



COURSE OUTLINE

1. **Course:** CHEM 351, Organic Chemistry I - Winter 2021

Coordinator(s)

Name	Email	Phone	Office	Hours
Dr. Ian Hunt	irhunt@ucalgary.ca	220-6430	SA 144G	TBA, working remotely

Section(s)

Lecture 01: MWF 10:00 - 10:50 - Online

Instructor	Email	Phone	Office	Hours
Dr Darren Derksen	dderksen@ucalgary.ca	403 220-2610	SB 233	By Zoom Appointment

Laboratory Coordinator

Name	Email	Phone	Office	Hours
Dr. Ian Hunt	irhunt@ucalgary.ca	220-6430	SA 144G	TBA : currently working remotely

Online Delivery Details:

Some aspects of this course are being offered in real-time via scheduled meeting times. For those aspects you are required to be online at the same time.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

This course has a registrar scheduled, synchronous final exam. The writing time is 2 hours + 50% buffer time.

Each course component will be described in more detail at the beginning of the course.

Lectures start Monday Jan 11th, 2021. Lecture material will be delivered as a series of modules that can be viewed asynchronously via D2L and follow a prescribed schedule. In a typical week, at least one lecture time slot will be used by the instructor for discussions/seminar/ Q&A sessions. Students are expected to work through the modules and to be current before the weekly synchronous discussion/seminar session. A schedule of progression with links to the etext will be available to help guide your studies.

Tutorials start Monday Jan 18, 2021. Tutorials follow a weekly time line and can be accessed online. There are five synchronous, online assignments during the semester that are to be completed during your registered 50 min. tutorial time. We will be using Moodle to administer these assignment activities. During non-assignment weeks, the learning and practice materials can be accessed in an asynchronous manner. There are no scheduled Zoom based activities for tutorials. The coverage details and schedule for the tutorial assignments (CAL) can be found on the course website.

Laboratory starts Monday Jan 25, 2021. Laboratory activities are synchronous online Zoom sessions during your registered laboratory time. It is envisaged that the laboratory activities will each have a "primary graded activity" this might be a report, or it might be based on your answers to a set of questions. Laboratory reports will be submitted via a D2L Dropbox and will have due dates that will be specified for each activity. There are two typical models for due dates (1) end of the laboratory period or (2) one week after the laboratory period.

Examinations (MT & Final) We envisage that examinations (MT & Final) will be delivered using Moodle and making use of the tools that Moodle has available. This means the examinations will be a hybrid of our normal tutorial assignments (CAL) and a conventional paper examination. The Final examination will be cumulative and based potentially on all components of the course (lecture, tutorial and laboratory content).

Communication We will use the course website and class emails as the primary methods for course related information. Students are responsible for reading these to ensure they are aware of the items within those messages and know how it impacts their course work. Not being aware of information in such messages is **not an acceptable excuse** for failing to complete work on time.

All emails sent to the course coordinator, instructor or TAs about course related issues MUST come from a UofC email address. Make sure you specify "Chem 351". We will attempt to reply to emails within 24-48 hrs. on

business days (i.e. excluding weekends and holidays and during the semester break) whenever possible.

We will also be making use of the D2L discussion board to help facilitate appropriate dialogue about course content and answers to problems etc.

Course Site:

D2L: CHEM 351 L01-(Winter 2021)-Organic Chemistry I

Website: www.chem.ucalgary.ca/courses/351/index351-w21.html

Note: Students must use their U of C account for all course correspondence.

2. Requisites:

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s):

Chemistry 201 or 211; and 203 or 213.

Antirequisite(s):

Credit for Chemistry 351 and 357 will not be allowed.

3. Grading:

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %	Date
Five Tutorial Assignments	20	See tutorial schedules for times (tutorial assignments are synchronous) (non-assignment weeks are asynchronous)
Laboratory	20	Start Monday Jan. 25, 2021 (Approximately weekly, See D2L for schedule)
Midterm Exam	25	Synchronous Out-of-class exam on March 2, at 6:30 pm
Final Exam	35	Scheduled by registrar (Synchronous)

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	75%	70 %	65 %	60%	55%	50 %	45 %

This course will have a final exam that will be scheduled by the Registrar. [The Final Examination Schedule](#) will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

The final exam will be administered using an on-line platform. Per section [G.5](#) of the online Academic Calendar, timed final exams administered using an on-line platform, such as D2L, will be available on the platform. **Due to the scheduling of the final exams, the additional time will be added to the end of the registrar scheduled synchronous exam to support students. This way, your exam schedule accurately reflects the start time of the exam for any synchronous exams. E.g. If a synchronous exam is designed for 2 hours and the final exam is scheduled from 9-11am in your student centre, the additional time will be added to the end time of the synchronous exam. This means that if the exam has a 1 hour buffer time, a synchronous exam would start at 9 am and finish at 12pm.** - updated April 6, 2021

3.1. A minimum 50% on the laboratory is required in order to satisfy the prerequisite requirement (i.e. C-) for further Science courses.

