

Chem 1301A (Fall 2025–26) Discovering Chemical Structure

Welcome to Chem 1301A!

Please download and save this course outline for future reference.

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Description & Prerequisite Requirements

An introduction to the foundational principles of chemical structure and properties, emphasizing their relevance to modern science. Topics include: atomic structure, theories of chemical bonding, structure and stereochemistry of organic molecules, and structure of coordination complexes.

3 lecture hours, 1.5 laboratory hours. 0.5 course. Fully in-person.

Prerequisite: Grade 12U Chemistry or equivalent.

Unless you have either the prerequisites for this course or written special permission from the Department of Chemistry to enroll in it, you may be removed and withdrawn from this course in accordance with university policy. This may be done after the add/drop deadline of the academic term, and the course will be marked as withdrawn (WDN) on your academic record. This decision may not be appealed.

Repeating students must repeat the lab component. There are no lab exemptions.

Key Dates

Date	Event
Wednesday, September 10	In-class Diagnostic Quiz based on high-school chemistry
Friday, September 12 ("Add deadline")	Last day to make registration changes, such as lecture and lab sections. This is the last day to de-register from a fall-term or full-year course and remove it from your academic record.
Sunday, September 14	Online quiz on administrative matters due by 11:55 pm
Week of September 15	Lab location and link to Achieve sign-up will be posted on OWL under <i>Grades</i>
Monday, September 22	Lab rotations start
Saturday, October 4	In-person Test #1 (6:30–8:30 pm). Room assignments will be posted on OWL under <i>Grades</i> .
Saturday, November 1	In-person Test #2 (6:30–8:30 pm). Room assignments will be posted on OWL under <i>Grades</i> .
Monday, December 1 ("Drop deadline")	Last day to drop a fall-term course without academic penalty. If you drop the course on or before this date, it will be shown on your academic record as WDN (withdrawn). Dropping after this date will result in a WDF, which counts as an F.

Course Website

News, course updates, and relevant materials will be posted on Western's learning management system, OWL Brightspace (<http://owl.uwo.ca>). This is the primary method by which information will be disseminated to all students in the class, so you are responsible for checking OWL on a frequent basis.

If you need technical assistance with OWL, seek support on the OWL Help page. Alternatively, contact the Western Technology Services Helpdesk by phone at 519-661-3800 or extension 83800.

Learning Outcomes

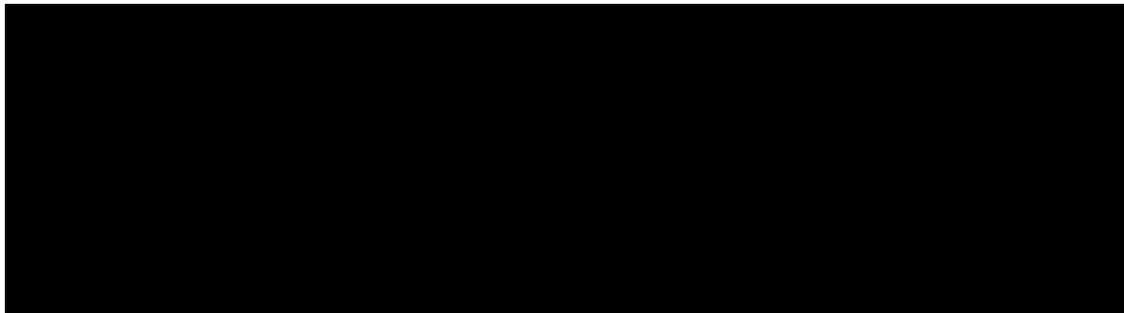
Chem 1301A has an emphasis on the development of skills such as critical thinking, problem solving, and quantitative reasoning; these “professional skills” are essential to success in not just chemistry but also in other courses and in many occupations. A student receiving credit for Chem 1301A will be expected to reliably demonstrate competence in their ability to:

