

# COURSE SYLLABUS



COURSE TITLE: CHEM-120: College Chemistry 1

CLASS SECTION: 001

TERM: F2022

COURSE CREDITS: 4

DELIVERY METHOD(S): In person lectures and lab

Camosun College campuses are located on the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.

Learn more about Camosun's [Territorial Acknowledgement](#).

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For COVID-19 information please visit <https://camosun.ca/about/covid-19-updates>

*Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.*

## INSTRUCTOR DETAILS

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NAME: Dr. Ryan Fradette

EMAIL: [fradetter@camosun.ca](mailto:fradetter@camosun.ca)

OFFICE: F 344A

HOURS: Tuesday 12:30-2:20 (in F344A), Monday and Wednesday (Online by appointment)

*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

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For both university and technology students, this course starts with atomic structure and periodic properties and leads to a discussion of chemical bonding, thermochemistry, molecular structure, intermolecular structure, colligative properties, intermolecular forces of attraction and their role in environmental issues. The experiments include chemical synthesis and analysis by titration and spectroscopy.

## PREREQUISITE(S):

One of:

- C in Chemistry 12
- C in Camosun Alternative

## COURSE LEARNING OUTCOMES / OBJECTIVES

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

1. Utilize nomenclature rules to name ionic and covalent compounds.
2. Demonstrate an understanding of stoichiometry by balancing chemical equations and performing mathematical calculations involving chemical reactions.
3. Describe the electronic structure of any atom in the periodic table and apply it to explain many of the physical and chemical properties of the elements.
4. Utilize simple bonding theories to explain why elements combine to form the compounds they do and also to explain many of the properties of compounds.
5. Apply knowledge of intermolecular interactions to rationalize many important physical properties of bulk matter in the gas, liquid and solid phases.
6. Use standard chemistry lab equipment, including burets, pipets, Buchner filters, and volumetric glassware in the correct manner.
7. Perform many standard laboratory procedures, such as titrations, preparation of standard solutions, the preparation, isolation, and purification of compounds, as well as use spectrophotometers to make analytical measurements.

## REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

Text	<p><b>Chemistry: The Central Science Mastering Chemistry with eText</b> (Access Card), 3/e (Lemay Brown)/ Purchase Price \$102.25</p> <ul style="list-style-type: none"><li>○ Once you have purchased an Access Code, please follow the instructions posted on the D2L page</li><li>● Please note that Mastering Chemistry is <b>not</b> required but the eText or a hard copy of the book is.</li><li>○ You may also use a hardcopy of <b>Chemistry, The Central Science, Brown, le May, Bursten. Custom Camosun Edition</b> it is available new in the bookstore for \$160, but used copies can also be found</li></ul> <p><b>Chemistry 120 Laboratory Manual, Fall 2017 Edition (Neil Meanwell)</b></p>
Other	<p><b>A scientific calculator</b> (I recommend the Sharp EL-531XG, as it is the model I use, it is affordable, and readily available in the bookstore, you may however use any calculator of your choice. Please be aware that you will not be able to use a smartphone/tablet as a calculator for any exam or quiz)</p> <p><b>lab coat</b></p> <p><b>safety glasses</b></p> <p><b>lab notebook</b></p>

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 # (Week of)	Monday (Labs) 5:30-8:20 pm	Wednesday (Lecture) 5:30-8:20 pm	Wednesday (D2L Quizzes) Due at 9pm
1 (Sept 5)	Labour day No lab	Intro Lecture & Preview	
2 (Sept 12)	Lab introduction	Chemistry Preview & Chapter 6	
3 (Sept 19)	Lab Exp 3	Chapter 6	Quiz 1
4 (Sept 26)	Lab Exp 4	Chapter 6	
5 (Oct 3)	<b>Test 1</b>	Chapter 7	
6 (Oct 10)	Thanksgiving No lab	Chapter 8	Quiz 2
7 (Oct 17)	Lab Exp 5	Chapter 8	
8 (Oct 24)	Lab Exp 6	Chapter 9	
9 (Oct 31)	Written Lab Quiz	Chapter 9	Quiz 3
10 (Nov 7)	<b>Test 2</b>	Chapter 11	
11 (Nov 14)	Lab Exp 7	Chapter 11	
Week 12 (Nov 21)	Lab Exp 9	Chapter 10	Quiz 4
Week 13 (Nov 28)	Lab Exp 10	Chapter 10	
Week 14 (Dec 5)	Chapter 13 Lecture	<b>Test 3</b>	Quiz 5
Week 15 (Dec 12)	<b>Test 4 (time and date TBA)</b>		

