UNIVERSITY OF CALGARY
FACULTY OF SCIENCE

Department of Chemistry
Science B 605
403 220-5385
chem.info@ucalgary.ca

COURSE OUTLINE

1. **Course:** CHEM 351, Organic Chemistry I - Fall 2024

Coordinator(s)

Name	Email	Phone	Office	Hours
Dr. Ian Hunt	irhunt@ucalgary.ca	220-6430	SA 144G	Open door, drop in OR make an appointment

Section(s)

Lecture 01 :

Instructor	Email	Phone	Office	Hours
Dr. Ian Hunt	irhunt@ucalgary.ca	220-6430	SA 144G	Open door, drop in OR make an appointment

Lecture 02 : MWF 09:00 - 09:50 in ENG 60

Instructor	Email	Phone	Office	Hours
Dr. Ian Hunt	irhunt@ucalgary.ca	220-6430	SA 144G	Open door, drop in OR make an appointment

Lecture 03 : MWF 10:00 - 10:50 in KNB 132

Instructor	Email	Phone	Office	Hours
Dr Chang-Chun Ling	ccling@ucalgary.ca	403 220-2768	SB 235	TBA

Workload expectations: For a Science course of this type (e.g. with multiple course components), on average you should be expecting to spend the same number of hours efficiently working on course content outside of class as you have in-class time.This applies to all lecture sections (L01-L03) and means 7 hrs class work / week plus 7 hrs out of class work based on 4 hrs related to lecture and tutorials plus 3 hrs for laboratory preparation and post-lab work. However, that assumes you are aiming for an average grade, have reasonable study habits and skills and have a reasonable background chemistry knowledge.

This course outline only pertains to the pre-semester plan for the delivery of lecture, tutorial, and laboratory components. If the Faculty, University, and/or Province mandates a return to online-only delivery, a new course outline will be developed.

Dr. Hunt is the **course & laboratory coordinator**.

Additional notes on alternative arrangements for missed components of term work can be found in section 4.

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

Lectures

L02 & L03 will be presented in-person at the scheduled times. They will not be recorded. Pre-recorded voice-captured Powerpoint video modules of course content topics will be released at the start of each week blocks in the D2L web-based content folder and are available to all lecture sections.

Laboratories will start in-person on Monday, September 9th, 2024. Laboratory activities are in-person at your registered weekly laboratory time in EEEL. The experimental schedule (plan : 10 wks, 1 orientation and 9 experiments) and laboratory manual can be found on the course website. Preparation for laboratory work is required (summary and quiz) and each experiment will have a "primary graded activity"; this might be a report, or it might be based on your answers to a set of questions (Moodle). The primary graded activities are equally weighted. Laboratory reports will be submitted via a experiment report specific D2L Dropbox and will have due dates that will be specified for each activity.

Tutorials (CAL, Computer Assisted Learning) will occur in-person in the computer lab SA 204 starting Tuesday, September 10th, 2024 during your scheduled tutorial time. As the semester, tutorials are broken into 5 modules and each module is based on a set of course topics as outlined on the course website and each module is worth 4%. Each module will build on previous modules and therefore these modules are cumulative. Modules consist of preparation and then assignment weeks. Assignments (4%) are completed in-person in SA204, 50-min, under exam conditions. See the course website (Chem351 F24 assignments) for the content and schedule details for each module.

Laboratory and tutorial assignments will occur during scheduled laboratory and tutorial times. See Section 4. Missed Components of Term Work for information on what to do in the event of an absence from these in-person components.

Online Component - Delivery Details

L 0 1 Pre-recorded voice-captured Powerpoint video modules of course content topics will be released at the start of each week blocks in the D2L web-based content folder. These are to be used asynchronously to create your lecture notes and can be used in conjuction with Dr Hunt's lecture templates. There are no synchronous Zoom lectures associated with CHEM351F24.

Laboratory & Tutorials are in-person, see information provided above.