Discipline-Specific Expectations	Professional-Skill Expectations
Describe the importance of chemistry in everyday life and the interdisciplinary nature of chemistry.	Analyze and critically assess problems, and take a systematic approach to solve them.
Use critical thinking skills to explain, make connections between, and apply chemical principles, laws, and theories pertaining to fundamental chemistry, atomic theory, molecular shape & structure, and the various properties of matter.	Work independently, as well as with others in an effective, practical, social, and ethical manner.
Evaluate and assess chemical data and explain how they relate to chemical theories/laws.	Obtain, evaluate, and integrate information from various sources, and determine its relevance.
Apply chemical theories or laws to solve a variety of new qualitative and quantitative chemical problems.	Prioritize tasks and manage the use of time.
Conduct experiments and draw conclusions from collected experimental data and results.	Execute mathematical calculations accurately.
Safely use a variety of laboratory equipment and instrumentation to perform experimental procedures and explain the underlying theory behind all of them.	Communicate thoughts, ideas, and observations verbally and in writing.
	Recognize when to seek assistance.
	Develop respect for, and comply with, regulations and policies.
	Accept responsibility for their decisions, actions, and inactions.



Course Personnel, Lecture Info, and Contact Info

Throughout the term, three course instructors, a lab coordinator, an undergraduate assistant, and many teaching assistants support your learning.



To contact any team member, please submit a service ticket at:

<https://help.sci.uwo.ca/servicedesk/customer/portal/14>

Direct emails to course personnel will not be accepted.

The ticketing system should only be used for administrative purposes. Tickets are triaged during regular business hours and answered in the order of importance. To allow the Chem 1301A team to respond to administrative concerns as quickly as possible, please do not send tickets containing:

- Questions about course material or on how to do a particular problem in the workbook. Such questions should be taken to the Resource Room or posted on the OWL discussions.
- Questions that can be answered based on the information found in this course outline.
- Requests for grade increases, extra assignments, make-up labs, or similar.

Constructive feedback is valuable to us. Please do not hesitate to contact us if you have any comments or feedback on any aspect of Chem 1301A. We are always trying to improve the course so that we can improve your experience!



Class Topics

Workbook Chapter	Class Topic	Approx # of Classes
	Welcome	1
1	Self-Study Concepts <ul style="list-style-type: none">This contains selected concepts from high-school chemistry and is important for the lab component. It is testable.	0
	Diagnostic Quiz (based on high-school chemistry)	1
2.1	Atomic Theory <ul style="list-style-type: none">Atomic structure, orbitals, electron configuration	5
2.2	Periodic Properties	2
3.1	Ionic and Covalent Bonding <ul style="list-style-type: none">Lewis structures, resonance, bond polarity	5
3.2	VSEPR Theory <ul style="list-style-type: none">Shapes and polarity of molecules	2
3.3	Intermolecular Forces	1
3.4	Valence Bond Theory <ul style="list-style-type: none">Hybridization and formation of σ and π bonds	2
3.5	Molecular Orbital Theory	2
4.1	Transition Metals and Coordination Complexes	2
4.2	Crystal Field Theory	2
5.1	Functional Groups and IR Spectroscopy	2
5.2	Alkanes and Cycloalkanes <ul style="list-style-type: none">Constitutional isomerism and conformations<i>cis/trans</i> isomerism of substituted cycloalkanes	3
5.3	Alkenes and Alkynes <ul style="list-style-type: none"><i>cis/trans</i> isomerism and <i>E/Z</i> nomenclature of alkenes	2
5.4	Chirality <ul style="list-style-type: none"><i>R/S</i> nomenclature of tetrahedral stereocentres	2

In all of the topics, the primary focus is on the *understanding* and *application* of the concepts. Accordingly tests and exams will be designed to evaluate your comprehension of the material and your ability to apply it to new and different scenarios. Students should not expect questions that simply test your ability to regurgitate memorized facts or substitute numbers into formulas.



Course Materials

Chemistry 1301A Course Workbook, 2025–26 edition

- This learning tool, designed by the Department of Chemistry, is a textbook and lecture-note set. Classes and assessments will be based on this year's edition, so we recommend using this edition. It is available at the bookstore: <https://bookstore.uwo.ca/product/9781533974860>
- Read the relevant topics before coming to class, bring your workbook to class, and complete the practice problems after class.

