



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

CHEM-100-003
General College Chemistry 1
Fall 2018

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

Instructor:	John Lee
Office Hours:	Please see posted times on office door, or by appointment.
Location:	Fisher 348 D
Phone:	250-370-3436
Email:	leejohn@camosun.ca
Website:	D2L

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 name chemical compounds, and identify and construct chemical formulas.
3. Summarize the characteristics of electrons, protons and neutrons, and identify their roles as components of atoms, ions and isotopes, including radioisotopes.
4. Describe atomic structure, the differences between elements, and the role of the periodic table in organizing elements within a coherent theoretical and empirical system.
5. Describe and account for the periodic table trends concerning atomic number, atomic radius, ionization energy and electronegativity.
6. Compare the formation and characteristics of ionic and molecular compounds.
7. Perform mathematical calculations involving chemical formulas, molecular weights, moles, Avogadro's number and Molarity.
8. Balance chemical equations, including use of the mole concept, and solve stoichiometry problems.
9. Account for the general characteristics of the gas, liquid, and solid states.
10. Conduct experiments in basic chemistry, utilizing common chemistry laboratory equipment with an enhanced knowledge and practice in basic lab skills.

3. Required Materials

Texts	Required: ♦ Chem 100 Course Notes / Lab Manual / Problem Sets, Department of Chemistry & Geoscience, Camosun College. 2018. \$42
Other	Sharp Scientific calculator. Eye protection is mandatory in the lab & a lab coat is recommended.
Optional	John's additional Problem Sets electronic version is free on D2L

4. Course Content and Schedule

Class times: Monday, Tuesday, Wednesday and Friday: 8:30-9:20 in Fisher 210

Rough Lecture Plan:			
Ch.	Topic (approx. # of lecture hours)	Ch.	Topic (approx. # of lecture hours)
1	Measurements & Calculations (4)	7	Chemical Bonding (5)
2	Introductory Terminology (4)	8	Gases (5)
3	Chemical Formulas & Names (4)	9	Liquids & Solutions (3)
4	Calculations Based Upon Formulas (5)	10	Organic Chemistry (3)
5	Stoichiometry (4)	11	Radioactivity (2)
6	Periodic Table & Electron Distributions (3)		

Students may use recording devices in the classroom with the prior permission of the instructor. However, 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. Recordings made in the classroom are for the student's personal use only, and distribution of recorded material is prohibited.

Provisional Lab Schedule

Wednesdays; 9:30 pm - 11.20 pm in Fisher 300

Note: This is only a preliminary lab schedule, changes may be made due to equipment &/or scheduling of other sections... Lab coat and eye protection are both mandatory!!

Week Number	Activity & Experiment Number	Actual Date of Lab Wednesdays
I Sep 3 rd	Lab Safety and Quiz: Attendance Mandatory unless previous lab credit has been granted	Sep 5th
II Sep 10 th	Expt. 1 Density	Sep 12th
III Sep 17 th	Expt. 2 identifying Liquid Compounds	Sep 19th
IV Sep 24 th	Expt. 3 Separating Mixtures	Sep 26th
V Oct 1 st	Expt. 4 Heat of Combustion	Oct 4th
VI Oct 8 th	Expt. 13 Synthesis of Aspirin)	Oct 11th
VII Oct 15 th	Expt. 5 Recycling copper	Oct 18th

VIII Oct 22 nd	Expt. 9 Chemical Reactivity	Oct 24 th
IX Oct 29 th	Expt. 7 The Copper and Silver Nitrate Reaction	Oct 31 st
X Nov 5 th	Expt. 10 Volume of a Gas	Nov 7 th
XI Nov 12 th	Expt. 14 Preparation of some Common Substances	Nov 14 th
XII Nov 19 th	Expt. 11 The Magnesium and Hydrochloric Acid reaction	Nov 21 st
XIII Nov 26 th	Expt. 12 Neutralization	Nov 28 th
XIV Dec 3 rd	Review Game	Dec 5 th
Final Exam Period	Final Exam TBD Dec 10 th to Dec 14 th	

5. Basis of Student Assessment (Weighting)

Labs (12 experiments)	30%
4 in-class progress quizzes	20% (5 % each)
On-line homework	20%
Final Exam (comprehensive)	30%

In Class Quiz dates.

All quizzes will be written in the classroom F210, and will require no more than the 50 minute class time. If you write your tests in the CAL you should give them 2 weeks notice in order to guarantee a space. All quiz dates are subject to confirmation.

Monday September 17th Week 3.

Tuesday October 9th Week 6

Monday October 29th Week 9

Monday November 19th Week 12

Notes:

- (1) Students must pass the lab portion of the course with a score of at least 50 %, to obtain credit for Chemistry 100.**
- (2) Student are encouraged to attempt all the in-class progress quizzes and the on-line homework. The weight of any missed quizzes or on-line homework will be carried on to the final exam. The instructor will use the combination of quizzes, on-line homework and final exam that gives the student the best possible overall score.

6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

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

Your instructor is always the best resource for course related questions. In addition, the School of Arts and Science offers a chemistry help centre for 15 hours per week. Please see the posted times on the website <http://camosun.ca/learn/subjects/chemistry/> or the posters on the Fisher building 3rd floor.

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.

Please be aware that plagiarism and cheating is NOT acceptable. Please refer to the School's policy on academic honesty:

<http://camosun.ca/learn/school/arts-science/images/Arts%20and%20Science%20Academic%20Honesty%20Guidelines.pdf>

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.