



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

CHEM-121-001
College Chemistry 2
Winter 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

(a) Instructor	John Lee	
(b) Office hours	See posted times on office door.	
(c) Location	F 344A	
(d) Phone	250 370 3446	Alternative: _____
(e) E-mail	leejohn@camosun.ca	
(f) Website	D2L	

2. Intended Learning Outcomes

(If any changes are made to this part, then the Approved Course Description must also be changed and sent through the approval process.)

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

1. Utilize the specialized vocabulary and nomenclature based on the IUPAC system of organic compounds to name and draw structures for many simple organic compounds containing the common functional groups.
2. Write chemical reactions to illustrate numerous transformations between organic functional groups.
3. Draw structural and stereoisomers of organic compounds and name stereoisomers based upon the IUPAC system of nomenclature.
4. Demonstrate an understanding of the factors that influence the rate of a chemical reaction, deduce the rate of a chemical reaction from time/concentration data, and utilize rate laws to perform kinetic calculations.
5. Apply the laws of thermodynamics and account for the factors that lead to spontaneous physical and chemical changes.
6. Explain how and why reactions attain equilibrium positions and perform calculations pertaining to equilibrium systems.
7. Describe redox reactions, use electrochemical data to predict the spontaneity of redox reactions, and comprehend the structures of electrochemical cells.
8. Describe various acid-base theories and apply these theories to acid-base reactions in aqueous solution.
9. Perform experiments in the areas of preparative organic, preparative inorganic, physical and analytical chemistry and use the various associated pieces of laboratory equipment.

3. Required Materials

(a) Texts

My Lab and Mastering Course Code. A My Lab Mastering Access Code can be purchased from the Camosun Bookstore. Approximately \$60. **Your Course code is valid for multiple courses for 2 years from purchase. So, if you already have a code (from Chemistry 120) there is no need to get another.**

If you have previously purchased a new textbook (Custom Camosun Edition) or ebook (see below) then this includes a My Lab Mastering Chemistry Course Code.

Chemistry 121 Laboratory Manual

(b) Other

OPTIONAL ONLY:

Chemistry, The Central Science, Brown, le May, Bursten. *Custom Camosun Edition*. \$145. (For hard copy, ebook access and My Lab Mastering course code). ebook and My lab Mastering course code only \$114.

The 2nd and 1st Australian editions of this textbook are also acceptable. **Note: New textbooks come with a My Lab Mastering Chemistry Code.**

4. Course Content and Schedule

(Can include: Class hours, Lab hours, Out of Class Requirements and/or Dates for quizzes, exams, lecture, labs, seminars, practicums, etc.)

Lecture Times: Tuesday, Thursday and Friday F 210: 9.30 - 10.20 am

Laboratory Time: Monday: 2.30 to 5.20 pm in F 356

Note: This is only a preliminary lab schedule, changes will be made due to equipment &/or scheduling. Lab coat and eye protection are both mandatory and **ARE NOT PROVIDED BY THE DEPARTMENT.**

Activity & Experiment Number	Date of Lab
Lab Orientation and tutorial	Monday Jan 9 th
Preparation of aspirin	Jan 16 th
Group A Expt. 3 Preparation of Benzoic acid	Jan 23 rd
Group B Expt. 3 Preparation of Benzoic acid	Jan 30 th
Midterm 1	Feb 5 th
College closed for reading break	Feb 12 th
[Expt. 2 Analysis of an unknown acid]	Feb 19 th
[Expt. 6 Bleach Vs. Blue Dye]	Feb 26 th
Expt 10 Thermochemistry	Mar 5 th

Expt 8 Gravimetric Analysis	Mar 12 th
Midterm Test 2	Mar 19 th
Expt. 9 Copper(I) chloride	Mar 26 th
Easter Review	Apr 2 nd
Material Review and Exam Preparation	Apr 11 th

5. Basis of Student Assessment (Weighting)

(Should be directly linked to learning outcomes.)

(a) Assignments

Online Mastering Chemistry Assignments: 25 %

Missed Mastering Chemistry assignment marks may not be carried over. The due dates for these assignments will not be extended.

(b) Exams

2 Midterm Tests: 10 % each.

Comprehensive Final Examination: 30 %

If it is advantageous to the student the theory mark will be solely derived from the Final Examination, or a combination of midterm(s) and final. 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.

(c) Other (e.g. Project, Attendance, Group Work)

Laboratory component: 25 %

Students must complete the laboratory portion of the course with a minimum score of 50%, in order to gain a passing mark in the course. In the event of a student being unable to attend a laboratory class it is advised that the student attempt to obtain data from a partner or perform the experiment with another section in order to complete the assignment/report. It is essential that you give your lab instructor the courtesy of an email in the event that you miss a laboratory class, otherwise a score of zero will be assigned.

A student that attends the laboratory class but does not present a written report/assignment, will receive a (maximum) score of 40%.

Students are responsible for obtaining their own safety glasses and laboratory jacket from the bookstore. It is not the responsibility of the College to provide you with safety equipment.

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 the best resource in the Course. If the office hours do not fit your schedule, please email or ask for an appointment. We are hoping to open a Science Help Centre in the Library during the Winter term. Your Instructor will give you details if and when this happens.

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.