Chemistry 1301A Laboratory Manual and Past Tests & Exams, 2025–26 edition

- Old editions may not be used. Students must bring the current edition to every experiment. It is available at the bookstore: <https://bookstore.uwo.ca/product/9781533974907>
- Macmillan's Achieve platform will be used for lab submissions. An access code is located in the lab manual.
- **You will be provided with your own link for signing up on Achieve during the week of September 15. You must sign up using your Western email address before your first lab.**

Your Western email ends in @uwo.ca. Using any other email will result in mark of zero on the lab component.

Safety Glasses

- Safety glasses are included with the purchase of the laboratory manual. Redemption details will be posted on OWL. **Safety glasses are not available for rent.**

Lab coat

- For your safety, a proper lab coat is required. Scrubs or "consultation coats" are not acceptable, because they are too short, do not offer enough protection to the upper body, or are not sufficiently fire-resistant.
- The lab coat can be purchased at the bookstore or obtained elsewhere. Past students have brought one from a place that they worked at, the Ontario Science Centre, etc. The lab coat can be of any colour and even tie-dyed! Sorry, we do not rent lab coats.

Molecular model kit, by Darling Models

- This resource is required and costs \$34.50 at the bookstore. Used kits are suitable.

Web-enabled device (phone, tablet, laptop, etc.) for the iClicker component

Non-programmable scientific calculator

- Any basic scientific calculator may be used as long as it is non-programmable and cannot store notes, formulas, or diagrams. The calculator must be a standalone calculator – that is, it must be an actual calculator and not, for example, a phone or computer. We recommend that you bring a second calculator to assessments in case your main calculator malfunctions. You will not be allowed to borrow or share calculators during assessments.



How to Attain Your Goals in Chem 1301A

You will be more successful in the course if you recognize the following:

1. Like many sciences, chemistry is a cumulative subject. Because one topic acts as a foundation for the next, it is essential to stay up-to-date by studying the material and doing practice problems.
2. Learn *why* something is the way it is, not just *what* it is. Recognize that memorization is not the same as learning and understanding. When working on questions from the workbook, focus on the concepts, the thought process, how to arrive at the answer, and why the answer is the answer.
3. Don't just come to class – get something out of coming to class. Be attentive. Participate. Think. Write down important points, but avoid spending so much time writing that you're not thinking.
4. Labs are intended to be an enjoyable experience. Prepare for each lab in advance by reading the lab manual and doing the prelab exercise. Learn the theory and the concepts behind the experiment.
5. We're here to help! If you have questions about the course material, ask them well in advance. Ask questions at the Resource Room or on the OWL forum as soon as they arise.
6. To assist in learning and understanding, you are encouraged to study in small groups, where you can challenge yourself by defending your work and ideas and also challenge others.



Learning Support and Resources

OWL Discussions

The discussion forums on OWL provide an engaging venue for students to collaboratively discuss course concepts. Course TAs will be participating in the discussions.

Chemistry Resource Room

The Resource Room, located in Materials Science Addition 1201, offers you a comfortable and informal environment to ask questions related to lecture material and obtain assistance on practice problems. Group work and peer-to-peer support are strongly encouraged.

During scheduled hours, which will be posted on OWL, the Resource Room will be staffed by a highly qualified teaching assistant. Virtual (online) sessions will also be available.

Instructors' Student Hours

Course instructors have student hours (office hours) that can be scheduled by appointment through the ticketing system. Each course instructor supports many students, so please note that these hours are set aside for concerns (e.g. learning strategies, personal matters, etc.) that cannot be addressed through the OWL discussions or the Resource Room. That way, if you have such concerns, you can be assured that you will have someone to talk to!

Learning Development & Success

Learning-skills professionals at LDS (<https://learning.uwo.ca/>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling. LDS also runs a Peer Assisted Learning Centre.

Tutors

Private, third-party review or tutor services are not affiliated with, or endorsed by, Western. As such, the university cannot be responsible for any of the content they provide, even if the content causes you to answer exam questions incorrectly. Because of liability reasons, your instructors are not permitted to suggest or recommend any specific tutors.

