



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

CHEM-175-X01A/B
Chem Essentials for Civil/Mech
Winter 2019

COURSE OUTLINE

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.

1. Instructor Information

(a) Instructor	<u>Dr. Tatiana Popa</u>
(b) Office hours	<u>Wednesday 9:30-10:30 am (Interurban), 11:30 am -1:00 pm (Lansdowne) or <i>by appointment</i></u>
(c) Location	<u>Room 106E, Fisher Building, Lansdowne Campus Room 232, Technologies Building, Interurban Campus</u>
(d) Phone	<u>(250) 370-3374 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

(a) Texts

Course Text Package & Laboratory Manual

Chemistry 175 Course Notes, Problem Sets, & Laboratory Manual, Camosun College Publications. This course pack is *required* for this course. A copy may be purchased from the book store.

The Lab Manual is in the course pack. Bring it to each lab. It contains the procedures for the experiments you are conducting. Come prepared. Lab attendance is mandatory.

(b) Other

General Materials and Supplies

Safety glasses Safety glasses *are required* when handling hazardous chemicals. Each student is required to provide her or his pair of safety glasses. Students lacking safety glasses when they are required *will not be permitted* to be in the laboratory.

Lab coats Lab coats are *recommended* for all experimental work in the laboratory. Each student has to provide her or his own lab coat.

Calculator A scientific calculator is *required* at times in the laboratory, in lecture, and during term tests and the final exam. Each student is *required* to provide her or his own scientific calculator. 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 (approximate)

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	8	Gases

Lecture	Tuesday Wednesday	3:30 pm – 4:20 pm 8:30 am – 9:20 pm	Technologies Building - Room 175 Technologies Building - Room 173
Laboratory	Friday	12:30 pm – 2:20 pm	Technologies Building - Room 230
Test I	Friday	February 15 th (Lab period)	Technologies Building - Room 230
Test II	Friday	March 22 nd (Lab period)	Technologies Building - Room 230

5. Basis of Student Assessment (Weighting)

- | | |
|---------------------------|-----|
| (a) Laboratory Work | 20% |
| (b) Test I and II (2x20%) | 40% |
| (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.

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.

6. Grading System

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- 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 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.