

## Chemistry 3303: Main Group Chemistry

### Course Outline – Winter 2022

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 312 Elliott Hall

Tutorials: Optional tutorials will be held prior to midterm and final exams

Labs: Wednesdays or Thursdays 1:00-4:00 pm in 221 Elliott Hall

Office Hours: Wednesday 9:00-10:00 am or by appointment

Textbook: *Inorganic Chemistry, 5th Edition* by Miessler, Fischer and Tarr  
ISBN-13: 978-0-321-81105-9; the textbook is **not required**,  
but access to an inorganic textbook is recommended

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%	
	Research Project	10%	
	Lab Work	25%	
Evaluation:	Midterm Exam #1	10%	Wednesday, February 16, 2022
	Midterm Exam #2	10%	Wednesday, March 9, 2022
	Midterm Exam #3	10%	Wednesday, March 23, 2022
	Final Exam	25%	

	Alpha	GPA	%
	A+	4.33	90 – 100
	A	4.00	85 – 89
	A-	3.67	80 – 84
	B+	3.33	77 – 79
	B	3.00	73 – 76
	B-	2.67	70 – 72
Grade	C+	2.33	67 – 69
Conversion:	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 midterm 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 goals of this course are to solidify and build upon the concepts of chemical structure and bonding for main group elements presented in CHEM 2303, and to introduce computational chemistry.

The topics covered in this course include:

1. Review of Inorganic Fundamentals
2. Symmetry and Group Theory
3. Molecular Orbital Theory
4. Advanced Molecular Orbital Theory
5. Computational Chemistry
6. Main Group Chemistry (Development and Current Research Areas)

#### 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 or if you anticipate needing supports or accommodations, please contact:

Ian Ford, Accessibility Resource Facilitator at 902-585-1520, [disability.access@acadiau.ca](mailto:disability.access@acadiau.ca)  
Marissa McIsaac, Manager, [disability.access@acadiau.ca](mailto:disability.access@acadiau.ca)

Accessible Learning Services is located in Rhodes Hall, rooms 111-115.

#### Commitment to Equity

Acadia University is committed to becoming a culturally safe and anti-oppressive community. This can only be achieved where there are simultaneous efforts to eliminate all forms of discrimination and harassment from our campus community, including the elimination of all discrimination, harassment and violence based on one's identity, including but not limited to, gender, race, class, ethnicity, sexual orientation, disability, gender identity, gender expression, and Indigeneity.

The Equity, Diversity and Inclusion Officer is available to **students, staff, and faculty**. The fundamental objective of the Equity Office is to **prevent discrimination, sexual harassment, and personal harassment** from occurring, in part by managing [Acadia's Policy Against Harassment and Discrimination](#). For more information, as well as for resources for students who believe they may have experienced or witnessed discrimination, sexual harassment, or personal harassment please contact Acadia's Equity, Diversity and Inclusion Officer, Polly Leonard, MSW, RSW (she/her/hers) at [equity@acadiau.ca](mailto:equity@acadiau.ca), and check out the [website](#).