

# COURSE SYLLABUS

COURSE TITLE: CHEM-100-Introductory Chemistry  
CLASS SECTION: -001

TERM: 2025W

COURSE CREDITS: 3

DELIVERY METHOD(S): F2F



Camosun College respectfully acknowledges that our campuses are situated on the territories of the Lək̓ʷəŋən (Songhees and Kosapsum) and WSÁNEĆ peoples. We honour their knowledge and welcome to all students who seek education here.

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## INSTRUCTOR DETAILS

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NAME:	John Lee (Tuesday, Wednesday & Fridays)	Blair Surridge (Mondays)
EMAIL:	<a href="mailto:leejohn@camosun.ca">leejohn@camosun.ca</a>	<a href="mailto:surridgeb@camosun.ca">surridgeb@camosun.ca</a>
OFFICE:	Fisher 350 C	Fisher 348 C
HOURS:	Wednesday & Friday 1:30 -2:20	Wednesday & Friday: 12:30 to 1:20

*As your course instructors, we endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with us. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.*

## CALENDAR DESCRIPTION

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This course is a basic introduction to chemistry and is intended for students with little or no background in chemistry. Topics include: chemical formulae and equations, simplest formula, atomic mass, mole concept, molarity, periodic table, molecules and chemical bonding, and some descriptive chemistry. Experiments will emphasize basic lab techniques.

### PREREQUISITE(S):

One of:

C in Math 10

C in MATH 053

C in MATH 057

C in MATH 075

### CO-REQUISITE(S):

### EQUIVALENCIES:

## COURSE LEARNING OUTCOMES / OBJECTIVES

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Upon completion of this course a student will be able to:

Use dimensional analysis, metric and SI units in performing chemical calculations.

Utilize the specialized vocabulary and nomenclature of chemistry and demonstrate an ability to name chemical compounds, and identify and construct chemical formulas.

Summarize the characteristics of electrons, protons and neutrons, and identify their roles as components of atoms, ions and isotopes including radioisotopes.

Communicate an understanding of atomic structure, the differences between elements, and the role of the periodic table in organizing elements within a coherent theoretical and empirical system.

Describe and account for the periodic table trends concerning atomic number, atomic radius, ionization energy and electronegativity.

Compare the formation and characteristics of ionic and molecular compounds.

Perform mathematical calculations involving chemical formulas, molecular weights, moles, Avogadro's number and Molarity.

Balance chemical equations, demonstrate an understanding of the mole concept and solve stoichiometry problems.

Account for the general characteristics of the gas, liquid, and solid states.

Conduct experiments in basic chemistry utilizing common chemistry laboratory equipment with an enhanced knowledge and practice in basic lab skills.

## REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

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CHEMISTRY 100 COURSEPACK (NOTES) E-text is free on D2L course site

\*CHEMISTRY 100 LAB MANUAL:

[https://www.camosuncollegebookstore.ca/buy\\_book\\_detail.asp?pf\\_id=10645390](https://www.camosuncollegebookstore.ca/buy_book_detail.asp?pf_id=10645390)

\*Safety Glasses:

[https://www.camosuncollegebookstore.ca/shop\\_product\\_detail.asp?catalog\\_group\\_id=LTO&catalog\\_group\\_name=U2VhcmNoIFJlc3VsdHM&catalog\\_id=0&catalog\\_name=U2VhcmNoIFJlc3VsdHM&pf\\_id=361&product\\_name=VVZFWCBTYWZldHkgR2xhc3Nlcw&type=1&search\\_text=safety+glasses&f=](https://www.camosuncollegebookstore.ca/shop_product_detail.asp?catalog_group_id=LTO&catalog_group_name=U2VhcmNoIFJlc3VsdHM&catalog_id=0&catalog_name=U2VhcmNoIFJlc3VsdHM&pf_id=361&product_name=VVZFWCBTYWZldHkgR2xhc3Nlcw&type=1&search_text=safety+glasses&f=) \*\*

\*Lab Jacket:

