



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

CHEM-220-001
Inorganic Chemistry
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

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

1. Utilize a detailed knowledge of the electronic structure of atoms to rationalize many of the physical and chemical properties of atoms.
2. Apply simple and sophisticated bonding theories to explain many of the properties of ionic and molecular substances.
3. Comment on the chemistry of the first row transition metals, especially in respect to formation of coordination compounds, their catalytic activity, and their relevance to bioinorganic chemistry.
4. Describe the major features of the chemistry of the main group elements of groups 14 and 18.
5. Use equipment associated with the preparation and analysis of inorganic compounds and perform reactions under an inert atmosphere for air- or water-sensitive compounds.
6. Outline the common approaches to synthesizing inorganic and coordination compounds in the laboratory.

3. Required Materials

(a) Texts

***Sapling Learning** course code (~\$40 US)

Laboratory Manual. Inorganic Chemistry (Winter 2018), John Lee

***If you purchased the 2 course option in Fall, there is no need to buy another code.**

(b) Other **OPTIONAL ONLY:** INORGANIC CHEMISTRY, Housecroft & Sharpe, *pub*: Pearson, current edition is 4ed. Other ed. acceptable.

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, Wednesday and Thursday F 210
All lectures are at 8.30 to 9:20

Lab Times: Wednesdays in F354.
Labs are from 9.30 to 12:20. Some of the labs** require more than 3 hours, so we will use the 8:30 lecture period to make sure we complete these labs.

Final Exam: Covering all material covered in the course. Date TBA

Midterm 1: Covering electronic structure, periodic table and bonding and symmetry sections.

Midterm 2: Covering transition metals and associated theory.

Note: This is only a preliminary lab schedule, changes can be made due to equipment &/or scheduling of other sections... Lab coat and eye protection are both mandatory and not provided!!

Week Number Begins on	Activity & Experiment Number	Actual Date of Lab Wednesday
I Jan 8 th	Gold nanoparticles	Jan 10 th
II Jan 15 th	Quantum Dots	Jan 17 th
III Jan 22 nd	Luminescent Lanthanides	Jan 24 th
IV Jan 29 th	Isomerism- part I	**Jan 31 st
V Feb 5 th	Isomerism- part II	**Feb 7 th
VI Feb 12 th	Family Day BC, College Closed	Feb 14 th
VII Feb 19 th	midterm test 1	Feb 21 st
VIII Feb 26 th	[Optical activity at an octahedral cobalt centre]	**Feb 28 th
IX Mar 5 th	tin(II) or tin (IV) ? - part I	Mar 7 th
X Mar 12 th	tin(II) or tin (IV) ? - part II	Mar 14 th
XI Mar 19 th	midterm test 2	Mar 21 st
XII Mar 26 th	Beer Cans to LED's part 1	Mar 28 st
XIII Apr 2 nd	Beer Cans to LED's part 2	Apr 4 th
XIV Apr 9 th	Element Jeopardy	Apr 11 th
Final Exam Period	Final Exams Apr 17 th to Apr 24 th	

5. Basis of Student Assessment (Weighting)

(a) Assignments

Sapling Homework

Online assignments: 25 %

(b) Midterms

2 midterm tests, each worth 10 %

(c) Final Exam

Covers all course material: 30 %

(d) Laboratory Work

25 %

Chemistry is a practical science, it is essential to attend the laboratory classes. 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 class with another section in order to complete the assignment/report. It is mandatory that you give your Lab Instructor and/or Lab Partner the courtesy of an email in the event that you miss a laboratory class, otherwise a score of zero will be assigned.

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.

The breakdown of the laboratory mark is as follows:

Pre lab assignments and the submission of pre-labs prior to starting the lab class.	25 %
Quality of performance and attendance at lab	75 %

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. In the event that office hours do not fit your schedule, please email for an appointment.

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.