – John McMurray (free access to web version or pdf version at https://openstax.org/details/books/organic-chemistry)
  - Organic Chemistry 3rd or 4th edition- David Klein
  - Organic Chemistry 8th edition- Leroy G. Wade Jr.

- Concordia CHEM 221 Organic Chemistry I Laboratory Manual and carbon-copy lab book
- **Lab coats & safety glasses** are compulsory during the practical laboratories and are available from the Concordia University bookstore.
- **Molecular models** help considerably in clarifying certain points on organic chemistry theory. They are permitted for exams and you are strongly advised to buy, borrow, or share a set.

5. Schedule *(may be subject to change)*

Examinations:

- **Three term exams** for 70 min during the classes starting at 8:45-9:55 am.

Term exam	Lecture Materials
1	L1-Electrons, Bonds and Molecular Properties, L2-Molecular Representations
2	L3-Acids & Bases, L4-Alkanes and Cycloalkanes, L5-Stereoisomerism
3	L6-Alkyl halides & Nucleophilic Substitution, L7-Alkenes & Elimination, L8-Addition to alkenes

- **Lab exam** during the lab (will be scheduled by the lab coordinator).

- **Final exam** (3 hrs) **-** Date will be arranged by the Concordia University Examinations Office.

Three assignments

- The assignments can be posted and submitted through course moodle under "assignments".
- Suggested answers for previous assignment will be posted on submission due.
- **Submission due by 5 pm on Jan 30 for A1, Feb 20 for A2, Mar 20 for A3**.
- Lecture Materials L1, L2 for A1, L3, L4 for A2, L5, L6 for A3
- **No late submission** will be allowed.

Excuse and no mark-up

- If you miss an exam due to medical reasons, you must provide a **written excuse** (signed by a doctor on the appropriate letterhead paper) within 5 business days after the exam.
- **Note**: There are **no make-up exams.** It is your responsibility to take note of their time and date.

Laboratory information:

Laboratory performance is graded on the quality of the experimental work, the laboratory reports, pre-lab quizzes as well as on practical laboratory exam questions in the lab exam (incorporated in the final exam). Laboratory experiments might not be directly related to the lectures although they illustrate the theory of Organic Chemistry. Consider the laboratory work as an independent and additional learning experience. The laboratory coordinator is **Vincent Lau** (Vincent.lau@concordia.ca) and the Chemistry 221 laboratories are located in SP-116. Laboratories start the week of **January 19, 2026**. All students *must* attend the lab section for which they are registered – please refer to wet-lab schedule posted on the CHEM 221 Lab Moodle page.

If you are repeating the course and have passed the lab component within the past two (2) years, you may request a lab exemption. The deadline for lab exemptions for the winter 2023 term is **Friday, January 16, 2026 at 12 pm.** Late applications will not be accepted. Signed and completed forms must be returned to **Lisa Montesano** (elizabeth.montesano@concordia.ca). You **must** register for the appropriate lab exemption section (56); if you are registered in any other lab section, you will be required to complete the lab portion of the course. If you apply late or are denied exemption, you must repeat the lab portion. Partial exemptions will not be given, in particular, lab (reports) and lab exam are linked. If an exemption is granted, your previous lab mark (lab reports and lab exam) will be carried forward. A student who is denied a lab exemption must repeat the laboratory component of the course.

Course withdrawal: (confirm the deadlines with UG academic date)

Students who wish to withdraw from a course must do so before the deadline: the **DNE (tuition refund) deadline is January 26, 2026 and the DISC deadline is March 23, 2026**. Students who withdraw from this course must *also check-out from their lab section.* A student who does not properly withdraw before the specified deadlines will receive a failing grade.

New change: Students receiving a DISC grade in this course will be required to repeat all components of the course if they retake the course.

6. Grading *(exam schedules may be subjected to change)*

The final grade of the course is based on **only** the marks obtained in the examinations and the laboratory marks. The composition of the final grade is as follows:

Assignments & participations		5%
Term exams:		30%
Final exam (arranged by the Examinations Office):		40%
Laboratory and prelab tests:		15%
Lab exam:		10%
TOTAL:	**100%**	

Students have to pass both the lecture and the lab SEPARATELY. Minimum passing marks: 50% lecture (within the lecture mark) and 60% lab (within the lab mark the minimum passing grade for both the lab reports and the lab exam is 50%). You will receive an R (repeat) as course grade should your lab exam, lab reports, and their combination be below passing marks. **STUDENTS MUST PASS THE FINAL EXAM (>50%) TO PASS THE COURSE**. While a lecture grade of 50% is a passing grade, a grade below 60% indicates that you are missing much of the understanding of the material and overall competence for future work in the area would be in doubt. In general, grades above the 75% level indicate decent competence so that success in future courses in organic chemistry can be expected. Grading scale: **0 F; 50.0 D-; 53 D; 57 D+; 60 C-; 63 C; 67 C+; 70 B-; 73 B; 77 B+; 80 A-; 85 A; 90 A+.**