3.2. A minimum 50% weighted average on the examinations (MT's & FIN) or minimum 50% on the Final is

required in order to satisfy the prerequisite requirement (i.e. C-) for further Science courses or better.

3.3. Notes 3.1 and 3.2 mean that if a student scores below 50% in either the laboratory or the examination component, then the maximum course letter grade they can obtain in Chem 351 is a D+.

3.4. Examinations are to be written as synchronous online activities. Both the midterm and final are scheduled to be 2 hrs writing time plus 50% technology buffer (total of 3 hours including buffer).

3.5. Students are expected to provide answers that are consistent with the course content / syllabus and based on the content of the lecture modules and the etext.

3.6. **Laboratory exemptions.** Students repeating the course within the last two years can be exempted from the laboratory component of the course if a grade of 75% or higher was obtained previously on the laboratory portion. Students choosing to exempt from the laboratory should be aware that, the new online labs in Winter 2021 may be significantly different from prior laboratory activities in this course; the material covered in these online laboratory activities will be integrated into other course assessments; and, the laboratory grade achieved on the previous attempt will be carried forward.

Prior to applying for an exemption, students are encouraged to connect with their course coordinator to better understand the risks and benefits in their specific online course, as well as what access they will (or will not) have to laboratory materials or feedback as an exempt student.

Students applying for a lab exemption should contact the Undergraduate Science Center (science.advising@ucalgary.ca) **no later than Monday January 18th 2021** to apply. Students registering in the course after this date should contact the USC as soon as possible if they wish to apply for an exemption.

3.7. Laboratory time consists of synchronous activities, and may also consist of quizzes and/or laboratory reports, some of which may be worked on asynchronously and have a due date to be handed in for grading. See the laboratory manual for the schedule of experiments and expectations.

3.8. For any synchronous assessment (e.g. tutorial assignments, examinations) students with scheduling issues (e.g. *different time zones, caregiving responsibilities, ability to secure an appropriate test-taking environment*) can request accommodations by emailing the course coordinator at least 5 business days prior to the activity. Such requests will be reviewed on a case-by-case basis.

3.9. Students registered with Student Accessibility Services will have the applicable accommodations specified in their accommodation letters applied to time limited activities associated with tutorials, the laboratory component and/or examinations provided the SAS letters are available within 5 business days of the activity. If the accommodations change during the semester, the student will need to let the course coordinator know of the change.

3.10. Students are not permitted to share or re-post ANY materials from the course, including examination or assignment questions. They are protected by copyright.

3.11. Examinations, assignments and quizzes etc. are to be completed entirely individually (see Calendar Section G), without discussion or collaboration with others. For laboratory assignments, students are welcome to discuss the content with peers, TAs and course instructors, as well as consult any references of your choosing. However, unless it is clearly stated otherwise, we expect and require that laboratory reports / graded activities must be written individually and in your own words. To avoid the risk of plagiarizing accidentally from other sources (including a peer, the internet, or your instructor's notes), consider taking rough notes from any source you consult, and then writing y

4. **Missed Components Of Term Work:**

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course.

4.1 A deferred examination will **ONLY** be provided for the Final Examination for which a student must apply through their student centre. There are no deferred midterms.

4.2 Absences from any midterm examinations must be reported to the course coordinator within **48 hours** via email for an excused absence to be considered. If no notification is provided within the required 48 hour time frame, then a grade of zero will be assigned. If an excused absence is approved then your midterm examination grade will be prorated based on your scores in the other examinations.

4.3 If you need to reschedule a tutorial assignment **in advance**, please contact the course coordinator (Dr. Darren Derksen) a minimum of 24 hrs before the scheduled tutorial times. Unexpected absences from any tutorial assignments must be reported within **48 hours** via email for an excused absence to be considered. If an excused absence is approved, then you may be provided with an opportunity to make up the missed tutorial quiz (one request / student / semester is normally possible). If no notification is provided within the required 48 hour time frame, then a grade of zero will be assigned. If an excused absence is approved then your tutorial grade will be prorated based on your scores in the other tutorial assignments.

4.4 Absences from any laboratory work must be reported to the laboratory coordinator (Dr. Ian Hunt) within 48 hours via email for an excused absence to be considered. For missed laboratory work, students should attempt to make up an excused absence by attending a different laboratory time slot if possible.

