

Course Syllabus

**General Chemistry
202-SN1-RE**

Field of Study: Health Sciences, Pure and Applied Sciences

Discipline: Chemistry

Weighting: 3-2-3

Number of Units: 2 ½

Session: Autumn 2023

Instructors and Availabilities:

- By appointment.
- Offices are located on the 5th floor.

	Olivia Bibollet	Matthew Hachey	Kim Silkauskas
Monday	11:00 – 12:00	11:30 – 13:30	12:30 – 13:00
Tuesday	9:30 – 11:00	10:00 – 12:00	10:00-10:30 12:30 – 14:00
Wednesday	N.A.	10:00 – 11:00	10:00 – 13:00
Thursday	N.A.	11:00 – 12:00	12:00 – 14:00
Friday	N.A.	10:00 – 11:00	N.A.

Course Description

- **Overview**

This is the first Chemistry course in the Science Program at Collégial international Sainte-Anne. This course reviews the fundamentals of chemistry such as essential concepts (atoms) and symbols (elements), chemical quantities (atomic mass), stoichiometry (limiting reagent), chemical reactions, chemical and physical properties, periodic properties, types and structures of compounds, and hybridization. Applications of chemistry, as well as the basics of Green Chemistry, will be integrated throughout the course.

- **Ministry Competency Target**

- 0C01: Analyze properties of matter and chemical changes.

- **Performance Criteria**

- Appropriate use of terminology.
- Observance of mathematical and chemical formalism.
- Use and conversion of appropriate units of measurement.
- Consideration of environmental issues.
- Demonstration of rigour in the problem-solving approach.

- **Elements of the Competency**

- Use chemical language and symbols.
- Carry out the quantitative analysis of chemical systems.
- Explain the properties of the elements and how they relate to the periodic classification.
- Explain the structure of matter according to the types of chemical bonds.
- Explain the main macroscopic properties of matter.
- Verify, using an experimental method, some chemical and physical properties of matter.

- **Course Contribution to the Science Program**

This course gives a solid foundation in chemistry needed to pursue Health Science or Pure & Applied Science field of studies.

Pedagogical Approach

This course consists of 5 hours of class work each week divided into two classes of 1h30 and one practical session of 2 hours.

1. Lecture

Concepts will be introduced using a variety of techniques such as lectures, videos, individual and group work, and hands-on activities. Active learning will be applied as much as possible. For example, students may be asked to read a specific section in the textbook or watch a video prior to coming to class. Students may then work on an activity based on this material in class.

2. Participation

Positive participation is essential for successful completion of this course. Students will be expected to complete all in-class and at-home assignments. Course content and supportive documents are available on Moodle and on the Mastering Chemistry website. It is the student's responsibility to check these sites regularly for newly uploaded course-related documents.

3. Bilingualism

This course will be taught entirely in English. Students may write their lab reports and other evaluations in French. However, they are encouraged to complete work in English to strengthen their comprehension and fluency.

4. Use of Information and Communication Technologies (ICTs)

ICTs will be used regularly, and students must bring their laptops to each class. The instructor reserves the right to determine when the laptops can be used. The course content and documentations will be available online on Moodle. It is the student's responsibility to regularly check for newly uploaded course-related documents.

- To look at your grades: [Omnivox](#)
- For access to the course content:
 - O. Bibollet: *To be confirmed.*
 - M. Hachey: [Moodle \(Hachey\)](#)
 - K. Silkauskas: [Moodle \(Silkauskas\)](#)
- E-text and practice problems: [Mastering Chemistry](#)

5. Global dimension

Students will be expected to consider the impact of the applications of chemistry on society and the environment on a global scale.

Evaluation

Activity	Details	Date	Weight
Quizzes	6 in all and one dropped.	Throughout the semester.	10%
Assignments	To be determined.	Throughout the semester.	5%
Laboratories	Lab book, labs, reports, quizzes.	Week following each lab.	30%
Midterm Exam	Material up to and including one week before the exam.	October 30 th	25%
Final Exam	Cumulative	Final Exam Period (15 – 22 December)	30%
TOTAL			100 %

1. Formative

Practice problems will be given in class and/or using Master Chemistry. This work is to give the student feedback and to develop comprehension. It will not count towards the term mark.

2. Summative

Summative evaluations include assignments, pre-lab work, lab reports, quizzes, two tests and the final exam. You are expected to complete and submit all summative evaluations – regardless of absences – since most work will be submitted on Moodle. If a deadline is missed and absence is justified, work must be submitted in a timely fashion. If an evaluation is missed due to an *unjustified reason*, a grade of zero will be given.

IMPORTANT INFORMATION:

1. All work that is submitted as a group will be graded as a group. However, the teacher reserves the right to grade (or re-grade) each student individually according to the work they have done. This could result in a different mark given to each team member. Therefore, it is critical to keep track of your contribution during group work. Important information includes: What was done? By whom? When?
2. Given the schedule, a lab may not occur synchronously with, or be directly related to the material covered in class that week. You are responsible for reading ahead.

