Chemistry 1302B • Winter 2024-25
Discovering Chemical Energetics

Welcome to Chem 1302B!

Please read this important information and refer to this document throughout the term.

Course Description 1
Key Dates 2
Course Website 2
Learning Outcomes 2
Teaching Team & Contact 3
Learning Support & Resources 4
Course Materials 5
Course Topics 6
Laboratory Information 6
Evaluation 9
How to Achieve Your Goals in Chem 1302B 11
Student Absences and Missed Course Components 12
Academic Policies and Legalities 15
Accessibility and Religious Accommodation 15
Support Services 16

Course Description

Calendar Description: *An examination of how the fundamentals of energetics influence chemical processes. Topics include: gases, thermodynamics and thermochemistry, chemical equilibria, solubility, weak acids and bases, electrochemistry, and chemical kinetics.*

Prerequisite: Grade 12U Chemistry (SCH4U) or equivalent. Grade 12U Advanced Functions (MHF4U) or Calculus & Vectors (MCV4U), or Mathematics 0110A/B or 0105A/B, is strongly recommended.

Antirequisites: The former Chem 1024A/B.

Extra Information: 3 lecture hours, 1.5 laboratory hours (3 hours every other week).

Note: Students repeating the course must repeat the lab component. **There are no exemptions.**

Unless you have either the prerequisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Key Dates

Dates in 2025	Event
Monday, January 6	Course begins. Attend your first Chem 1302B class!
Tuesday, January 14	Last day to add a second-term half course or make changes to lab section enrolment.
Friday, January 17	OWL Intro Activity and OWL Pre-Test due by 11:55 pm. First designated class for team-based problem-solving. Lab location and personalized Achieve lab site link available on OWL.
Monday, January 20	First week of laboratory rotations. Sign up on Achieve and complete initial online activities prior to your first lab.
Saturday, February 1	Test #1, 10:00 am – 12:00 pm (Locations TBA on OWL).
February 15 – 23	Family Day and Spring Reading Week.
Sunday, March 9	Test #2, 3:00 pm – 5:00 pm (Locations TBA on OWL).
Sunday, March 30	Last day to drop the course without academic penalty.

Course Website

Course material will be posted to OWL: https://westernu.brightspace.com/

Students are responsible for checking the course OWL site (https://westernu.brightspace.com/) regularly for news and updates. This is the primary method by which information will be disseminated to all students in the class.

If students need assistance with the course OWL site, they can seek support on the OWL Brightspace Help page. Alternatively, they can contact the Western Technology Services Helpdesk. They can be contacted by phone at 519-661-3800 or ext. 83800.

Learning Outcomes

This course emphasises skill development, such as critical thinking, problem solving, analysis, and quantitative reasoning; these transferrable skills are essential to success in not just chemistry but also in other courses and many occupations. By the end of Chem 1302B, students should be able to:

Discipline-Specific Outcomes	Transferrable-Skill Outcomes
Describe the importance of chemistry in everyday life and the interdisciplinary nature of chemistry. Use critical thinking skills to explain, make connections between and apply chemical	Analyze and critically assess problems, and take a systematic approach to solve them.

principles, laws, and theories pertaining to ideal gases, thermodynamics, chemical equilibria, electrochemistry, and chemical kinetics. Evaluate and assess chemical data and explain how they relate to chemical theories/laws. Apply chemical theories or laws to solve a variety of new qualitative and quantitative chemical problems. Conduct laboratory experiments and draw conclusions from collected experimental data and results. Safely use a variety of laboratory equipment and instrumentation to perform experimental procedures and explain the underlying theory behind all of them.	Obtain, evaluate, and integrate information from various sources, and determine its relevance. Work with others in an effective, practical, social, and ethical manner. Prioritize a set of tasks and manage the use of your time. Execute mathematical calculations accurately. 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 your decisions, actions, and non-actions.

Teaching Team & Contact

Four course instructors, a lab coordinator, an undergraduate advising assistant, a lab technician, and several dozen teaching assistants (TAs) support your learning in this course.

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

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

Please do **not** email team members directly.