5. Scheduled Out-of-Class Activities:

The following out of class activities are scheduled for this course.

Activity	Location	Date and Time	Duration
Midterm	WEB-BASED	Tuesday, March 2, 2021 at 6:30 pm	2 Hours

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a conflict with the out-of-class-time-activity, please contact your course coordinator/instructor no later than **14 days prior** to the date of the out-of-class activity so that alternative arrangements may be made.

Writing time = 2hrs 6:30-8:30 pm (+ 1 hr technology buffer time, total of 3 hours INCLUDING technology buffer time)

If you have a conflict with the out of class synchronous midterm examination, then email the course coordinator including a copy of your weekly university schedule as soon as possible but no later than 10 business days prior to the midterm date so that an ALTERNATE examination time can be arranged for you.

If you have a conflict of an out-of-class-time-activity in another course with any scheduled synchronous component of CHEM 351, then you need to contact the course coordinator/instructor of the other course with the out-of-class activity no later than 10 business days prior to the date of the out-of-class activity so that they can make alternative arrangements. See note in section 4 about deferred examinations.

6. Course Materials:

Textbook: No text book is required.

There is an excellent online course textbook that is available for Chem 351 and 353 [Organic Chemistry etext Contents \(ucalgary.ca\)](#)

If you wish to purchase a textbook because it better suits your individual learning style, "Organic Chemistry - Mechanistic Patterns" by Ogilvie et. al. (published by Nelson) or "Organic Chemistry" by Jones (published by Norton) are good choices for our courses, otherwise consult your instructor.

Molecular Model kits: very strongly recommended to support your learning for the Winter 2021 asynchronous delivery course and are available in the Bookstore.

Chemistry 351 "Laboratory Manual" can be found here: [CHEMISTRY 351 STUDENT LABORATORY MANUAL \(ucalgary.ca\)](#). Other supporting material can be found via the course D2L site.

The course website is [Organic Chemistry Chem 351 \(ucalgary.ca\)](#)

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

7. Examination Policy:

Any student with academic accommodations must be registered with Student Accessibility Services, and have reviewed their accommodations (as described on the SAS documents) with the course coordinator (ideally within the first 15 days of the semester or at least 7 days) before any scheduled activity for which accommodations are required.

All examinations and tutorial quizzes are to be completed individually, without discussion or collaboration with others.

In terms of allowed resources, examinations are "open book", which allows access to both on-line and text based resources. However, some types of questions will require answers that stay within the bounds of the course material from the lecture resources and the e-text: These questions will be clearly indicated in an examination.

Students are directed to review the policy around academic misconduct before attempting any examination. The Student Handbook on Academic Integrity, available through the Student Success Center is an excellent resource.

Students should also read the Calendar, [Section G](#), on Examinations.

8. Approved Mandatory And Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

9. Writing Across The Curriculum Statement:

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. Human Studies Statement:

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

11. Reappraisal Of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.
- c. **Laboratory work**, please see the Chem 351 W21 online student laboratory manual for details about laboratory work reappraisals. The appeal should be made first to your laboratory TA. If you need to appeal to the Laboratory Coordinator (Dr. Hunt), then you will need to provide the original work, a written statement (clearly stating the concern) and your UofC email contact information (all to be done within the 10 business day period). The Laboratory Coordinator will then take the work to review it and provide appropriate feedback via UofC email.

12. Other Important Information For Students:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).

- b. **SU Wellness Services:** For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (syva@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>)
- d. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)
Student Academic Misconduct [Policy](#) and [Procedure](#)
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

- e. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Chemistry, Dr. Yuen-Ying Carpenter by email ahugchem@ucalgary.ca or phone 403-220-6908. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.

- f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: sciencerep@su.ucalgary.ca. [Student Ombudsman](#), Email: ombuds@ucalgary.ca.
- h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.
- i. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

Course Outcomes:

- Recognize and employ the conventions of naming, structure drawing, and curved arrow pushing to communicate about organic compounds
- Draw reaction mechanisms with appropriate curved arrows to account for how bonds are made and broken in

organic reactions

- Analyze the structural features of starting materials, reaction intermediates, and products to predict or rationalize their physical properties or reaction behaviour
- Identify and interpret spectral data to deduce the structure of simple organic molecules
- Understand laboratory experimental data and explain observations.
- Propose a short (ca. 1-4 step), feasible synthesis for the formation of a specific organic product using a limited number of possible reaction types: acid/base, radical substitution, nucleophilic substitution, or elimination reactions.

Electronically Approved - Apr 06 2021 16:03

Department Approval

Electronically Approved - Apr 06 2021 16:28

Associate Dean's Approval