3. Laboratory follow-up work and other formal assignments must be submitted as a pdf on Moodle on the given date and time as specified by your instructor. Work submitted in any other format or by email will **not** be corrected.
4. If a class, assignment, or a lab is missed, you are still responsible for the material.
5. If work is missed for a valid reason, you are expected to contact the teacher, and/or the lab technician (where applicable), to complete and submit the work within a reasonable timeframe.
6. Work submitted after the due date and time **may not be evaluated** – and will be given 0 - OR may lose up to 10% per day. It is up to the discretion of the teacher.
7. CiSA's evaluation policies apply to this course. Details can be found in the section "Documents" on Omnivox.
8. Recording of classes is not allowed unless advance permission is given by the instructor.
9. **You must keep a copy of every submitted work until you receive your final grade for this course at the end of the semester.**

Materials

- Mandatory
 - etext "Chemistry" by McMurry, Fay, and Robinson (8th edition).
 - An access card, which will give you access to the Mastering Chemistry website and the etext, is available for purchase at the school's bookstore.
 - Once you have the access card with a code number, the link to this website is:

<https://www.pearsonmylabandmastering.com/northamerica/masteringchemistry/>
 - Lab coat, goggles, and lab notebook – also available for purchase at the bookstore.
 - Personal computer/digital device.
- Recommended
 - **Non-programmable** scientific calculators are essential for this course. They are permitted during quizzes, assignments, and exams.
 - It is strongly recommended that you use a notebook to take notes and work on problems.

**Note: This is a tentative schedule that could change throughout the semester.
Review this document frequently.**

Date	Content	Activities
Week 1 Aug. 22	<ul style="list-style-type: none"> • Course Syllabus • Unit 1: Fundamentals • Lab safety and expectations 	<ul style="list-style-type: none"> • Introduction • Lab Activity
Week 2 Aug. 28	<ul style="list-style-type: none"> • Unit 1 <i>continued</i> • Unit 2 Chemical Composition 	<ul style="list-style-type: none"> • Workshop
Week 3 Sept. 4	<ul style="list-style-type: none"> • Unit 2 <i>continued</i> 	<ul style="list-style-type: none"> • Workshop
Week 4 Sept.11	<ul style="list-style-type: none"> • Unit 3: Stoichiometry 	<ul style="list-style-type: none"> • Lab 1: Measurement and Expression of Data
Week 5 Sept. 18	<ul style="list-style-type: none"> • Interdisciplinary week 	<ul style="list-style-type: none"> • <i>Lab 1 Follow-Up</i>
Week 6 Sept. 25	<ul style="list-style-type: none"> • Unit 3 <i>continued</i> 	<ul style="list-style-type: none"> • Lab 2: Physical and Chemical Changes
Week 7 Oct.2	<ul style="list-style-type: none"> • Unit 4: Atomic Structure 	<ul style="list-style-type: none"> • Lab 3: Limiting and Excess Reagents
Oct. 9	Semaine de récupération: <i>No classes</i>	
Week 8 Oct. 16	<ul style="list-style-type: none"> • Unit 4 <i>continued</i> 	<ul style="list-style-type: none"> • <i>Labs 2 and 3 Follow-Up</i> • Workshop
Week 9 Oct. 23	<ul style="list-style-type: none"> • Unit 4 <i>continued</i> 	<ul style="list-style-type: none"> • Lab 4: Halogens • Workshop
Week 10 Oct. 30	<ul style="list-style-type: none"> • Unit 5: Periodicity 	<ul style="list-style-type: none"> • <i>Lab 4 Follow-Up</i> • Midterm Exam (25%)
Week 11 Nov. 6	<ul style="list-style-type: none"> • Unit 6: Chemical bonds 	<ul style="list-style-type: none"> • Workshop
Week 12 Nov. 13	<ul style="list-style-type: none"> • Unit 6 <i>continued</i> 	<ul style="list-style-type: none"> • Workshop
Week 13 Nov. 20	<ul style="list-style-type: none"> • Unit 7: Bonding Theories 	<ul style="list-style-type: none"> • Workshop
Week 14 Nov. 27	<ul style="list-style-type: none"> • Unit 7 <i>continued</i> 	<ul style="list-style-type: none"> • Lab 5 Part A: Procedure

Week 15 Dec. 4	<ul style="list-style-type: none"> • Unit 8: Intermolecular forces 	<ul style="list-style-type: none"> • Lab 5 Part B: Experiment
Week 16 Dec.11	<ul style="list-style-type: none"> • Unit 8 <i>continued</i> 	<ul style="list-style-type: none"> • <i>Lab 5 Follow-Up</i> • Workshop
Exam Week	<ul style="list-style-type: none"> • Final Exam 	<ul style="list-style-type: none"> • Summative Exam (30%)