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](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

## EVALUATION OF LEARNING

	Category	Breakdown
Lecture	Tests	<b>60%</b> The best 3 of the 4 tests will make up your test mark
	Multiple Choice Quizzes	<b>10%</b> The best 4 of the 5 quizzes will make up your quiz mark
	Everyday Chemistry Assignment (EDC)	<b>5%</b>
Lab	Labs	<b>25%</b> 8 Lab assignments (16%) 1 Lab safety quiz (1%) 1 Written lab quiz (2%) Lab Notebook (3%) Performance (3%)

### Tests

- The tests will take place on the dates indicated in the schedule above (80 minutes in length)
- They will be closed book
- The weight of any missed test will count as the lowest test mark and be dropped at the end of the term
- Any considerations for missed tests must be provided to the instructor *prior* to the test.
  - In the event that more than 1 test is missed a makeup test will be scheduled

### Multiple Choice Quizzes

- These will take place on D2L
- They are open book
- They will be available from 10am Thursdays due to 10pm on Wednesday of the next week

### Everyday Chemistry

- These will be a small that will give you a chance to explore everyday chemistry, we will discuss this project in more detail in week 11

### Lab

- Lab assignments will be submitted digitally to D2L by Wednesday at 10pm on the same week the lab takes place
- A grade of at least 50% in the lab must be obtained to pass the course
- In the event of a student being unable to attend a laboratory class due to illness it is essential that you give your lab instructor the courtesy of an email. It may be possible for the instructor to provide lab data so you can complete the lab calculations for partial marks.
- Late lab assignments are deducted 20% if they are not submitted on time, and will not be accepted after 7 days.

- Lab assignment extensions
  - You may use up to 2 lab extensions
  - The extensions are good for 1 week from the time of the lab (ie. if you wish to use an extension for a Monday lab week, the lab assignment will be due the following Monday at 10pm)
  - If you wish to use an extension the way you will notify me is by including your intention to use an extension in your assignment submission comments, you don't have to let me know in advance

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](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) policy for more information.  
<http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

## COURSE GUIDELINES & EXPECTATIONS

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I will post lecture videos to ensure you do not miss any material should you be ill or unable to attend lecture D2L and email will be my primary method of communication with you, please make sure you are checking both regularly

## SCHOOL OR DEPARTMENTAL INFORMATION

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The school of Arts and Science operates a Science help center with hours available for additional chemistry help on Mondays, Wednesdays and Fridays. More information can be found by following the link below

<http://camosun.ca/learn/subjects/chemistry/>

## 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 <http://camosun.ca/students/>.

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Academic Advising

<http://camosun.ca/advising>

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Accessible Learning

<http://camosun.ca/accessible-learning>

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Counselling

<http://camosun.ca/counselling>

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Career Services

<http://camosun.ca/coop>

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Financial Aid and Awards	<a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>
Help Centres (Math/English/Science)	<a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>
Indigenous Student Support	<a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>
International Student Support	<a href="http://camosun.ca/international/">http://camosun.ca/international/</a>
Learning Skills	<a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>
Library	<a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a>
Office of Student Support	<a href="http://camosun.ca/oss">http://camosun.ca/oss</a>
Ombudsperson	<a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>
Registration	<a href="http://camosun.ca/registration">http://camosun.ca/registration</a>
Technology Support	<a href="http://camosun.ca/its">http://camosun.ca/its</a>
Writing Centre	<a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</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.

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

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### Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](#) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started:

<http://camosun.ca/services/accessible-learning/>

### Academic Integrity

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf> for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

### Academic Progress

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/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 <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <http://camosun.ca/learn/fees/#deadlines>.

### Grading Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf> for further details about grading.

### Grade Review and Appeals

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

### Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the “Attendance” section under “Registration Policies and Procedures” (<http://camosun.ca/learn/calendar/current/procedures.html>) and the Grading Policy at <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>.

### 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. Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf> to learn more about the process involved in a medical/compassionate withdrawal.

### Sexual Violence and Misconduct

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 or misconduct 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 and Misconduct Policy: <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf> and [camosun.ca/sexual-violence](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto:oss@camosun.ca) or by phone: 250-370-3046 or 250-3703841

### 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

<http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

**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.