



**CAMOSUN COLLEGE**  
**School of Arts & Science**  
**Department of Chemistry & Geoscience**

**CHEM-120-D01**  
**College Chemistry 1**  
**Fall 2020**

## **COURSE OUTLINE**

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The course description is online @ <http://camosun.ca/learn/calendar/current/web/chem.html>

*Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.*

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### **1. Instructor Information**

(a) Instructor	Dr. Ryan Fradette
(b) Office hours	Virtual: Monday 6-7pm, Wednesday 8-9pm, Thursday 9:45-11:45am
(c) Location	
(d) Phone	<b>Alternative:</b>
(e) E-mail	fradetter@camosun.bc.ca
(f) Website	

### **2. Intended Learning Outcomes**

Upon completion of this course the 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.

### 3. Required Materials

#### **Textbook:**

**Chemistry: The Central Science MasteringChemistry with eBook Access Card, 3/e**

\$115 from the bookstore website, you can find it by searching CHEM 120 from the following link  
[https://www.camosuncollegebookstore.ca/buy\\_access\\_codes.asp?](https://www.camosuncollegebookstore.ca/buy_access_codes.asp?)

#### **Other:**

##### **Scientific Calculator**

I use a Sharp EL-531, but any scientific calculator will be suitable

##### **Chem 120 Lab manual**

It will be posted on the course D2L page in week 2

##### **Technology**

The following link discusses technology requirements

<http://camosun.ca/services/orientation/online-learning.html>

For this class you will need:

##### **A computer that can run Microsoft Excel**

Office 365 for PC or Mac which contains excel is free for Camosun students, link:

<http://camosun.ca/services/its/other-services.html>

##### **Smartphone scanning app (or desktop scanner)**

I use Scannable or CamScanner apps both are freely available and allow you to scan and submit handwritten work as a PDF file

*\*If you find yourself struggling with any aspect of the technology used in this course, please do not hesitate to ask me. I might not always be able to solve your problem, but in those rare cases I can point you in the right direction\**

#### 4. Course Content and Schedule

Week # (Week of)	Monday (Labs) 7-8 pm	Tuesday Watch Video Reading	Wednesday (Seminars) 6:30-8 pm	Thursday Practice	Friday (D2L Quizzes) Due at 6pm	Mastering Chemistry
1 (Sept 7)	Labour day		Intro Lecture		Attendance Due	
2 (Sept 14)	Lab intro		Chem Review		Written Quiz 1	
3 (Sept 21)	Lab Exp 3		Ch 6		M.C. Quiz 1	
4 (Sept 28)			Ch 6		Written Quiz 2	
5 (Oct 5)	Lab Exp 4		Ch 7		M.C. Quiz 2	Chapter 6 Due
6 (Oct 12)			Ch 8		M.C. Quiz 3	Chapter 7 Due
7 (Oct 19)	Lab Exp 5		Ch 8		Written Quiz 3	
8 (Oct 26)			Ch 9		M.C. Quiz 4	Chapter 8 Due
9 (Nov 2)	VSEPR Lab		Ch 9		Written Quiz 4	
10 (Nov 9)			Ch11			Chapter 9 Due
11 (Nov 16)	Lab Exp 9		Ch 11		M.C. Quiz 5	
Week 12 (Nov 23)			Ch 10		M.C. Quiz 6	Chapter 11 Due
Week 13 (Nov 30)	Lab Exp 11		Ch 10		Written Quiz 5	
Week 14 (Dec 7)	Lab Project due		Ch 13		M.C. Quiz 7	Chapter 10/13 Due
Week 15	Exam week: Final Exam Date TBA					

**Mondays:**

- We will meet on collaborate to discuss the virtual lab assignments, a lab video will be posted the previous Thursday (The meeting will also be recorded)
- Lab Assignments will be due on D2L at 7pm the following week
- The lab project will be discussed in week 9