Course Site:

In all communications, 'D2L' refers to the D2L page, whereas the 'Course Website' refers to the chem.ucalgary page given below:

D2L: CHEM 351 - L01 - L03 (Fall 2024) - Organic Chemistry I

COURSE WEBSITE: https://www.chem.ucalgary.ca/courses/350/index351-F24.html

We will endeavour to reply to D2L discussion board and course-related emails (from ucalgary email addresses) within 2 business days (M-F 08:30-16:30).

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

Equity Diversity & Inclusion:

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

The Chemistry EDI Committee acknowledges there are persistent barriers that prevent such accessibility and hinder our progress towards EDI. Our representatives (faculty, postdocs, graduate and undergraduate students) are committed to addressing any concerns and work towards proactive solutions that enact necessary change within the department. To submit anonymous questions, comments or concerns regarding EDI related issues, please reach out to our Associate Head EDI, Amanda Musgrove (amanda.musgrove@ucalgary.ca)

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:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Laboratory[1]	20%	Ongoing		
Tutorial CAL Activities and Assignments[2]	20%	Ongoing		
Midterm	25%	Oct 30 2024 at 07:00 pm (2 Hours)	in-person	TBA
Registrar Scheduled Final Exam	35%	Will be available when the final exam schedule is released by the Registrar	in person	Will be available when the final exam schedule is released by the Registrar

[1] The laboratory grade (20%) is a based on a points system. Experiments may have the following components: (a) Pre-laboratory quizzes* (online, Moodle) due by the start of your scheduled laboratory (all wet expts, 2.5 pts) (b) Pre-laboratory summary* to be written and pdf submitted to the specific D2L Dropbox by the start of your scheduled laboratory (all wet expts, 2.5 pts) (c) Laboratory notebook: a duplicate copy of notes taken during experiments need to be handed to the TA before you leave the laboratory (all wet expts, 2.5 pts) (d) Primary graded activity (e.g. experimental report, or answers to a set of questions (Moodle) etc). Equally weighted. Report pdf to be submitted to the specific D2L Dropbox with due dates that will be specified for each activity (due dates are typically one week after the activity, i.e. by the start of your next laboratory, 10 pts). The points total will be converted to the laboratory grade out of 20. * Required in order for you to participate in the laboratory session.

[2] Weekly tutorials run in-person in SA204 during your scheduled tutorial time starting Tu Sept 10th, 2024. Tutorials will be split into 5 content based modules, each worth 4% and covering a set of topics (see D2L / course website for details). Modules typically have a week for preparation & practice and then the assignment week (50-min, in-person, in SA204, under exam conditions).

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	95.00 %	85.00 %	80.00 %	75.00%	70.00%	65.00 %	60.00 %	55.00%	50.00%	45.00 %	40.00 %

This course will have a Registrar Scheduled Final exam that will be delivered in-person and on campus. 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.

Grade Limiting Statements:

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

b. A minimum 50% **weighted average** on examinations (MT & FIN) ***or*** 50% on the Final is required in order to satisfy the prerequisite requirement (i.e. C–) for further Science courses.

c. Statements (a) and (b) mean that if a student scores below 50% **in either** the laboratory **or** the examination component, the maximum course letter grade they can obtain in CHEM 351 is a D+.

Notes:

Students repeating the course can be exempted from the Laboratory component of the Course if a laboratory grade of 75% or higher were obtained, ***and the laboratory was completed fully or mostly in-person in the last 2 years***. However, students are still responsible for the laboratory content as it may be covered in other course work (e.g. examinations). The laboratory grade achieved on the previous attempt will be carried forward. Such students must contact the Undergraduate Science Centre and complete the opt out process **by Fr Sept 6 or immediately after registering in the course (whichever is later).**

The University of Calgary offers a flexible grade option, Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: https://science.ucalgary.ca/current-students/undergraduate/program-advising/undergraduate-processes

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

Students who are absent from an in-course assessment or who miss a deadline to submit course work are responsible for understanding and following the recommended steps provided in this Course Outline, and in the event of unexpected circumstances, contacting their course instructor to determine the impact of the missed assessment. At the discretion of the course instructor, alternative arrangements may be considered for missed components of term work, as described in Section G2.3 Absence from In-Course Assessments of the Calendar. For additional information and resources on the steps you can take in the event of unexpected circumstances interrupting your studies, see the website link in Section M.1 of the Calendar.

