



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

**CHEM-175-DX01A**  
**Chem Essentials for Civil/Mech**

**Winter 2021**

## **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	<u>Tatiana Popa</u>
(b) Office hours	<u>Tuesday 11:30 -12:20 or by appointment</u>
(c) Location	<u>Online</u>
(d) Phone	<u>Alternative: _____</u>
(e) E-mail	<u>PopaT@camosun.bc.ca</u>
(f) Website	<u>D2L</u>

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

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

1. Use dimensional analysis, metric and SI units in performing chemical calculations.
2. Utilize the specialized vocabulary and nomenclature of chemistry and demonstrate an ability to name chemical compounds.
3. Identify and construct chemical formulas.
4. 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.
5. Perform mathematical calculations involving chemical formulas, molecular weights, moles, Avogadro's number and Molarity.
6. Balance chemical equations, demonstrate an understanding of the mole concept and solve stoichiometry problems.
7. Conduct experiments in basic chemistry utilizing common chemistry laboratory equipment with practice in basic lab skills.

### 3. Required Materials

#### Course Text Package & Laboratory Manual

*Chemistry 175 Course Notes and Problem Sets*, available on D2L.

Information about each experiment, including the experimental procedure, will be provided on D2L.

#### General Materials and Supplies

Scientific Calculator is *required* for Chem 175. Cell phone-based, tablet-based or computer-based calculators cannot be used during tests or the final exam.

### 4. Course Content and Schedule

#### Lecture Plan

Unit	Topic	Unit	Topic
1	Measurements and Calculations	5	Stoichiometry
2	Introductory Terminology	6	Periodic Table and Electron Distributions
3	Chemical Formulas and Names	7	Chemical Bonding
4	Calculations Based Upon Formulas		

Lecture            Wednesday            2:30 pm – 4:20 pm            D2L

Laboratory        Monday                    1:30 pm – 2:20 pm            D2L  
                          Tuesday                    1:30 pm – 2:20 pm            D2L

Test I              Wednesday              2:30 – 4:20 pm              February 10<sup>th</sup>              D2L  
Test II             Wednesday              2:30 – 4:20 pm              March 24<sup>th</sup>                D2L

## 5. Basis of Student Assessment (Weighting)

- (a) Laboratory Work            30%

To write the final exam you must achieve a minimum final score of **50%** on laboratory work, and you must pass **both** the lecture portion and the laboratory portion in order to pass the course.

### The Laboratory Grade

**Lab Reports** are to be submitted on D2L, under “Assignments” tab, before the due date. Each student must hand in their own work. Lab reports count 22% each toward the final lab grade. Late reports, with a late penalty of 25%, are accepted up to a week after the deadline. **Plagiarized lab reports are subject to academic penalties** – see section 8 below.

**Lab Safety Quiz**, posted on D2L under “Quizzes” tab, counts 12% toward final lab grade.

- (b) Test I and II (2 x 15%)    30%

In the event of a midterm test being missed due to illness/other commitments the weight of the missed test will be carried over to the final. There are no make-up dates for midterms.

- (c) Final Exam                    40%

If it is advantageous to the student the theory mark will be solely derived from the final examination, or a combination of midterm with the final.

## 6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

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

There are problem sets at the end of each chapter in the course pack to help you prepare for exams. These problem sets are not graded but answer keys are provided at the end of each chapter. You are not expected to work through every single question. Do as many of them as you need to feel comfortable with the topic.

## 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, Student Ancillary Fees, Academic Integrity, Grade Review & Appeals, Student Misconduct and Academic Accommodations for Students with Disabilities 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.