[https://www.camosuncollegebookstore.ca/shop\\_product\\_detail.asp?catalog\\_group\\_id=LTO&catalog\\_group\\_name=U2VhcmNoIFJlc3VsdHM&catalog\\_id=0&catalog\\_name=U2VhcmNoIFJlc3VsdHM&pf\\_id=982&product\\_name=TGFilENvYXQgLSBCdXR0b24gRnJvbnQ&type=1&search\\_text=lab+coat&f=](https://www.camosuncollegebookstore.ca/shop_product_detail.asp?catalog_group_id=LTO&catalog_group_name=U2VhcmNoIFJlc3VsdHM&catalog_id=0&catalog_name=U2VhcmNoIFJlc3VsdHM&pf_id=982&product_name=TGFilENvYXQgLSBCdXR0b24gRnJvbnQ&type=1&search_text=lab+coat&f=) \*\*

\*Essential Or from any hardware store / used marketplace\*\*.

## COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

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The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

WEEK	Likely ACTIVITY or TOPIC	Experiment
1	Measurements and Calculations	Lab Safety
2	Introductory Terminology	Density
3	Introductory Terminology/Chemical Formulas and Names	Heat of Combustion
4	Chemical Formulas and Names/Calculations based on Formulas	Separating Mixtures
5	Calculations Based on Formulas/Stoichiometry	Copper and Iron
6	Stoichiometry	Water of Hydration
7	Reading Break – No Classes	No Experiment
8	Stoichiometry/Periodic Table and Electron Distributions	Midterm Test
9	Electron Distributions and Chemical Bonding	Recycling Copper
10	Chemical Bonding/Gases	Chemical Reactivity
11	Gases/Liquids/Solutions	The Volume of a Gas
12	Liquids and Solutions	Mg & HCl Reaction
13	Organic Chemistry	Neutralization
14	Organic Chemistry/Radioactivity	Review of Material

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced notice is required. Deadlines can be reviewed on the [CAL exams page](https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams).

<https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams>

## EVALUATION OF LEARNING

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DESCRIPTION	WEIGHTING /100 %
Laboratory Component (details in first lab period)	25 %
Online D2L Quizzes	20 %
Midterm Test (2-hours)	20 %
Final Exam (3-hours)	35 %

## COURSE GUIDELINES & EXPECTATIONS

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In order to pass the course, **students must pass the laboratory with a score of 50 %**. There is an expectation that students complete all laboratory experiments, along with the associated assignments. In the event that you miss a laboratory session due to illness or extenuating circumstances, **you must inform your instructor via email before the laboratory session**. Your instructor may require you to complete the assignment using data provided, or an online version of the experiment. Your Laboratory Instructor will outline the laboratory assignment due date at the start of the experiment (ALL DUE ON OR BEFORE THE NEXT LABORATORY CLASS UNLESS SPECIFIED). No late assignments will be accepted unless you have prior accommodations through CAL, or you have requested an extension due to illness or extenuating circumstances. Even though you may perform the experiments with a partner, and collect identical data, **you must submit your own assignment**. Duplicate assignments will not be accepted. If you complete the practical part of an experiment, but fail to upload an assignment by the due date without a granted extension, you may be given a participation mark only.

Students must write the midterm test during the time scheduled in the course outline, and submit required assignments by the specified deadline. On a case-by-case basis, and at the instructor's discretion, a student experiencing a personal emergency or an uncontrollable extenuating circumstance (as outlined in the Academic Concessions Policy) may arrange an alternate time with the Assessment Centre to write the missed test (before the marked tests have been returned to the class). <https://camosun.ca/apply/how-apply/assessment-and-testing/rescheduled-camosun-course-exams>

The weighting of a missed term test will be carried over to the final. Students that **write in the CAL should book test times at least two weeks in advance**. If it is advantageous to the student the theory mark will be solely derived from the final examination, or a combination of midterm/ online quizzes and the final. The weight of any quizzes not completed before the end of the term will be carried over to the final exam.

## SCHOOL OR DEPARTMENTAL INFORMATION

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The School of Arts and Science offers a **Science Help Centre**. Tutors are available in **Fisher 264** everyday to assist you in chemistry, biology and physics.

Students may only use recording devices in the classroom with the prior permission of the instructor or the Centre for Accessible Learning. The instructor's permission is not required when the use of a recording device is sanctioned by the College's Centre for Accessible Learning in order to accommodate a student's disability, *and* when the instructor has been provided with an instructor notification letter which specifies the use of a recording device.

Camosun College is a scent-free institution. Please refrain from wearing scents. Thank you.