The course instructor may ask for supporting documentation to confirm an absence. For information on supporting documentation that you can provide, see Section M.1 Supporting Documentation for Absences of the Calendar.

In the event that an alternative arrangement is denied by the course instructor, students can email science@ucalgary.ca to discuss the matter further with an Associate Dean.

Notes:

Absences from any term work should be reported to the course coordinator (Dr. Hunt) ideally within 48 hours whenever possible. It's as easy as sending an email. Timely communication means alternative plans of action are *much easier* to consider and facilitate.
Please provide some context with sufficient detail on the reason and appropriate supporting documentation for each absence so that an informed decision can be made.

If an absence is not reported by the time the grades are published, it will result in a grade of zero for the missed component as per UofC calendar regulation G.2.3.a.

Under **no circumstances** will we accept any piece of work for grading after the same piece of graded work has been returned to any students in the course (for what should be obvious reasons).

a. **Final examination**: Applications for deferred Final examinations are administered by the Registrars Office and students must apply within the appropriate time window via their student center.

b. **Midterm Examination**: Students who miss the scheduled midterm need to report their absence and request the deferred MT as stated above via their ucalgary email. Time is important here since appropriate planning and preparation needs to occur, so we need as least 24 hrs notice. The information will be reviewed by the course coordinator so that an informed decision can be made. If an excused absence from the midterm is approved, then the student is required to write the deferred midterm (Wed Nov 6th 19:00-21:00 location **TBA**).

c. **Tutorials**: see D2L or course website for more details.

(i) non-assignment tutorials - no need to report your absence. Students should drop-in at another CHEM351 tutorial time and use a spare seat if there is one. Access is on a first come, first served basis but students registered in a particular time slot always have priority.
(ii) missed tutorial assignments - students need to complete the Qualtrix survey (https://survey.ucalgary.ca/jfe/form/SV_dbV3MBiy80Y3JAy) to report the absence and to provide availability information for scheduling a make-up opportunity or request an excused absence. In the event of an excused absence, the missed assignment will be awarded the same grade as the Final examination. Students are required to complete 3/5 of the tutorial assignments. Any questions regarding tutorial assignment make-ups beyond the information in the outline / D2L / course website should be directed to the **course coordinator** ***(Dr. Ian Hunt, irhunt@ucalgary.ca)***.

d. **Laboratory work**: see D2L / course website / laboratory manual for more details. Missed laboratory work can only be made-up for legitimate reasons during the week that experiment is performed during another CHEM351 laboratory time.

If you know you are going to miss a laboratory session ahead of time, then report the absence before the session takes place, ideally before the start of that week of laboratory activities (https://survey.ucalgary.ca/jfe/form/SV_7aLeiortE3ubsSq). The laboratory coordinator will then determine if the reason is valid or not. If possible, students with valid reasons that are appropriately reported in a timely manner to the Laboratory Coordinator are normally **required** to make up the laboratory session. Valid absences can **only** be made up during week of the corresponding experiment, and by prior arrangement with the Laboratory Coordinator. No absences can be made up after the experiment has completed for the week. In the event that it is not possible to reschedule an alternate laboratory session, then an “excused absence” will be awarded. An excused absence means that that student is automatically excused from all components of the experiment (though they are still responsible for the experimental content). Each student is normally allowed **one** laboratory make-up opportunity per semester (except where prearranged special permission has been granted). Students with non-valid reasons are expected to perform the experiment during their scheduled laboratory time and those that don’t will get a zero for the experiment as per G.2.3.a (it's an “unexcused” absence). If you don’t perform the experiment, none of the experimental components will be graded.