Students should realize that they may not hire tutors who are Chem 1301A teaching assistants, even if they are not from your own lab section. This is a serious legal matter pertaining to conflict of interest.



Team-Based Problem-Solving Modules

These activities are designed to engage you and your team in discussion of course concepts and problem-solving strategies related to the team exercises in your workbook. Please select your own team members (2–4 students). You are encouraged to meet with your team to complete each module, but if circumstances require you to complete a module independently, this is permitted.

You must work through these modules using your own OWL account. Your grade on these activities is based on completing the modules and then acknowledging each module completion via an OWL Quiz. Submitting an OWL Quiz without completing the associated module is considered a fraudulent submission and may be investigated.

For optimum learning, it is suggested that the modules be completed prior to the test/exam, as specified below. To provide flexibility, you are allowed to acknowledge completion of the modules until the last official day of class (December 9). **The suggestions below only indicate by when you should complete the modules and do not indicate what is covered on the test/exam:**

- By Test #1: Chapter 1 Self Study (not counted towards the 7), Topic 2.1, and Topics 2.2/3.1
- By Test #2: Topics 3.2/3.3, Topics 3.4/3.5, and Topics 4.1/4.2
- By last day of class: Topics 5.1/5.2 and Topics 5.3/5.4

Your best 6 of 7 module marks will be included towards your course grade. Thus, your first missed module will automatically be excused. Additional missed modules will earn a mark of zero and academic consideration will not be considered.

Laboratory Information

Experiments, Schedule, and Location

In Chem 1301A, you will partake in four exciting laboratory experiments:

1. Introduction to Laboratory Practices
2. Synthesis of a Coordination Compound
3. Investigating the Properties of Carbonates
4. Identification of Ions by Qualitative Analysis

Although your timetable on Student Centre or Draft My Schedule will show that you have a lab every week throughout the term, only four of those weeks will be used. There are no course activities during the non-lab weeks, so use those weeks to study!

Please follow this schedule:

Expt	Prelab open on Achieve at 9:00 am	Lab held (lab section ends in 1, 3, or 5)	Lab held (lab section ends in 2, 4, or 6)	Smart worksheet due on Achieve at 11:55 pm
1	Sept 22	Week of Sept 22	Week of Oct 6	Oct 17
2	Oct 13	Week of Oct 13	Week of Oct 20	Oct 31
3	Oct 27	Week of Oct 27	Week of Nov 10	Nov 21
4	Nov 17	Week of Nov 17	Week of Nov 24	Dec 5

To determine your lab section, please see your course information on Student Centre. (Note that your schedule on Draft My Schedule may not be accurate because you may have registered for something else other than what you had added to your draft.)



The location where you will be performing your labs will be posted on OWL. **It will not be on your timetable on Student Centre or Draft My Schedule.**

Lateness Policy

Any student who arrives after the doors to the lab have closed, when the “TA talk” begins, is considered to be late and will not be permitted to do the experiment. Late students will be assigned a mark of zero for the entire experiment. It may be possible to replace the mark of zero by writing a “lab make-up quiz” (see later).

Safety and Dress Code

Western is committed to workplace health and safety, and has strict safety regulations. Lab TAs and staff will remove students who, in their opinion, do not meet the safety requirements or are not prepared, as described below. These students, and those who arrive late, will receive a zero for the entire experiment, and no credit will be given for the prelab exercise. It may be possible to replace the mark of zero by writing a “lab make-up quiz” (see later).

Safety glasses or goggles must be worn whenever you are in the laboratory. Students who wear prescription glasses must wear appropriate safety glasses or goggles over them. If you wear contact lenses, you must inform the lab TA. **Safety glasses are not available for rent.**

With respect to clothing, Western mandates “shoulder-to-toe” coverage. Details are found in the lab manual. **Shoes, socks, pants, or lab coats are not available for rent from Chemistry.**

Everyone must be wearing a buttoned-up lab coat at all times in the laboratory.