Failing Grades - **F: <50 (theory) or <50 (final exam); R: <50 (lab exam), <50 (lab reports) or <60 (lab)**

In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

7. Rights and Responsibilities
Source: http://www.concordia.ca/students/academic-integrity.html

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MANDATORY QUIZ AND SEMINAR (CHEM 101: The Academic Code of Conduct)

As part of your CHEM course, you are ***required*** to i) attend a Chemistry and Biochemistry Departmental Seminar on the academic conduct code and the appropriate use of information sources and ii) pass the online quiz associated with this seminar (the passing grade for the quiz is 100%). (**Note:** this quiz is graded by the Department of Chemistry and Biochemistry, and you do not have access to it until after you have attended the seminar. Therefore, any other quiz you may have taken on the academic code of conduct does not count toward the CHEM 101 requirement.) The aim of this seminar and quiz is to clarify the academic conduct code in terms of which practices will be considered unacceptable with regards to work submitted for grading in your CHEM course. **You are only exempt from repeating the seminar and the quiz if you have done both in Winter 2021 or more recently,*** otherwise you are required to repeat both this term. This short seminar (1 hour) will be held at the following times (note that you will not be given credit if you join too late and/or leave too early):

Date (Winter 2026)	Time	Mode	Registration link
Jan. 27 (Tuesday)	21:00-22:00	Zoom	https://concordia-ca.zoom.us/meeting/register/abB53MlnQSC6LrNsCnRepw
Jan. 29 (Thursday)	21:00-22:00	Zoom	https://concordia-ca.zoom.us/meeting/register/0v3k0gZLTgGLTXRYpNJ7zg

As space for each of the Zoom seminars is limited, please **register early** for your preferred slot (copy the corresponding link above into your browser). **Look out** for the confirmation email from us (Elizabeth Montesano) with the link to the actual seminar. Then do not forget to **attend** that seminar slot on the date above: put it into your scheduler/agenda. You will **not** receive a reminder on or before the date!

We will take attendance at the Zoom seminar; this means that you must log in with the code that was supplied for your registration. Do not "join a friend" in watching at their computer.

If you do not complete this course requirement, your final grade for the course may be lowered by one full letter grade with an incomplete (INC) notation until such time as this requirement is completed. Please refer to the undergraduate calendar (section 16.3.5) for details on removal of an incomplete notation.

* You are exempt if you can locate your ID in the pdf file located on the Departmental web site (http://www.concordia.ca/content/dam/artsci/chemistry/docs/Compliance-list.pdf) and if there is no entry in the "quiz" column for you. If the list does not say "Winter 2021-Fall 2025", you have the wrong list: clear your browser data.

PLAGIARISM AND OTHER FORMS OF ACADEMIC DISHONESTY
The Academic Code of Conduct can be found in section 17.10 of the academic calendar and on the Academic Integrity site (https://www.concordia.ca/conduct/academic-integrity.html). Any form of unauthorized collaboration, cheating, copying or plagiarism found in this course will be reported and the appropriate sanctions applied. The mandatory seminar is a clear and fair opportunity to learn what our faculty regards as academic misconduct. Failure to take part in this learning opportunity and thus ignorance of these regulations is no excuse and will not result in a reduced sanction in any case where academic misconduct is observed.

8. Improving Your Academic Experience

The University offers many services that can help students:

Concordia Counseling and Development offers career services, psychological services, student learning services, *etc.* - *http://www.concordia.ca/students/counselling.html*

The Concordia Library Citation and Style Guides - *http://library.concordia.ca/help/howto/citations.html*

Advocacy and Support Services - https://www.concordia.ca/offices/advocacy.html

Student Transition Centre - *http://stc.concordia.ca/*

New Student Program -
http://newstudent.concordia.ca/

Students with Disabilities - *http://www.concordia.ca/students/accessibility.html*

Student Success Centre -
http://www.concordia.ca/students/success.html

Financial Aid & Awards -
http://www.concordia.ca/offices/faao.html

Health Services -
https://www.concordia.ca/students/health.html

Sexual Assault Resource Centre -
https://www.concordia.ca/students/sexual-assault.html

Concordia's COVID-19 updates -
https://www.concordia.ca/coronavirus.html