



COURSE OUTLINE

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

Ω Please note: the College electronically stores this outline for five (5) years only.
It is **strongly recommended** you keep a copy of this outline with your academic records.
You will need this outline for any future application/s for transfer credit/s to other colleges/universities.

1. Instructor Information

(a)	Instructor:	Steve McKinnon		
(b)	Office Hours:	TBA		
(c)	Location:	F348D		
(d)	Phone:		Alternative Phone:	
(e)	Email:	mckinnons@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

- (a) Texts: CHEMISTRY, The Central Science: a Broad Perspective, by Brown, Lemay, Bursten, Langford, Sagatys, and Duffy. Prentice Hall. Australian edition 2nd edition (blue).

The 1st edition (purple/green) is acceptable along with the 10th and 11th US editions

- (b) Lab Manual: Chemistry 120 Laboratory Manual, Fall 2007 Edition (From the bookstore)

- (c) Safety glasses are mandatory for laboratory activities. These can be purchased at the campus bookstore.

4. Course Content and Schedule

Lecture Plan:	
Textbook chapter (Brown at al.)	Topic (approximate number of hours)
1-3	Review of selected topics (6)
9	Gases (3-4)
5	Electronic structure of atoms (7-8)
6	Periodic properties of the elements (3)
7	Basic concepts of chemical bonding (3-4)
8	Molecular geometry & bonding theory (3)
10	Intermolecular forces, liquids and solids (3)
11	Solutions (3)
18	Chemistry of the environment (3)

5. Basis of Student Assessment (Weighting)

(a) Laboratory	L.O. 6 and 7	25%
(b) Midterm Exam I	L.O. 1 and 2	15%
(c) Midterm Exam II	L.O. 3 – 5	20%
(d) Final Exam	Cumulative	40%

1. Students must complete a minimum of 70% of the laboratory work to pass the laboratory component of Chem 120. Students must pass the laboratory portion of the course in order to obtain credit for Chem 120.

2. Test score that is not as high as that of December final exam will be dropped automatically and its weight redistributed to the final exam. For anyone who misses both tests, your final exam will then be 75% of the course grade.

3. Students must write each test as scheduled. No one is allowed to write late and there will be no exceptions. Early exam is a privilege and not a right, at full discretion of the instructor.

6. Grading System

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	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

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 E-1.5 at camosun.ca 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, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. <i>(For these courses a final grade will be assigned to either the 3rd course attempt or at the point of course completion.)</i>
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.

7. Important Dates

Week

- V** Oct. 1 (Tues): **Test I 6:30-9:00pm in Lab**
- VII** Oct. 14 (Mon): Thanksgiving Day
- X** Nov. 5 (Tues): Last day to Withdraw from course or Change to Audit
- XI** Nov. 11 (Mon): Remembrance Day
- Nov. 12 (Tues): **Test II 6:30-9:00pm in Lab**

Final Exam Period: Dec. 9-14, 16 and 17

8. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services, or the College web site at camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services, and the College web site in the Policy Section.

Chem 120-001 - Fall 2013 Lab Schedule

Tuesdays, 18:30-21:20 in Fisher 354

Week Number Begins on	Activity & Experiment Number	Actual Date of Lab Tuesdays
I Sept 2 nd , Labour Day	Lab Orientation— attendance mandatory	Sept 3 rd
II Sept 9 th	Expt. 2 Densities of Solids & Liquids	Sept 10 th
III Sept 16 th	Expt. 3 Stoichiometry of Chem. Rxns—Gp A	Sept 17 th
IV Sept 23 rd	Expt. 3 Stoichiometry of Chem. Rxns—Gp B	Sept 24 th
V Sept 30 th	Test I in Lab (2.5 hours)	Oct 1 st
VI Oct 7 th	Expt. 4 The Spectroscopic Determination of Nickel in Aqueous Solution	Oct 8 th
VII Oct 14 th	Expt. 5 Colorimetric Determination of Iron in a Vitamin Tablet	Oct 15 th
VIII Oct 21 st	Expt. 6 Determination of Copper Using Atomic Absorption Spectroscopy	Oct 22 nd
IX Oct 28 th	Expt. 7 Determination of the Total Hardness of Water Using E.D.T.A.	Oct 29 th
X Nov 4 th	Expt. 9 The Preparation of Potassium Tris(oxalato)Ferrate(III)	Nov 5 th
XI Nov 11 th , Remembrance Day	Test II in Lab (2.5 hours)	Nov 12 th
XII Nov 18 th	Expt. 10 Analysis & Uses of Potassium Tris(oxalato)Ferrate(III)	Nov 19 th
XIII Nov 25 th	Expt. 8 Molecular Shapes & VSEPR Lecture	Nov 26 th
XIV Dec 2 rd	Exam Info & Review	Dec 3 rd
Final Exam Period - Dec 9th to Dec 14th, Dec 16th & 17th		

Note: This is only a preliminary lab schedule, changes will be made due to equipment &/or glassware problems, or rescheduling of tests...

Eye protection is mandatory!!