Everyone must wear ankle-length pants, socks that cover the ankle, and shoes that cover the whole foot (top, sides, and back) without any “cutout holes.” Shorts, sandals, and capris are among the items of clothing that are not acceptable. No skin may show at the ankles even when you are seated. Pants with rips or tears, or leggings with mesh panels, are not acceptable.

Preparation

Before coming to the first experiment, read the Safety Regulations, Introduction, and Significant Figures sections of the lab manual; read the Lab Practices Experiment; view the relevant materials on OWL; and complete the Safety Contract on Achieve. **Bring your lab manual and calculator. Proper attire, including safety glasses and lab coat, is required.**

Prelab exercises must be completed online on Achieve before you arrive. You will be required to present proof of prelab completion on your laptop, tablet, or phone before entering the lab. Access to the prelab exercises on Achieve will be available starting at **9 am** on the dates indicated on the previous page.

Lab Submissions

Each lab submission has three parts:

1. A prelab exercise that is completed on Achieve prior to your lab session.
2. A *Submit-in-the-Lab Sheet* that is handed in to lab TA at the end of the lab session.
3. A *Smart Worksheet* that is completed on Achieve, which, for labs 1 through 4, are due by **11:55 pm** on the dates indicated on the previous page. Of course, you can submit your smart worksheet before the deadline!

Obviously, you can only submit a smart worksheet if you had attended the lab session. Submitting one without attending a lab is considered a fraudulent activity that will be investigated in accordance with Western’s policy on scholastic offences.

Evaluation

Components

Your overall course grade out of 100 will automatically be the *higher* of grades calculated by the two methods shown below using the respective component weights.

Component	Notes	Method	Method
		1	2
Diagnostic Quiz	Held in class on Wednesday, Sept. 10, and based on high-school chemistry (not just the self-study section of this course). As long as you complete the quiz, you will receive one mark regardless of your actual score. No studying is required for this quiz.	1	same
OWL activity on administrative matters	Due Sunday, Sept. 14 at 11:55 pm. This activity will help you become familiar with the course and with Western. As long as you obtain at least 90%, you will receive one mark regardless of your actual score. You have five (5) attempts to obtain 90%.	1	same
iClicker	Marked on participation only. As long as you answer at least 70% of the questions, you will receive the full participation mark. If you answer less than 70% of the questions, the weight of the iClicker component will be shifted to the Final Exam.	2	same
Team-Based Modules	Best 6 out of 7 modules (0.50 each)	3	same
Laboratory	Four experiments (4.00 each)	16	same
Term Tests	Test #1: Saturday, October 4, 6:30–8:30 pm Test #2: Saturday, November 1, 6:30–8:30 pm		
	Higher-scoring test based on percentage	30	same
	Lower-scoring test based on percentage	5	0
Final Exam	Cumulative and scheduled by the Registrar, 3.00 h	42	47
Bonus	Participation in 2 research surveys (0.50 each)	1 bonus	same

The Diagnostic Quiz, Test #1, Test #2, and Final Exam are marked using bubble sheets via the Gradescope platform. You are responsible for filling out the sheets correctly during the assessments (no extra time is provided for filling out the sheets).

Method 2 means that if your Final Exam mark is higher than your lower-scoring test, both on a percentage basis, your lower-scoring test won't count!

Requirements for Passing Course

To receive a passing grade for Chem 1301A, you must fulfill all three of these conditions:

1. Obtain an overall grade of at least 50%.
2. Obtain at least 50% (8.00 out of 16) on the laboratory component. This mark is calculated from all four experiments. A missed experiment is assigned a mark of zero unless the mark has been replaced by the mark obtained on a lab make-up quiz (see section on Missed Course Components).
3. Miss no more than two experiments, even if the marks for the missed experiments are replaced by the marks on the make-up quizzes. That is, you must do at least two labs.