Chemistry Department Chair: John Lee: Fisher 350 C

Applied Chemistry and Biotechnology Program Leader: Steve McKinnon: Fisher 350 B

## STUDENT RESPONSIBILITY

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Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

## SUPPORTS AND SERVICES FOR STUDENTS

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Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit [camosun.ca/services](https://camosun.ca/services).

Support Service	Website
Academic Advising	<a href="https://camosun.ca/services/academic-supports/academic-advising">camosun.ca/services/academic-supports/academic-advising</a>
Accessible Learning	<a href="https://camosun.ca/services/academic-supports/accessible-learning">camosun.ca/services/academic-supports/accessible-learning</a>
Counselling	<a href="https://camosun.ca/services/health-and-wellness/counselling-centre">camosun.ca/services/health-and-wellness/counselling-centre</a>
Career Services	<a href="https://camosun.ca/services/co-operative-education-and-career-services">camosun.ca/services/co-operative-education-and-career-services</a>
Financial Aid and Awards	<a href="https://camosun.ca/registration-records/financial-aid-awards">camosun.ca/registration-records/financial-aid-awards</a>
Help Centres (Math/English/Science)	<a href="https://camosun.ca/services/academic-supports/help-centres">camosun.ca/services/academic-supports/help-centres</a>

Support Service	Website
Indigenous Student Support	<a href="https://camosun.ca/programs-courses/iecc/indigenous-student-services">camosun.ca/programs-courses/iecc/indigenous-student-services</a>
International Student Support	<a href="https://camosun.ca/international">camosun.ca/international</a>
Learning Skills	<a href="https://camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills">camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills</a>
Library	<a href="https://camosun.ca/services/library">camosun.ca/services/library</a>
Office of Student Support	<a href="https://camosun.ca/services/office-student-support">camosun.ca/services/office-student-support</a>
Ombudsperson	<a href="https://camosun.ca/services/ombudsperson">camosun.ca/services/ombudsperson</a>
Registration	<a href="https://camosun.ca/registration-records/registration">camosun.ca/registration-records/registration</a>
Technology Support	<a href="https://camosun.ca/services/its">camosun.ca/services/its</a>
Writing Centre	<a href="https://camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills">camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills</a>

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

## COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

### Academic Integrity

Students are expected to comply with all College policy regarding academic integrity; which is about honest and ethical behaviour in your education journey. The following guide is designed to help you understand your responsibilities: <https://camosun.libguides.com/academicintegrity/welcome>  
Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.13.pdf> for Camosun's Academic Integrity policy and details for addressing and resolving matters of academic misconduct.

### Academic Accommodations for Students with Disabilities

Camosun College is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging appropriate academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a documented disability and think you may need accommodations, you are strongly

encouraged to contact the Centre for Accessible Learning (CAL) and register as early as possible. Please visit the CAL website for more information about the process of registering with CAL, including important deadlines: <https://camosun.ca/cal>

### Academic Progress

Please visit <https://camosun.ca/sites/default/files/2023-02/e-1.1.pdf> for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

### Course Withdrawals Policy

Please visit <https://camosun.ca/sites/default/files/2021-05/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <https://camosun.ca/registration-records/tuition-fees#deadlines>.

### Grading Policy

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.5.pdf> for further details about grading.

### Grade Review and Appeals

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

### Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal (see [Medical/Compassionate Withdrawals policy](#)). Please visit <https://camosun.ca/services/forms#medical> to learn more about the process involved in a medical/compassionate withdrawal.

### Sexual Violence

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun's Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student's right to choose what is right for them. For more information see Camosun's Sexualized Violence Policy: <https://camosun.ca/sites/default/files/2021-05/e-2.9.pdf> and [camosun.ca/services/sexual-violence-support-and-education](https://camosun.ca/services/sexual-violence-support-and-education).

To contact the Office of Student Support: [oss@camosun.ca](mailto:oss@camosun.ca) or by phone: 250-370-3046 or 250-370-3841

### Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College's Student Misconduct Policy at <https://camosun.ca/sites/default/files/2021-05/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

### Looking for other policies?

The full suite of College policies and directives can be found here: <https://camosun.ca/about/camosun-college-policies-and-directives>

**Changes to this Syllabus:** Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.