Late laboratory work:
(i) students who arrive late for a laboratory session will not be allowed to participate in the laboratory session (unless there are extenuating circumstances). They will be required to report the absence and request a make-up session.
(ii) the pre-laboratory quiz and summary **must** be completed before you attend the laboratory session. You will not be allowed to participate in laboratory work unless these are done to a satisfactory level.
(iii) laboratory notebook duplicate paper copies **must** be submitted to the TA before you leave at the end of the laboratory session. They will not be accepted after the end of the laboratory session.
(iv) all "late" laboratory reports need to be pre-approved by the laboratory coordinator. If there are extenuating circumstances, then the work will be accepted for grading for up to 36hrs after it was due (this is to ensure all students in all laboratory sections have the same opportunity). Late adjustments to the grade will be applied based on 12 hr windows (*i.e.* an "A" report that is 11 hrs. late, would be recorded as an "AB", 23 hrs. late "B" etc.).

For students who complete all the laboratory experiments, we will automatically drop their lowest experiment grade.
An **excused** laboratory absence will be given the same grade as obtained on the final exam, provided that the student attends and submits **at least half of the laboratories.** When given an excused absence from an experiment, students are automatically excused from all components of that specific laboratory experiment.

- Given the essential nature of the hands-on skills taught during the CHEM 351 laboratory, students must complete at least half of the laboratory experiments that must be completed to be eligible for a C- or better.
- Students who are not be able to meet this requirement may apply to complete this course component after the end of term, using the Deferral of Term Work process (see also, Calendar G.7).

Any questions regarding laboratory work beyond the information in the outline / D2L / course website should be directed to the **laboratory coordinator *(Dr. Ian Hunt, irhunt@ucalgary.ca)***.

5. **Scheduled Out-of-Class Activities:**

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

Activity	Location	Date and Time	Duration
Midterm	On-Campus, room to be announced	Wednesday, October 30, 2024 at 7:00 pm	2 Hours
Deferred midterm exam	On-Campus, room to be announced	Wednesday, November 6, 2024 at 7:00 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.

UofC POLICY STATES THAT REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If another of your courses has an out-of-class-time-activity that conflicts with any in-class component of Chem 351, then you should 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 alternative arrangements may be made.

*It is the course with the out-of-class activity that is **obliged** to make suitable alternate arrangements for you that don't impact Chem 351.*

6. **Course Materials:**

Textbook: No textbook is required. We provide an Organic Chemistry e-text via the course website.

https://www.chem.ucalgary.ca/courses/351/Carey5th/Carey.html

If you wish to purchase a textbook because it 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 course. Otherwise, consult your instructor.

Molecular models kits are very strongly recommended.

Chemistry 351 Laboratory Manual (free, online via the course website).

A self-duplicating **Laboratory Notebook** (required, available from the Bookstore)

Laboratory safety coat (required, available from the Bookstore)

Laboratory safety glasses (required, available from the Bookstore)

Top Hat account (optional; available from Top Hat, see D2L for more details, free to U of C students). TopHat may be used in-person lectures (L02 & L03) for practice with the course material. The TopHat courses will be activated on Wed Sept 4 2024. TopHat does not contribute to couremarks.

L02 code 636970 or https://app-ca.tophat.com/e/636970/

L03 code 681389 or https://app-ca.tophat.com/e/681389/

D2L Students are expected to stay informed on the course as it progresses via the D2L News and class emails (typically updated on Fr each week for the week ahead. We expect you to read those messages and act upon them. If we've communicated via those channels, then "I didn't know..." isn't an acceptable response.

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. **Academic Assessment & Examination Policy:**

All examinations / **assignments are common to all sections**, *i.e.* students in L01, L02 and L03 write the "same" **in-person** examinations & assignments. All the lecture instructors are involved in determining content coverage, creating, selecting and reviewing questions, creating and reviewing grading rubrics and grading of student answers as well as reviewing the grades once collated.

"Exam conditions" : All in-person examinations, assignments etc. are closed book. A Model kit and a non-programmable calculator are allowed. A periodic table and spectroscopy data tables will be provided if required. No other aids including **any form** of "cheat" or "data" materials are allowed. Wireless devices and other electronic devices are not allowed.