Students who fail to meet requirement #2 or #3 will receive a course grade no greater than 40%, even if the calculated course grade is higher.

iClicker

To receive credit for the iClicker component:

- Create an iClicker account using your **Western email and your Western username (the part before @uwo.ca)**. Please see instructions at <https://wts.uwo.ca/iclicker/> and on OWL.
- If you already have an iClicker account, please go into the settings and verify that it uses your Western email address and contains your Western username.
- You should be automatically added to the proper Chem 1301A iClicker section. If not, you can manually add it.
- Attend, and answer iClicker questions in, the lecture section in which you are registered. Questions answered in the incorrect lecture section will not count towards the total number of questions that you answer.
- Ensure that your web-enabled device is working properly. If it is not working, try refreshing the page or restarting the app. It is your responsibility to ensure that your device is working properly. Contact Western Technology Services if you require assistance.

Not using your Western email and your Western username will result in mark of zero on the iClicker component.

Equal Opportunity and Evaluation Policy

We are here to help you attain your goals. We want you to do well in the course. We were, at one time, students ourselves, so we understand the importance of course grades and the hard work that you will invest into this course.

Most importantly, we also have to be fair. The university is committed to academic integrity and has high ethical and moral standards. All students will be treated equally and evaluated using the criteria presented in this course outline and their respective weights. The evaluation criteria are based strictly on actual achievement, not on effort or how hard the student tried. Claims of an excellent academic history, of attendance in the course components, or of personal issues (family, relationship, financial, etc.) cannot be used to justify a higher grade in the course because they are not criteria for evaluation. There is no extra work available for extra credit. We do not offer any extra assignments, essays, experiments, or other work of any kind to anyone.

The requirement for a higher grade in order to, for example, maintain a scholarship, enter a program, or obtain a higher GPA for various reasons, is not a justifiable reason for increasing your grade. If we increased or “bumped” your grade (*i.e.* gave you a grade that you did not legitimately earn), it would be unfair to the other students and also a great disservice to the scholarships and programs who are evaluating all students on the basis of their grades. Please do not ask us for a grade increase.



Late or Missed Coursework

Most students in Chem 1301A follow all deadlines and participate in all learning activities and assessments, which are all strategically designed and scheduled for optimum learning.

Your instructors realize that occasionally, students may experience an extenuating circumstance of significant severity (such as illness or injury) that temporarily renders them unable to meet academic requirements.

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs* posted on the Academic Calendar at:
https://www.uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf

This policy does not apply to requests for academic consideration submitted for attempted or completed work, whether online or in person.

The policy also does not apply to students experiencing longer-term impacts on their academic responsibilities. These students should consult Accessible Education at:
http://academicsupport.uwo.ca/accessible_education/index.html

For procedures on how to submit academic consideration requests, please see the information posted on the Office of the Registrar’s website at:
https://registrar.uwo.ca/academics/academic_considerations/

All requests for academic consideration must be made within 48 hours after the assessment date or submission deadline.

- If you are a Science or Basic Medical Sciences student, information on academic considerations (as well as adding/dropping courses, appeals, exam conflicts, and many other academic-related matters) can be found at: website: <https://www.uwo.ca/sci/counselling/>

All academic consideration requests must include supporting documentation; however, recognizing that formal documentation may not be available in some extenuating circumstances, the policy allows students to make *one* academic consideration request without supporting documentation in this course. However, the following assessments are excluded from this, and therefore always require formal supporting documentation:

- Final Exam

When a student *mistakenly* submits their one allowed academic consideration request without supporting documentation for the assessments listed above or those in the coursework with built-in flexibility below, the request cannot be recalled and reapplied. This privilege is forfeited.

Because the following components already have built-in flexibility, academic consideration requests will be denied for these:

- OWL Admin Assignment (automatic 48 h extension)
- iClicker Questions (shifting of weight to the Final Exam if participation is under 70%)
- Team Modules (accepted until the last day of class)
- First missed test (Test #1 *or* Test #2; evaluation Method 2 applies)
- First missed lab component (lab itself *or* smart-worksheet over 48 h late; write make-up quiz)

Students who miss *both* Test #1 and Test #2 can request academic consideration, and when granted, the weight of the two tests will be shifted to the Final Exam.

A summary of the procedures for the different course components is provided below.

