

COURSE SYLLABUS



COURSE TITLE: CHEM-121-College Chemistry 2

CLASS SECTION: 003

TERM: 2025W

COURSE CREDITS: 3

DELIVERY METHOD(S): F2F

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

INSTRUCTOR DETAILS

NAME: John Lee

EMAIL: leejohn@camosun.ca

OFFICE: F350 C

HOURS: Wednesday & Friday 1:30 -2:20

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

CALENDAR DESCRIPTION

This course is a continuation of CHEM 120 and covers the following: chemical kinetics, acids and bases, thermodynamics, electrochemistry and provides an introduction to organic chemistry. The laboratory experiments provide practical experience in each area covered in lectures.

PREREQUISITE(S):

All of:

C in CHEM 120

CO-REQUISITE(S):

EQUIVALENCIES:

COURSE LEARNING OUTCOMES / OBJECTIVES

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

Utilize the specialized vocabulary and nomenclature based on the IUPAC system of organic compounds to name and draw structures for many simple organic compounds containing the common functional groups.

Write chemical reactions to illustrate numerous transformations between organic functional groups.

Draw structural and stereoisomers of organic compounds and name stereoisomers based upon the IUPAC system of nomenclature.

Demonstrate an understanding of the factors that influence the rate of a chemical reaction, deduce the rate of a chemical reaction from time/concentration data, and utilize rate laws to perform kinetic calculations.

Apply the laws of thermodynamics and account for the factors that lead to spontaneous physical and chemical changes.

Explain how and why reactions attain equilibrium positions and perform calculations pertaining to equilibrium systems.

Describe redox reactions, use electrochemical data to predict the spontaneity of redox reactions, and comprehend the structures of electrochemical cells.

Describe various acid-base theories and apply these theories to acid-base reactions in aqueous solution.

Perform experiments in the areas of preparative organic, preparative inorganic, physical and analytical chemistry and use the various associated pieces of laboratory equipment.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

All course materials will be posted on D2L. You will need to purchase a **CHEM 121 Laboratory Manual** from the Bookstore to bring to your laboratory classes. You will also need a **lab coat**, and a pair of **safety glasses**. Although not required for purchase, you may find access to a copy of Chemistry: The Central Science, Brown, LeMay, Bursten, a good resource.

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

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

WEEK or DATE RANGE	In-class material (approximate week)	Experiment
1	Review & Organic Chem	Safety Briefing & Review
2	Organic Chem	Synthesis of Aspirin (1)
3	Organic Chem	Synthesis of Banana Oil (2)
4	Chemical Kinetics	Bleach and Blue Dye Kinetics (3)
5	Chemical Kinetics	Thermochemistry (4)
6	Thermochemistry	Midterm 1
7	Reading Break –No class	Reading Break –No Experiment
8	Thermochemistry/dynamics	Equilibrium (5)
9	Thermodynamics	Unknown Acid Analysis (6)
10	Equilibrium	Gravimetric Analysis (8)
11	Equilibrium	Solubility Product Constant (9)
12	Acid-Base	Midterm 2
13	Acid-Base	Redox Reactions (10)
14	Electrochemistry	Review
15	Final Exam Period	Final Exam Period

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

DESCRIPTION	WEIGHTING
Pre-experiment assignment quizzes	5 %
Post-experiment assignments	20 %
Term Test 1	15 %
Term Test 2	15 %
Module D2L Quizzes	10 %
Final Exam	35 %
	TOTAL
	100%

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the [Grade Review and Appeals](#) policy for more information.

https://camosun.ca/sites/default/files/2021-05/e-1_14.pdf

COURSE GUIDELINES & EXPECTATIONS

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. The laboratory assignment due dates are specified on D2L. 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 each 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 any missed term tests 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 midterms 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

Department Chair: John Lee: leejohn@camosun.ca

Assistant to the Dean: Katya Bissky: BisskyK@camosun.ca

Applied Chemistry & Biotechnology Program Leader: Steve McKinnon: McKinnonS@camosun.ca

The School of Arts and Science offers a Science Help Centre at Lansdowne campus. Zach and Matt are available in Fisher 264 everyday to assist you in chemistry, biology and physics, between 9:00 to 4:30.

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.

STUDENT RESPONSIBILITY

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

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.

Support Service	Website
Academic Advising	camosun.ca/services/academic-supports/academic-advising
Accessible Learning	camosun.ca/services/academic-supports/accessible-learning
Counselling	camosun.ca/services/health-and-wellness/counselling-centre
Career Services	camosun.ca/services/co-operative-education-and-career-services
Financial Aid and Awards	camosun.ca/registration-records/financial-aid-awards
Help Centres (Math/English/Science)	camosun.ca/services/academic-supports/help-centres
Indigenous Student Support	camosun.ca/programs-courses/iecc/indigenous-student-services

Support Service	Website
International Student Support	camosun.ca/international
Learning Skills	camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills
Library	camosun.ca/services/library
Office of Student Support	camosun.ca/services/office-student-support
Ombudsperson	camosun.ca/services/ombudsperson
Registration	camosun.ca/registration-records/registration
Technology Support	camosun.ca/services/its
Writing Centre	camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills

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.

To contact the Office of Student Support: 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.

