



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

**CHEM-120-004 & 005**  
**College Chemistry 1**  
**Fall 2018**

## **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**

Instructor:	Diana Li
Office Hours:	M & W 14:30-15:20, Tu 15:30-16:20, Th 13:30-15:20, or by appointment.
Location:	Fisher 344C
Phone:	250-370-3444
Email:	<a href="mailto:lid@camosun.bc.ca">lid@camosun.bc.ca</a>
Website:	<a href="http://camosun.ca/learn/programs/chem.html">http://camosun.ca/learn/programs/chem.html</a>

\*To avoid class interruptions & cancellations, please refrain from wearing fragrance or other strongly scented products to class!\*

### **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

Texts	"Chemistry, The Central Science: a broad perspective" by Brown et al., 2014—a.k.a. 3 <sup>rd</sup> Australian Custom Edition.
Other	◆ Chem 120 Lecture Notes Supplement & Appendix by D. Li, Fall 2015 Ed. This supplement goes with both 2 <sup>nd</sup> & 3 <sup>rd</sup> Australian editions of BLB but the 3 <sup>rd</sup> Australian edition is preferred. Note: Your Chem 121 instructor is not obligated to accommodate the 2 <sup>nd</sup> edition, and homework questions selected from both editions are not necessarily identical or equivalent. ◆ Chem 120 Lab Manual ◆ Molecular Model Kit—recommended if you are taking Chem 121 and other 2 <sup>nd</sup> year Chemistry courses (Chem 230, 231, etc.) ◆ Eye protection is mandatory & lab coat is recommended in the lab!

### 4. Course Content and Schedule

Lecture Plan:		
Chapter		Topic (approximate number of lecture hours)
3 <sup>rd</sup> Ed.	[2 <sup>nd</sup> Ed.]	
2-4	[1-3]	Review & Preview of Selected Topics (9)
10	[9]	Gases (3-4)
6	[5]	Electronic Structure of Atoms (7-8)
7	[6]	Periodic Properties of the Elements (3)
8	[7]	Basic Concepts of Chemical Bonding (3-4)
9	[8]	Molecular Geometry & Bonding Theory (3 + lab lecture)
11	[10]	Intermolecular Forces, Liquids & Solids (3)
12	[11]	Solutions (3)
13	[20]	Chemistry of the Environment (3)

*Students may not use recording devices in the classroom without 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.*

### 5. Basis of Student Assessment (Weighting)

Labs (up to 9 experiments)	22%
Test I (Review & Preview Materials)	13% (Week V Lab Period; 2.5 hours)*
Test II (3 <sup>rd</sup> Ed.-Ch. 10 & 6)	20% (Week X Lab Period, 2.5 hours)*
Final Exam (comprehensive)	45% (TBA~Week V, 3 hours in December)

\* Test dates to be confirmed during the first week of classes in September.

#### Notes:

- (1) Student must pass the lab portion of the course to obtain credit for Chem 120. Your lab faculty will go over the lab component of Chem 120 and lab evaluation with you...
- (2) Student is encouraged to attempt both tests. Test score that is not as high as that of the December final exam will be dropped automatically and its weight redistributed to the final exam. However anyone who is caught cheating will receive zero for that test which will not be redistributed. For anyone who misses both tests, your final exam will then be 78% of the course grade.
- (3) Student must write each test as scheduled for his/her section. No one is allowed to write late and there will be no exceptions. Early exam is a privilege and not a right, thus, at full discretion of the instructor.

### 6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

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

Hard copies of the 1<sup>st</sup>, 2<sup>nd</sup>, & 3<sup>rd</sup> Australian Editions of B-L-B are available in the Library Reserve Room.

**Note:** Short answers to all red numbered exercises are at the back of the text, and a hard copy of the Solutions Manual for the 1<sup>st</sup> Australian Ed. is in the library. Answers to red & black numbered exercises are available from Di & she will email the 3<sup>rd</sup> edition answers to everyone. Please email Di if you need the 2<sup>nd</sup> edition answers.

## 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.

### Academic Honesty Guidelines

<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.