

## Chemistry 2303: Inorganic Chemistry

### Course Outline – Fall 2019

- Professor: Dr. Bobby Ellis (office: 115 Elliott Hall; e-mail: [bobby.ellis@acadiau.ca](mailto:bobby.ellis@acadiau.ca))
- Lectures: Mon., Wed. and Fri. 10:30-11:20 am in 303 Elliott Hall
- Tutorials: Optional tutorials will be held prior to midterm and final exams
- Labs: Wednesdays 1:30-4:30 pm in 221 Elliott Hall
- Office Hours: Mon., Wed. and Fri. 9:00-10:00 am or by appointment
- Textbook: No required textbook, recommended access to an inorganic textbook:  
 M&T: Inorganic Chemistry, 5th Edition by Miessler, Fischer and Tarr  
 H&S: Inorganic Chemistry, 4th Edition by Housecroft and Sharpe  
 S&A: Inorganic Chemistry, 6th Edition by Shriver, et. al
- Resources: Supplementary problems and other course resources:  
<http://www.acadiau.ca/~bellis/resources/>
- Other: Students are **strongly recommended** to purchase a molecular model kit

	Assignments/Quizzes	5%	
	Nomenclature	5%	
	Lab Work	30%	
Evaluation:	Midterm Exam #1	10%	Monday, October 7, 2019
	Midterm Exam #2	10%	Friday, November 8, 2019
	Midterm Exam #3	10%	Monday, November 25, 2019
	Final Exam	30%	

	Alpha	GPA	%
Grade Conversion:	A+	4.33	94 – 100
	A	4.00	87 – 93
	A-	3.67	80 – 86
	B+	3.33	77 – 79
	B	3.00	73 – 76
	B-	2.67	70 – 72
	C+	2.33	67 – 69
	C	2.00	63 – 66
	C-	1.67	60 – 62
	D+	1.33	57 – 59
	D	1.00	53 – 56
D-	0.67	50 – 52	
F	0.00	0 – 49	

**If you miss more than two lab periods for any reason, you earn a failing grade in course.**

**Programmable calculators are not allowed for midterms or final exams.**

**There are no make-up midterms.** If you miss a midterm examination for a valid reason, the points are transferred to the value of the final exam.

The topics covered in this course are:

1. Atomic Structure (periodic trends, reduction-oxidation reactions)
2. Simple Bonding Theories (Lewis structures, VSEPR theory, valence bond theory)
3. Symmetry and Group Theory (point groups, molecular symmetry, character tables)
4. Molecular Orbital Theory (sigma and pi bonding polyatomic MO diagrams)
5. Coordination Chemistry (crystal field theory, ligand field theory)
6. Ionic Bonding (crystal systems, bonding in extended salt structures)
7. Main Group Chemistry (electron deficient compounds, heavy element multiple bonds)

#### Fit to Learn Policy

Students are required to show up to laboratory (lab) and lecture at Acadia University in a mental and physical state suitable for learning. This means they must not be impaired due to sources such as (but not limited to) marijuana, prescription drugs, alcohol, severe lack of sleep or any other cause that may compromise the safety and/or learning potential for themselves or other students.

The instructor has the right to remove anyone from the lab setting that they feel is exhibiting signs of impairment with likely grade implications.

#### Accessible Learning Services

If you are a student with documentation for accommodations who anticipates needing supports or accommodations, please contact Marissa McIsaac, Accessibility Resource Facilitator at 902-585-1520, [disability.access@acadiau.ca](mailto:disability.access@acadiau.ca) or Emily Duffett, Accessibility Officer, 902-585-1823, [disability.access@acadiau.ca](mailto:disability.access@acadiau.ca). Accessible Learning Services is located in Rhodes Hall, rooms 111-115.