



COURSE OUTLINE

1. **Course:** CHEM 353, Organic Chemistry II - Winter 2021

Coordinator(s)

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

Section(s)

Lecture 01: MWF 09:00 - 09:50 - Online

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

Lecture 02: MWF 10:00 - 10:50 - Online

Instructor	Email	Phone	Office	Hours
Dr Ashley Causton	acauston@ucalgary.ca	403 210-3968	SA 144A	TBA

Laboratory Coordinator

Name	Email	Office	Hours
Dr. Ian Hunt	irhunt@ucalgary.ca	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.

Lectures start Monday January 11th 2021.

Lecture material will be delivered as a series of video 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 instructors for virtual office hours and/or Q&A sessions. Students are expected to work through the course content video modules and to be current for each of the synchronous lecture meetings. A schedule of progression with links to the etext will be available on the course website to help guide your studies.

Tutorials (CAL) start Monday January 18th 2021.

Tutorials use **Computer Assisted Learning (CAL)** and follow a weekly time line and can be accessed online. There are five synchronous, online CAL assignments during the semester that are to be completed during your registered 50 min. CAL 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 CAL tutorials. The coverage details and schedule for the CAL assignments can be found on the course website.

Laboratories starts Monday January 25th 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. We anticipate there being 5-7 weeks of laboratory activities, see the course website for this information.

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 CAL assignments and a conventional paper examination. All examinations will be cumulative in nature and based on all components of the course (lecture, CAL tutorials and laboratory content).

Communication

We will use D2L News / emails as the primary methods for reminders about course related information and they will typically contain links to relevant sections of the course website. Students are responsible for reading the information to ensure they are aware of the items within those messages and know how it impacts their Chem 353 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 coordinators, instructors or TAs about course related issues MUST come from a UofC email address. **Make sure you specify "Chem 353"**. We will attempt to reply to emails within 24 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:

www.chem.ucalgary.ca/courses/353/index353-w21.html (major resource)

D2L: CHEM 353 ALL-(Winter 2021)-Organic Chemistry II

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 351.

Antirequisite(s):

Credit for Chemistry 353 and either 355 or 357 will not be allowed.

Chem 353 will build on Chem 351 and therefore any student in Chem 353 is expected to have a C- level working knowledge of Chem 351 content at the start of the course.

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
Midterm examination (synchronous)	25	March 11, 2021 (6:30 - 8:30 p.m.) See note 3.4
Laboratory (5-7 weeks of activities)	20	laboratories starts Jan 25 2021
CAL tutorial assignments (5)	20	CAL tutorials start Jan 18 2021
Final examination	35	Registrar scheduled See note 3.4

All assessments above are synchronous except the laboratory, which will have both synchronous and asynchronous graded components depending on the specific laboratory week (see note 3.7 below for more information about laboratory assessments).

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 %	85 %	80 %	75%	70%	65 %	60 %	55%	50%	45 %	40 %

Notes

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 & Final) **or** a minimum of 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 the minimum required % **in either** the laboratory **or** the examination component, then the *maximum* course letter grade they can obtain in Chem 353 is a D+.

3.4 Examinations are to be written as synchronous activities and we expect them to be delivered using the Moodle system. As such, they will utilise the question formats available within Moodle. Both the midterm and final are scheduled to be 2 hrs writing time plus 50% technology 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 will 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 instructor or 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 laboratory 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. No exemptions will be possible after the add/drop deadline.

3.7 Laboratory time consists of synchronous activities. The laboratory activities may involve quizzes based on preparation as the start of the laboratory session, and on the "primary graded activity" such as a laboratory report or answers to a set of questions. Some of the laboratory reports may be worked on asynchronously and have a due date to be handed in for grading while some may be required at the end of the laboratory session. See the Chem 353 laboratory manual (course website) for more information of activities and expectations.

3.8 For any synchronous assessment (e.g. CAL 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. Accommodations will be calculated in the manner *consistent with the guidelines faculty were given via the Dean's Office*.

- *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***

- **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 Deferred examinations will **ONLY** be provided for the Final Examination for which a student must apply through their student centre. This means there are no deferred midterms.

4.2 Absences from the midterm examination must be reported to the course coordinator (Dr. Hunt) within 48 hours via email for an excused absence to be considered. If the appropriate notification is not 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 score in the Final examination

4.3 If you need to reschedule a laboratory activity or a CAL assignment, please complete the appropriate form (see links below in 4.4 & 4.5 and submit it to Dr Hunt a **minimum of 24 hrs in advance** (the forms are processed first thing each morning M-F). Make sure to follow **all** the instructions on the form and provide the required information otherwise the form typically cannot be processed which will mean you will be required to resubmit the request.