Any student with academic accommodations must be registered with Student Accessibility Services (see Section 12(e) below), and we strongly recommend that they review their accommodations personally for all course components with the course coordinator (Dr. Hunt) ideally within the first 15 days of the semester or at least 7 days before any scheduled activity for which accommodations are required.

Supplemental Final examination: In F24, as part of a continuing pilot program, CHEM351F24 will provide a supplemental examination option for eligible students. Supplemental examinations provide some students who have earned a D+ or lower overall with an additional opportunity to demonstrate prerequisite competence and earn a "C-" grade in the course so that it can be used as a prerequisite for progression. Students in good standing, with a 351F24 grade of D+ or lower, who write the Registrar Final examination, have passed the laboratory component, and have at least 35/70 on the term work are typically eligible to write the Supplemental examination.

Further details on the Faculty of Science regulations and fee for supplemental examinations are found in the Faculty of Science area on the Calendar in section 3.6C

Use of AI:
Examinations & Tutorial assignments: Since these activities are in-person under exam conditions and additional electronic devices are not allowed, then AI is **not allowed during these assessment activities**. Therefore, it is in your best interests to ensure that you develop your personal academic skills during the semester to allow you to perform under exam conditions.

Laboratory work: Students may use artificial intelligence tools, including generative AI, for laboratory related work as learning aids or to help produce reports. Students are accountable for the scientific accuracy of the work they submit. The use of AI tools must be documented in a reference for each document. The reference should include what tool(s) were used, how they were used, and how the results from the AI were incorporated into the submitted work. Failure to cite the use of AI generated content in submitted document will be considered a breach of academic integrity and subject to Academic Misconduct procedures.

See also Section G of the Calendar, on Academic Assessments and 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:**

Writing skills are not exclusive to English courses and, in fact, should cross all disciplines. The University supports the belief that throughout their University careers, students should be taught how to write well so that when they graduate their writing abilities will be far above the minimal standards required at entrance. Consistent with this belief, students are expected to do a substantial amount of writing in their University courses and, where appropriate, members of faculty can and should use writing and the grading thereof as a factor in the evaluation of student work. The services provided by the Writing Support , part of the Student Success Centre, can be utilized by all undergraduate and graduate students who feel they require further assistance. See also Section E.2 of the University Calendar.

In this course, the quality of the student's writing in laboratory reports will be a factor in the evaluation of those reports. See also Section E.2 of the University Calendar.

10. **Human Studies Statement:**

If you agree, your course work may be used for research purposes. Your responses will remain anonymous and confidential. Grouped data (no individual responses) may be used in academic presentations and publications. Participation in such research is voluntary and will not influence grades in this course. Students' signed consent forms will be withheld from instructors until after final grades are submitted. More information will be provided at the time student participation is requested.

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 of the University Calendar.

a. **Term Work:** The student should present their rationale a s 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**, found on the Grade Reappraisals & Appeals web presence 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 Calendar and https://science.ucalgary.ca/current-students/undergraduate/program-advising/grade-reappraisals-and-appeals

b. **Final Exam:** student seeking a reappraisal of a final grade should first attempt to review the final grade with the d epartment or faculty offering the course. After which, if the student wishes to initiate a formal grade reappraisal, they should refer to ucalgary.ca/registrar/student-centre/grades for more information. The student must indicate exactly what error was made in marking the final assessment and/or in computing the final grade. 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 Section I.3 Reappraisal of Final Grades of the University Calendar.

a. Term work

Be aware that in all requests for regrades, as per UofC policy, the grade to the work could go up, remain the same or it could go down and the regrade outcome is binding.
We also very strongly recommend that you take at least 24hrs after getting a grade back *before* you start the regrade process. This gives you chance to review the feedback and probably take some of the emotion out of the situation (this is a good life lesson for many aspects of life).

i. MT & CAL Students are required to present a concise but complete chemistry / science based rationale via ucalgary email to the course coordinator (Dr Hunt) within ten business days of either being notified about the grade or when the graded item is returned to the class.