	Team Member	Location	Times	Section
Section Instructors	Dr. Jamie Noel	NSC-145	MWF 9:30 am–10:20 am	002
	Dr. Yang Song	NSC-145	MWF 10:30 am–11:20 am	003
	Dr. Christina Booker*	NSC-145	MWF 12:30 pm–1:20 pm	004
	Dr. Francois Lagugne-Labarthet	NCB-101	MWF 1:30 pm–2:20 pm	005
Lab Coordinator	Dr. M. Naeem Shahid	MSA 1235	**Course Coordinator*	
Undergraduate Advising Assistant	Sarthak Nanda	CHB 119		

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 your Chem 1302B team to respond to administrative concerns as quickly as possible, please do not send tickets containing:

- Questions that can be answered based on the information found in this course outline. Refer to the course outline first.

- Questions about course material. Such questions should be taken to the Resource Room or posted on the OWL forum.
- Requests for grade increases, extra assignments, make-up labs, etc. Refer to the section below entitled *Equal Opportunity and Evaluation Policy.*

Constructive feedback is valuable to us. Please contact us if you have any comments or feedback on Chem 1302B. We are always trying to improve the course so that you can have a great learning experience!

Learning Support & Resources

OWL Discussions

Collaboratively discuss course concepts and practice problems with your peers. TAs will also be participating in these discussions.

Resource Room

The Resource Room, located in Materials Science Addition 1201, provides you with an informal environment to discuss chemistry questions with a highly qualified teaching assistant (TA) throughout the week. Group work and peer-to-peer support at these sessions are encouraged. Online sessions and sessions for lab-based questions will also be available. The schedule for these drop-in sessions will be posted on OWL.

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 forums or the Resource Room. That way, if you have such concerns, you can be assured that you will have someone to talk to!

Instructors may also be available in the Resource Room during the designated Team Problem-Solving classes and as indicated in the Resource Room schedule on OWL.

Learning Development & Success

Learning-skills professionals at Learning Development & Success (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.

Note on Tutors

Before considering a tutor, check out the Resource Room! Private, third-party review or tutor services are not affiliated with, or endorsed by, the university. 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 Chemistry 1302B teaching assistants, even if they are not from your own lab section. This is a serious legal matter pertaining to conflict of interest.

 *Course Materials*

The following materials are **required** and can be found at Western's Dellelce Family Bookstore.

Chemistry 1302A/B Course Workbook, 2024-25 edition

- This is the textbook and lecture note set for our course. This learning tool is designed by faculty in the Department of Chemistry and costs $78.25 at the bookstore. Since classes and assessments will be based on this year's edition, we strongly recommend using this year's edition.
- Read the relevant topics prior to class, bring your workbook with you to class, and complete the practice problems after class.

Chemistry 1302A/B Laboratory Manual and Past Exams, 2024-25 edition

- This item includes a paper copy of the lab manual and past exams, *and* an access code to **Macmillan's *Achieve* platform**, which will be used for lab preparation and submissions. This resources costs $94.35 at the bookstore and the current edition is required.
- You will receive a **personalized link** to Achieve on OWL by Friday, January 17th. Use this link (*and only your link!*), your access code from your lab manual, and your **@uwo.ca email** address to sign up on *Achieve* before your first lab.

Lab Coat & Safety Glasses

- For your protection, safety glasses and a lab coat are required for the labs. You are welcome to bring ones that you already own. Scrubs or "consultation coats" are not acceptable because they are too short, do not offer enough protection, or are not sufficiently fire-resistant.
- Safety glasses can alternatively be purchased from Western's Chem Club and details will be provided on OWL.

Scientific Calculator

- A basic scientific calculator may be used in the labs and on the test and exam. No programmable calculators (capable of storing notes, formulas, graphing, etc.), smartphones, nor other electronic devices may be used.

Web-Enabled Device

- A phone, tablet, laptop or other web-enabled device will be used for the iClicker component during class. You can use Western's WiFi with your Western credentials.

Course Topics

Our primary focus is on the *understanding* and *application* of these concepts. Accordingly, tests and exams are designed to evaluate your comprehension of the material and your ability to apply it to different scenarios, and not simply your ability to regurgitate memorized facts or substitute numbers into formulae.