4.4 Absences from any CAL assignment must be reported to the CAL coordinator (Dr. Hunt) as soon as possible, but certainly within 48 hours via email for an excused absence to be considered. Given **advance or timely notice**, complete the following form ([temp CAL tutorial section](#)) and we will attempt to reschedule your assignment (one such request / student / semester is normally possible) but the request is time sensitive. If the appropriate notification for absence is not provided within the required 48 hour time frame, then a grade of zero will be assigned. If an excused absence is approved but too late to allow you to complete the assignment at another time, then your CAL assignment grade will be prorated based on your score in the Final examination.

4.5 Absences from any laboratory work must be reported to the laboratory coordinator (Dr. Hunt) as soon as possible, but certainly within 48 hours via email for an excused absence to be considered. For missed laboratory work, students are expected to make up an the absence by requesting a different laboratory time on the appropriate form with a minimum of 24 hrs notice (www.chem.ucalgary.ca/courses/353/laboratory/tls.pdf) In the event that an excused absence is approved but too late to allow you to complete the assignment at another time, then your laboratory grade for the missed experiment will be prorated based on your score in the Final examination.

◦ **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	Thursday, March 11, 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)

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 (email facilitates a reply etc.) 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 353, 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. They are obliged to make suitable alternate arrangements for you. See note 4.1 in section 4 about deferred examinations.

◦ **Course Materials:**

Chem 353 has a free online text book: [Organic Chemistry etext Contents \(ucalgary.ca\)](#)

Models kits are very strongly recommended and should be available via the UofC Bookstore.

Chem 353 laboratory manual can be found on the course website [Chem 353 laboratory \(ucalgary.ca\)](#)

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.

◦ **Examination Policy:**

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.

Allowable collaboration. All examinations and CAL tutorial assignments are to be completed entirely individually, without discussion or collaboration with others. Laboratory assignments may allow for discussion with peers, but submitted work should be written individually in the student's own words.

Allowed resources. All examinations and assessments are open-book. Students should recognize that the allotted writing time assumes a strong knowledge of the material with minimal use of reference material. Exams are designed so that they can be completed without referring to other course materials, and time should be allotted accordingly.

Students should ensure they have easy access to a calculator and a model kit during each assessment. Copies of our standard periodic table and spectroscopy tables will be made available at the time of the activity if required.

Content covered. All examinations are common to all sections, i.e. students in L01 and L02 write the same examinations. Both of the instructors are involved in determining content coverage, creating, selecting and reviewing examination questions, creating and reviewing grading rubrics and grading of student answers as well as reviewing the grades once collated.

Questions will require answers that stay within the bounds of the course material from the lecture / course resources and the e-text and consistent with the syllabus.

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

◦ **Approved Mandatory And Optional Course Supplemental Fees:**

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

◦ **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.

◦ **Human Studies Statement:**

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

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

◦ **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 [1.1](#) and [1.2](#) of the University Calendar

b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section 1.3](#) of the University Calendar.

c. Laboratory work, please see the Chem 353 W21 student laboratory manual for more details. The appeal should be made first to your laboratory TA. If you need to appeal to the Laboratory Coordinator, then you will need to provide a 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 review the work and provide appropriate feedback via UofC email. In making such a request for a regrade, you should be aware that in accord with UofC policies, the grade could go up, remain the same or go down.

o **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 (svsa@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](tel: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](#) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [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:

- Analyze and use the structural and electronic characteristics of the organic species to predict or rationalise properties and reactivity.
- Draw reasonable reaction mechanisms with appropriate curved arrows to account for the step by step bonding changes in organic reactions.
- Design and evaluate feasible syntheses of small organic molecules from simple starting materials.
- Classify molecules as being aromatic, non-aromatic or anti-aromatic to recognise and describe the implications this has on their stability, properties and reactivity.
- Analyse chemical information to determine a reasonable solution to a problem involving the reactions and / or spectroscopic data of organic species.
- [Temporarily suspended during online learning for W21] Use experimental procedures to safely set-up, perform and clean up reactions that apply standard introductory organic techniques and report the outcomes.

Electronically Approved - Apr 06 2021 16:04

Department Approval

Electronically Approved - Apr 06 2021 16:29

Associate Dean's Approval