ii. Laboratory. See section 6 of the CHEM351F24 student laboratory manual.
The request should be made in the first instance to your laboratory TA and only after that (if required) to the laboratory coordinator. If you need to appeal to the laboratory coordinator, then you need to provide a detailed rationale that outlines where and for what reason an error is suspected (*i.e.* clearly stating the details of your concern) and your University of Calgary email contact information (all to be done within the 10 day business period). The laboratory coordinator will then review the request and provide a response to the University of Calgary email address. No such appeal will be considered after the 10 business days have elapsed. 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 examination: The student shall submit the request to Enrolment Services. See Section I.3 of the University Calendar

12. **Other Important Information For Students:**

a. **Wellness and Mental Health Resources** 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. **Student Wellness Services:** For more information, see their website or call 403-210-9355.

c. **Student Success:** The Student Success Centre provides services and programs to ensure students can make the most of their time at the University of Calgary. Our advisors, learning support staff, and writing support staff assist students in enhancing their skills and achieving their academic goals. They provide tailored learning support and advising programs, as well as one-on-one services, free of charge to all undergraduate and graduate students. For more information visit: https://www.ucalgary.ca/student-services/student-success

d. **Student Ombuds Office:** The Student Ombuds Office supports and provides a safe, neutral space for students. For more information, please visit www.ucalgary.ca/ombuds/ or email ombuds@ucalgary.ca

e. **Student Union (SU) Information:** The SU Vice-President Academic can be reached at (403) 220-3911 or suvpaca@ucalgary.ca; Information about the SU, including elected Faculty Representatives, can be found here: https://www.su.ucalgary.ca. Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca.

f. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the Request for Accommodation in Academic Courses Form and sending by email to science@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

g. **Academic Integrity and 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
Faculty of Science Academic Misconduct Process
Research Integrity Policy

Additional information is available on the Student Success Centre Academic Integrity page

h. **Copyright Legislation:** All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy) and requirements of the copyright act (laws-lois.justice.gc.ca/eng/acts/C-42/index.html) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

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.

j. **Recording of Lecture:** Audio recording of lectures, other than where an audio recording is an accommodation, shall be permitted for individual private study only at the discretion of the instructor. For any other use, whether by duplication, transcription, publication, sale or transfer of recordings, written approval must be obtained from the instructor for the specific use proposed. Any use other than that described above constitutes academic misconduct and may result in suspension or expulsion. For more information, see Section E.6 Recording of Lectures of the University Calendar.

k. **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.

l. **Surveys:** At the University of Calgary, feedback through the UCalgary Course Experience Survey provide valuable information to help instructors and programs evaluate the student experience. Your responses make a difference and facilitate instructors in improving the learning and teaching experience offered in our courses. For more information, please visit https://www.ucalgary.ca/provost/teaching-learning/student-surveys.

m. **Emergency Evacuation/Assembly Points:** Assembly points for emergencies have been identified across campus. Assembly points are designed to establish a location for information updates from the emergency responders to the evacuees; from the evacuated population to the emergency responders. For more information, see the University of Calgary's Emergency Management website: https://www.ucalgary.ca/risk/emergency-management/evac-drills-assembly-points/assembly-points

n. **Safewalk:** Campus security will escort individuals, day or night, anywhere on campus (including McMahon Stadium, Health Sciences Centre, Student Family Housing, the Alberta Children's Hospital and the University LRT station). Call 403-220-5333 or visit https://www.ucalgary.ca/security/safewalk. Use any campus phone, emergency phone or the yellow phone located at most parking lot pay booths. Please ensure your personal safety by taking advantage of this service.

o. **Campus Supports & Resources:** A link to required information that is not course-specific related to student wellness and safety resources, can be found on the Office of the Registrar's website: https://www.ucalgary.ca/registrar/registration/course-outlines

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 - Aug 28 2024 10:07

Department Approval

Electronically Approved - Aug 28 2024 16:42

Associate Dean's Approval