Workbook Topic	Lecture Topic	Approximate Start Date
	Welcome & Introduction	January 6
1.1	Gases	January 8
1.2	The Ideal Gas Law*	
2.1	Heat, Work, and Energy	January 15
2.2	Enthalpy*	
2.3	Entropy and Spontaneous Change	
2.4	Free Energy	
3.1	The Equilibrium Constant*	February 3
3.2	Solubility of Ionic Compounds	
3.3	Weak Acids and Bases*	
	Reading Week	*February 15-23*
3.4	Buffers Solutions*	
4.1	Redox Reactions*	March 10
4.2	Voltaic Cells	
4.3	Electrolysis and Electrolytic Cells	
4.4	Batteries	
5.1	Reaction Rates and Rate Laws	March 24
5.2	Reaction Mechanisms and Arrhenius Equation*	

*Review the pre-lesson module on OWL ***prior*** to discussing this topic in class

Laboratory Information

Access, Schedule, and Location

Our course has partnered with *Macmillan* for the lab component. Macmillan's Achieve platform will be used for lab preparation and submissions. You will be provided with a **personalized link** (via OWL) by January 17th to sign up on *Achieve*. **You must sign up using *your* personalized link,**

Western email address (@uwo.ca email address), and access code in your lab manual *before* your first lab.

The laboratory section in which you are registered is the only in-person section that you may attend. Your **lab section** number (along with day of the week and time for your lab) can be found on your **current timetable** on Student Centre. Refer to the schedule below to determine which weeks your experiments will occur, based on your lab section. Each course has its own lab schedule, so do not assume that your chemistry lab schedule will follow another course's schedule.

The **location** where you will be performing your labs will be posted on OWL by January 17th. The possible locations include Zones A, B, C, and D of Materials Science Addition 1220, Zone E of Materials Science Addition 1205, and Chemistry Building 110.

Experiment	Prelab* Opens Online	Lab Held (Lab Section ends in 1, 3, or 5)	Lab Held (Lab Section ends in 2, 4, or 6)	Post-Lab Smart Worksheet Due
#1 Calorimetry of Reactions and Heat Transfer	January 17, 9:00 am	Week of January 20	Week of January 27	February 7, 11:55 pm
#2 Determination of an Equilibrium Constant	January 31, 9:00 am	Week of February 3	Week of February 10	February 28, 11:55 pm
#3 Spectrophotometric Determination of the Ka and Concentration of Bromocresol Green	February 21, 9:00 am	Week of February 24	Week of March 3	March 14, 11:55 pm
#4 Redox Analysis of Iron Supplements	March 7, 9:00 am	Week of March 10	Week of March 17	March 28, 11:55 pm

**Your pre-lab exercise must be completed online prior to your lab experiment, regardless of the default date listed on Achieve. Proof of completion must be shown upon entering your in-person lab.*

Preparation and Report Submission

Prior to your *first* experiment (and *after* receiving your personalized link on January 17th):

Enroll on Macmillan's *Achieve* Platform.
1. Use personalized link on OWL Grades.
2. Activate with code in lab manual.
3. Register using your @uwo.ca email address.

Complete lab conduct agreement and **review** Smart Worksheet activities within Lab Overview materials on Achieve.

Read Safety Regulations, Introduction, and Significant Figures sections in your lab manual.

For *each* experiment:

Read Background, Strategy & Procedure sections in your lab manual.

Submit Pre-Lab activity on Achieve. **Bring** proof of completion to your lab.

Attend your in-person lab. **Bring** your lab manual and calculator. **Dress** appropriately, including safety glasses and lab coat.

Record your data in your lab manual. **Submit** your Submit-in-Lab Sheet to your TA before leaving the lab.

Submit Post-Lab activities within the Smart Worksheet on Achieve, using **your** data, by the due date.

You are encouraged to submit your lab report components well in advance of the due date. **Only one submission attempt is possible** for each lab by the due date. Second-attempt requests will not be granted without academic consideration.

Each lab submission has three parts:

1. A **Pre-Lab** exercise that is completed on Achieve *prior* to *your* lab session.
2. A **Submit-in-the-Lab Sheet** that is handed in to the lab TA at the end of your lab session.
3. A **Smart Worksheet** post-lab activity that is completed on Achieve with *your* lab data *after* your lab session.

Obviously, you can only submit a Smart Worksheet Post-Lab activity if you attended the in-person lab. Submission of any Smart Worksheet Post- Lab activities without lab is considered a **fraudulent assignment** and may be investigated in accordance with the Western's policy on scholastic offences.