**Tuesdays:**

- A lecture video will be posted each Tuesday (with the exception of week 1)
- Watch the video sometime before Wednesday at 7pm
- Each video will have accompanying textbook readings and practice problems (these won't be collected or marked, but solutions will be posted) Tuesday is a great time to start looking at them

**Wednesdays**

- We will meet on collaborate in a seminar to discuss the lecture posted the previous day, I envision us using this time to solve problems together, and I encourage you to email me if there are any problems you would like me to work through during the seminar (these meeting will also be recorded)

**Thursdays**

- I encourage you to dedicate some time on Thursdays to working assigned practice problems, Mastering Chemistry assignments, and lab assignments

**Fridays**

- There will be a quiz every Friday with the exception of weeks 1 and 10
- They will be available on D2L at 11am and due at 8pm the same day, these are short quizzes that if you can set aside an 30 minutes – 1 hour for you should be able to complete, they are available for most of the day to offer some flexibility.

## 5. Basis of Student Assessment (Weighting)

	Category	Breakdown
<b>Lecture</b>	<b>Mastering Chemistry online homework assignments</b>	<b>10%</b> 6 Assignments weighted individually
	<b>Multiple choice quizzes</b>	<b>15%</b> The best 6/7 quizzes will make up your mark
	<b>Written quizzes</b>	<b>15%</b> The best 4/5 quizzes will make up your mark
	<b>D2L Discussion forum</b>	<b>5%</b>
	<b>Final exam</b>	<b>30%</b> Date: TBA
<b>Lab</b>	<b>Labs</b>	<b>25%</b> 1 Lab introduction quiz 6 Lab Assignments 1 Lab project

### Mastering Chemistry

- These due dates are posted in section 4 above
- Overall Mastering Chemistry marks will be rounded as follows
  - >90% = 100%
  - 80%-90% = 90%
  - 70%-80% = 80%
  - 60%-70% = 70%
  - <60% = Raw mark
- If your Final Exam mark is greater than your Mastering Chemistry mark, then your final exam mark will replace your Mastering Chemistry to your advantage

### Quizzes

- Quizzes cannot be rewritten
- The weight of any missed quiz will count as the lowest quiz mark and be dropped.
- The weight of any subsequent missed quizzes will be transferred to the final exam, provided the instructor is notified **prior** to the quiz.

### D2L Discussion Forum

- This is a place you and your peers to post questions and help to each other with anything but the quizzes and final exam
- As long as you make at least 5 contributions, asking or answering questions you will receive full marks, I'll pop in occasionally but this is a chance for you all to talk chemistry, etc!

### Final Exam

- This will take place a time a date TBA and will just be a longer version of what you have seen in the quizzes

### Lab

- Lab assignments will be due at 7pm the Monday after we meet to discuss them
- Late labs will be penalized 10% and will no longer be accepted 1 week after the deadline

## 6. Grading System

- Standard Grading System (GPA)
- Competency Based Grading System

## 7. Recommended Materials to Assist Students to Succeed Throughout the Course

Your instructor and the text book are both excellent resources, use them as much as you can!

The **Camosun Science Help Center** also provides excellent help through the Chemistry Help Desk, they are available to meet through collaborate 3 hours a day, 6 days a week

Hours:

<b>Monday</b>	<b>4:30-7:30pm</b>
<b>Tuesday</b>	<b>4:30-7:30pm</b>
<b>Wednesday</b>	<b>4:30-7:30pm</b>
<b>Thursday</b>	<b>4:30-7:30pm</b>
<b>Friday</b>	<b>9:30am-12:30pm</b>
<b>Saturday</b>	<b>10:00am-1:00pm</b>

The link to the **Chemistry Help desk**:

<https://ca.bbcollab.com/collab/ui/session/guest/26ea0383a00444b39291183944267d53>

## 8. College Supports, Services and Policies



### Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

### College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

### College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://camosun.ca/about/policies/index.html> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.