Missed Diagnostic Quiz

- | | |
|----------------------|---|
| Step 1 | A missed Diagnostic Quiz results in a mark of zero. However, if extenuating circumstances apply (including adding the course after the quiz date), simply contact us using the ticketing system by Wednesday, September 18. |
| What happens? | After we review your ticket, you will be granted the participation mark. |

Late or Missed OWL Admin Assignment

What happens? A 48-hour extension is automatically granted. There is no need to contact us. Just submit your assignment within 48 hours after the deadline.

Assignments will not be accepted after the 48-hour extension period and will be assigned a mark of zero.

Requests for academic consideration will be denied.

Missed iClicker Questions (Lectures)

What happens? Most students attend all lectures, but we realize that every now and then, you will not be able to attend class. The participation-based iClicker marking scheme is already designed to account for the occasional missed class or technical difficulty. So, iClicker marks will not be adjusted for those reasons.

If you do not answer at least 70% of the iClicker questions, the value (2) of the iClicker component will automatically be shifted to the Final Exam.

Requests for academic consideration will be denied.

Missed Lab Component (Lab Session or Submission Deadline)

What happens? There are no make-up labs, nor is it possible to reschedule a lab.

If you attended your lab but missed the smart-worksheet submission deadline, you can submit it up to 48 h late without penalty.

If you missed a lab, or your smart-worksheet submission is over 48 h late, you are deemed to have missed a *lab component*. Proceed to Step 1.

Step 1 If this is your **first** missed lab component (either a missed lab *or* a submission over 48 h late), academic consideration is not required.

At the end of the term (around December 5), you will be able to write a make-up quiz pertaining to the missed lab or late submission. The mark you receive on the quiz will replace the entire mark for the associated experiment. Watch for an announcement around December 1 containing further information and action items. In the meantime, do not contact us.

If you miss a **second** lab component (either a missed lab *or* a submission over 48 h late, regardless of what the first missed lab component was), obtain academic consideration. You will write a second make-up quiz.

Good to know! Although the mark on a make-up quiz replaces the mark for the associated experiment, the quiz is not a replacement for actually completing the experiment. Completing an experiment means doing the prelab exercise, attending the lab, and submitting the smart worksheet.

To be eligible to pass the course, you must complete at least two experiments, and obtain at least 50% on the lab component. Considering that the course has four experiments, this requirement means that you can only write a maximum of two make-up quizzes.

Tests and exams will contain questions related to the theoretical aspects of the experiments. You are still responsible for the material pertaining to the missed labs.

Missed Test #1 and/or Test #2

There are no make-up tests. The procedure depends on whether you miss one or both tests.

Missed one of Test #1 or Test #2

What happens? According to Method 1 of the evaluation scheme, the higher-scoring test is worth 30, and the lower-scoring test is worth 5.

A missed test is assigned a mark of zero, so the missed test is the lower-scoring test. Therefore, calculation Method 2 will apply if you miss one test. This is done automatically. There is no need to contact us or take any additional steps.

Academic consideration neither required nor accepted.

Missed both Test #1 and Test #2

Step 1 Obtain academic consideration.

Anything else? Nope! After obtaining academic consideration, please do not contact us even though you may be asked to do so. We will be automatically notified of the academic consideration after it has been processed.

What happens? The weight of the tests will be transferred to the Final Exam, resulting in a Final Exam weight of 77.

Missed Final Exam

- Step 1** Obtain academic consideration. **Supporting documentation is required.**
- Anything else?** Nope! After obtaining academic consideration, please do not contact us even though you may be asked to do so. We will be automatically notified of the academic consideration after it has been processed.
- What happens?** You will be able to write the Special Exam (the name given to a make-up Final Exam) in January next year.
- If you miss the Special Exam, you will need to obtain academic consideration again. If it is granted, the date of the next Special Exam will normally be the scheduled date for the Final Exam during the intersession offering of the course next May. The maximum course load for the term in which the Special Exam is granted will be reduced accordingly. Please see the section on Special Exams in the Academic Calendar for details:
https://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=5&SelectedCalendar=Live&ArchiveID=#Page_65
- Good to know!** You may also be able to write the Special Exam if you are in a “Multiple Exam Situation.”
- https://registrar.uwo.ca/academics/examinations/exam_conflicts.html

Academic Policies and Legalities

Use of Generative AI Tools

Unless otherwise stated, the use of generative AI tools (e.g., ChatGPT, Microsoft Copilot, Google Gemini, or similar platforms) is not permitted in the completion of any course assessments, including but not limited to: assignments, lab reports, presentations, tests, and final examinations.