If you have a lab-based question or concern and you are in your lab, ask your lab TA. Otherwise, visit the Lab Resource Room. If your concern remains, visit the lab coordinator, Dr. Naeem Shahid, in MSA 1235. If the coordinator is unable to resolve your concern, appeal in writing via the ticketing system.

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. These students, like those who arrive late, will not be permitted to do the experiment, and thus will receive a grade of zero for their Submit-in-the-Lab sheet and smart worksheet.

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 designed to fit over their regular glasses. If you wear contact lenses, you must inform the lab TA. For your safety, headphones are not permitted in the lab.

Western mandates "shoulder-to-toe" coverage in a lab. Details are found in the lab manual. Everyone must wear 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 mesh areas or "cutout holes". Shorts, sandals, crocs, 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. For hygienic reasons, shoes, socks, pants, lab coats, and safety glasses are **not** available for rent.

Lateness Policy

Any student who arrives after the doors to the lab have closed, when the "TA talk" begins, is considered 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).

Evaluation

Components

Component	Notes	Weight (%)
OWL Intro Activity	Due Friday, January 17 at 11:55 pm on OWL. This activity will help you become familiar with the course and background concepts. You will have 5 attempts and must earn 80% on an attempt to obtain this 1% towards your course grade.	1
OWL Pre-Test	Due Friday, January 17 at 11:55 pm on OWL. This pre-test is based on high school chemistry. Regardless of your score on this pre-test, if you complete this activity by the due date, you will obtain this 1% towards your course grade.	1
iClicker	Questions are graded for participation only. As long as you answer at least 70% of the questions, you will earn 2.0/2.0. If you answer less than 70% of the questions, the weight of the iClicker component will be shifted to the Final Exam.	2
Team-Based Problem-Solving Modules	Best 5 out of 6 modules (1.0 each)	5
Laboratory	Four in-person experiments, with online and in-person submissions (4.0 each).	16
Midterm Tests	Test #1: Saturday, February 1, 10:00 am – 12:00 pm Test #2: Sunday, March 9, 3:00 pm – 5:00 pm Highest test score counts towards this component weight.	30
Final Exam	Registrar-scheduled, 3.00 hours	45

Essential Learning Requirements

To receive a passing grade for Chem 1302B, you must fulfill all three of these conditions:

1. Obtain a minimum overall course grade of 50%.
2. Obtain a minimum of 50% on the laboratory component (8.0/16.0). 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 requirements #2 or #3 will receive a course grade no greater than 40%, even if their calculated course grade is higher.

iClicker

In order to receive credit for the iClicker component, you must:

- Create a free iClicker account using your **Western email address**. Please refer to the instructions at https://wts.uwo.ca/iclicker/ and on OWL. Add **your section** of Chem 1302B to your iClicker account. If you already have an iClicker account, please go into the settings and verify that it uses your **@uwo.ca** email address.
- Attend, and answer iClicker questions in, the lecture section in which you are registered. Questions answered in the incorrect lecture section may 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.

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.

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.

You can select your own team members (teams of 2-4 students) or find a team via OWL Groups. You are encouraged to meet with your team in-person (or virtually) to complete each module, but if circumstances require you to complete a module independently, this is permitted. Class time and space is reserved for you to work with your team to complete these modules, but you may use any time or location that works for your team, such as a library study space, residence, Zoom, or any other WiFi enabled location. Below is the schedule for these modules:

Module	Available	Designated class	Due
Chapter 1	January 13	January 17	January 20
Chapter 2	January 27	January 31	February 3
Chapter 3A	February 10	February 14	February 24
Chapter 3B	March 3	March 7	March 10
Chapter 4	March 17	March 21	March 24
Chapter 5	March 31	April 4	April 4

Midterm Tests and Final Exam

The midterm tests and final exam are multiple-choice and will cover the content from the workbook and lab experiments, as announced in class. The final exam will be cumulative.

A data and formula sheet will be provided, along with a periodic table. You will be permitted to use a basic scientific calculator. Proctors and instructors for tests and exams do not lend calculators. It

is your responsibility to ensure your calculator is in proper working order (consider bringing a spare calculator, just in case). Obviously, you will not be allowed to share calculators during tests and exams.

The tests and exam are marked using bubble sheets via the Gradescope platform (linked to OWL). You are responsible for filling out the sheets correctly.

Equal Opportunity and Evaluation Policy

We are here to help you achieve 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 must be fair. Your instructors committed to academic integrity. 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.

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 that are evaluating all students on the basis of their grades. Please do not ask us for a grade increase.

♈° *How to Achieve Your Goals in Chem 1302B*

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

1. Study the material and do practice problems at least twice each week. Like many sciences, chemistry is a cumulative subject, and one topic acts as a foundation for the next, so it is **essential to stay up-to-date** with the material.
2. Work with your **team** to complete the team-based problem-solving modules. **Discuss** the questions, **clarify** concepts, and **explain** your problem-solving approach with one another.
3. Learn **why** something is the way it is, not just **what** it is. Please realize 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.
4. Don't just attend lecture – get something out of the experience! **Think**. **Engage**. **Write** down key points. **Sketch** out connections. Record any questions you have and **follow up** on those questions.
5. Visit the **Resource Room** or post your questions to the **OWL Discussion**. Ask these questions as they arise rather than waiting until just before an assessment.

6. Labs are intended to be an enjoyable experience. **Prepare** for each lab in advance by reading the lab manual and doing the prelab exercise. **Think** and **ask** about the theory and the concepts behind the experiment. Be mindful of the details. **Chat** with your TA if you have any questions or ideas.
7. Complete **all** the **practice problems** in the workbook for each topic. Work through the previous year's tests and exams under simulated test conditions to evaluate your studying, knowledge, and application abilities. Avoid just checking the answers – let yourself think and try different approaches before looking for hints. Again, visit the online resource room to discuss any concepts or questions.

Missed Coursework

Students must familiarize themselves with the *University Policy on Academic Consideration – Undergraduate Students in First Entry Programs* posted on the Academic Calendar: 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.

For procedures on how to submit Academic Consideration requests, please see the information posted on the Office of the Registrar's webpage: 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.

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:

- Examinations scheduled during official examination periods
- Midterm Tests (only if **both** tests are missed). If both Test #1 and Test #2 are missed, academic consideration with documentation is required for missing Test #2. If only Test #1 or only Test #2 is missed, no academic consideration is required (nor considered).

If a student *mistakenly* submits their one allowed Academic Consideration request without supporting documentation for the assessments listed above or those in the section below that do not require academic consideration, the request cannot be recalled and reapplied. This privilege is forfeited.

Students are expected to submit their assignments by the deadlines listed in the course outline and attend the midterm tests and final exam. Should extenuating circumstances apply, refer to the following table for applicable policies and actions. By policy, instructors may deny Academic Consideration requests for assessments with built-in flexibility, as specified below. Academic consideration is only required when specified below.

Missed Course Component	Policies & Actions
	= Obtain academic consideration; = Submit a ticket to chemistry course support; = Submit the Lab Make-Up Survey
OWL Intro Activity	You may submit your OWL Intro Activity and/or OWL Pre-test up to 48 h after the due date with no penalty. No academic consideration is required (nor considered).
OWL Pre-Test	A missed OWL Intro activity or OWL Pre-test (not submitted by the deadline nor 48 h following) will result in a mark of zero with no opportunity for make-up.
iClicker/ Lectures	We understand that you may not be able to attend class from time to time. The participation-based iClicker marking scheme is designed to account for the occasional missed class or technical difficulty. **Therefore, iClicker marks will not be adjusted for these reasons.** If you are unable to answer at least 70% of the iClicker questions, the weight of the iClicker component will automatically be shifted to your final exam. As this is done automatically, no action on your end is necessary.
Team-Based Problem-Solving Modules	You may submit your module completion quiz up to 48 h after the due date with no penalty. No academic consideration is required (nor considered). Your best 5 of 6 module grades will be included towards your course grade. Thus, your **first** missed module will automatically be excused. Additional missed modules will earn a grade of zero and academic consideration will not be considered.
Laboratory	There are no make-up labs, and it is not possible to reschedule them. 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 lab experiment(s): Obtain **academic consideration** immediately. Then, submit the *Lab Make-Up Survey* between March 24 and 28 to declare your missed lab(s) and plan to write the make-up quiz pertaining to the missed lab(s). The link to the survey will be shared via OWL Announcements and the deadline to submit the survey is March 28. At the end of the term (anticipated Friday April 4), write the **make-up quiz** pertaining to your missed experiment. The mark you receive on the quiz will count as the mark on your missed experiment. If you do not submit the survey by the deadline or write the make-up quiz, a mark of zero for your missed lab will apply. If you miss **two** labs and have academic consideration for **both** missed labs, plan to write **two** make-up quizzes for your two missed experiments.