Use of Western @uwo.ca email

In accordance with policy, https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

Use of Electronic Devices During Assessments

In courses offered by the Faculty of Science, the possession of unauthorized electronic devices during any in-person assessment (such as tests, midterms, and final examinations) is strictly prohibited. This includes, but is not limited to: mobile phones, smart watches, smart glasses, and wireless earbuds or headphones.

Unless explicitly stated otherwise in advance by the instructor, the presence of any such device at your desk, on your person, or within reach during an assessment will be treated as a scholastic offence, even if the device is not in use.

Only devices expressly permitted by the instructor (e.g., non-programmable calculators) may be brought into the assessment room. It is your responsibility to review and comply with these expectations.

Scholastic Offences

Policy on Scholastic Offences:

https://uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_offences.pdf

Procedures on Scholastic Offences (Undergraduate):

https://uwo.ca/univsec/pdf/academic_policies/appeals/undergrad_scholastic_offence_procedure.pdf

Requests for Relief (formally known as “appeals”):

Policy on Request for Relief from Academic Decision:

https://uwo.ca/univsec/pdf/academic_policies/appeals/requests_for_relief_from_academic_decisions.pdf

Procedures on Request for Relief from Academic Decision (Undergraduate):

https://uwo.ca/univsec/pdf/academic_policies/appeals/undergrad_requests_for_relief_procedure.pdf

Cheating Analysis

Computer-marked, multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

Registrar’s Site and Class Scheduling

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

It is university policy that a regularly scheduled class (lecture, lab, or tutorial) takes precedence over tests and exams. Therefore, if another course schedules a test or exam that takes place during your chemistry lecture or lab, the instructor for that course must accommodate you.

Contingency Planning

Although the intent is for this course to be delivered in person, should any university-declared emergency require some or all of the course to be delivered online, either synchronously or asynchronously, the course will adapt accordingly. The grading scheme will not change. Any assessments affected will be conducted online as determined by the course instructor.

Tests and examinations in this course are in-person assessments. In the event that one or more of these assessments need to be conducted online due any university-declared emergency, they may be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: <https://remoteproctoring.uwo.ca>.



Accessibility and Religious Accommodation

Students with disabilities are encouraged to contact Accessible Education (http://academicsupport.uwo.ca/accessible_education/index.html), which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The university's policy on Accommodation for Students with Disabilities can be found here: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic%20Accommodation_disabilities.pdf

When conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible but not later than two weeks prior to the writing or the examination (or one week prior to the writing of the test). Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays: <https://www.edi.uwo.ca>



Additional Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://www.uwo.ca/health>) for a list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at https://www.uwo.ca/health/student_support/survivor_support/get-help.html. To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Western University is committed to a thriving campus as we deliver our courses in the mixed model of both virtual and face-to-face formats. We encourage you to check out the Digital Student Experience website to manage your academics and well-being: <https://www.uwo.ca/se/digital>.

Additional student-run support services are offered by the USC, <http://westernusc.ca/services>.

This course is supported by the Science Student Donation Fund. If you are a student registered in the Faculty of Science or Schulich School of Medicine and Dentistry, you pay the Science Student Donation Fee. This fee contributes to the Science Student Donation Fund, which is administered by the Science Students' Council (SSC). One or more grants from the Fund have allowed for the purchase of equipment integral to teaching this course. You may opt out of the Fee by the end of September of each academic year by completing the online form linked from the Faculty of Science's Academic Advising site. For further information on the process of awarding grants from the Fund or how these grants have benefitted undergraduate education in this course, consult the Chair of the Department or email the Science Students' Council at ssc@uwo.ca.