As per the Evaluation information on page 9, if you **miss more than two labs**, you are not eligible to pass the course and will receive a course grade no greater than 40%. If you are in this situation, reach out to your home faculty academic advisor.

Attended lab experiment but missed smart worksheet submission due date:

You may submit your smart worksheet up to 48 h after the specified due date with no penalty. No academic consideration is required (nor considered).

Should extenuating circumstances apply before the deadline *and* extend beyond 48 h after the deadline, obtain academic consideration (for the deadline *and* for 48 h afterwards) and submit a ticket with your proof of academic consideration to request an extension. It will then be your responsibility to submit your lab smart worksheet by the extended due date. Smart worksheets will not be accepted after the last day of class, regardless of academic consideration.

Midterm Tests

Your **highest** score from Test #1 and Test #2 will automatically count towards your midterm test course component (i.e. the lowest of the two grades will be dropped). Thus, if you must miss **one** of the tests (Test #1 **or** Test #2), no academic consideration is required (nor considered), and your score for the test you wrote will automatically count as your midterm test grade. There are no make-up tests.

Since Test #1 and Test #2 are assessments with flexibility, our policy allows instructors to deny any form of academic consideration requests. However, if you miss **both** tests (Test #1 **and** Test #2), you may obtain **academic consideration (*with documentation)** for the date of Test #2. Upon obtaining academic consideration, the weight of the midterm test will shift to your final exam.

Please do **not** contact your instructor nor submit a ticket, even though your academic consideration may state that you must do so. We will automatically be notified of the academic consideration and calculate your grade accordingly.

Final Exam

If you miss the final exam, obtain **academic consideration (*with documentation)**. Academic consideration without documentation does not apply. Then, plan to write the **Special Exam** (the name given by the university to a make-up Final Exam) in May of 2025. See the Academic Calendar for details (under Special Examinations), especially for those who miss multiple final exams within one examination period. If you do not obtain academic consideration, a grade of zero applies.

Please do **not** contact your instructor nor submit a ticket, even though your academic consideration may state that you must do so. We will automatically be notified of the academic consideration.

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (see https://registrar.uwo.ca/academics/examinations/exam_conflicts.html).

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 the next time this course is offered. 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=#SubHeading_70

Academic Policies and Legalities

The website for Registrar Services is http://www.registrar.uwo.ca.

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.

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.

Aside from a non-programmable scientific calculator, **no other electronic devices** (phones, iPods, etc.) may be used during tests and exams, even for timekeeping purposes. They may not be at your test/exam desk or in your pocket. Any student found in possession of these prohibited devices will receive a mark of zero on the test or exam.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at this website: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf.

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

Audience response systems ("clickers") will be used to provide immediate feedback on your understanding of course concepts. You must use your own clicker account and may not submit responses for any other student. The data collected using the devices will not be used for research purposes without your consent.

The Midterm Test and Final Exam are **in-person assessments**. In the event that one or more of these assessments need to be conducted online due to 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 Accommodation

Please contact the course instructor if you require lecture or printed material in an **alternate format** or if any other arrangements can make this course more accessible to you. You may also wish to contact

Accessible Education at http://academicsupport.uwo.ca/accessible_education/index.html if you have questions regarding accommodation.

Students with disabilities are encouraged to contact **Accessible Education**, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic Accommodation_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 Academic Advising office of their Faculty of Registration **and** submit a ticket to the Chemistry Course Support. 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.

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/advising/.

Students who are in emotional/mental distress should refer to Mental Health@Western (https://www.uwo.ca/health/) for a complete 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/your-services/.

This course is supported by the Science Student Donation Fund. If you are a BSc or BMSc 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 hosted on the Faculty of Science's Academic Advising website. 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.