

Dear Students,

Welcome to Introductory Chemistry Part II! Our primary goal is to ignite your passion for chemistry by creating a meaningful learning environment with many real-life applications of chemistry. The knowledge you gain in this course is applicable in diverse disciplines, including Medicine, Pharmacy, Environmental Sciences, Neuroscience, Biochemistry and Biology. We are looking forward to teaching you many interesting topics on molecular structure, chemical reactions and nuclear chemistry. Please read the course syllabus to understand the learning expectations and assessment methods. Looking forward to meeting all of you! Although there is no pre-requisite for this course, it is highly recommended that you have completed grade 12 Chemistry and Grade 12 Advanced Functions or Grade 12 Calculus. The lectures for this course are three times a week for one hour and you are strongly encouraged to attend all the lectures to engage in the participatory lessons!

Prof. Nirusha

Lectures will be streamed synchronously via Zoom until the end of January. Updates on the lecture format (in-person or online) for the remainder of the term will be announced at a later date. Please check the class announcements regularly for updates.

(4

in total;

You should continue to work on your assignments to the best of your ability, as extension accommodations may be as short as one business day, depending on the nature of the illness/emergency.

If an accommodation has been granted but you are unable to meet the conditions of the accommodation (ex. you need a longer extension, or you missed a make-up test), you will need to repeat the missed term work procedure and submit additional forms to request further accommodation. Note that in the case of a missed make-up test, an opportunity to write a second make-up test may not be provided.

Completion of this form does not guarantee that accommodations will be made. The course instructor reserves the right to decide what accommodations (if any) will be made. Failure to adhere to any aspect of this policy may result in a denial of your request for accommodation.

If an accommodation is granted but a continued illness/emergency prevents you from meeting the requirements of your accommodation, you must repeat the missed term work procedure to request additional accommodations.

Academic integrity is one of the cornerstones of the University of Toronto. It is critically important both to maintain our community which honours the values of honesty, trust, respect, fairness and responsibility and to protect you, the students within this community, and the value of the degree towards which you are all working so diligently. Detailed information about how to act with academic integrity, the Code of Behaviour on Academic Matters, and the processes by which allegations of

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to, doctor's notes.

To use or possess an unauthorized aid in any test or exam.

There are other offences covered under the Code, but these are by far the most common. Please respect these rules and the values which they protect. Offences against academic integrity will be dealt with according to the procedures outlined in the Code of Behaviour on Academic Matters.

Week	Topic(s)	Suggested Reading
1	Introduction to Quantum Model of the Atom	

Below is a list of topics that will be covered in this course, along with the corresponding chapters and learning outcomes.

Students will be able to

- i. Explain the need for the development of the quantum mechanical model of the atom and the key scientists who made major contributions to its development.
- ii. describe the evidence for the wave/particle duality of electrons and photons.
- iii. Be able to describe the electronic configuration of an atom or ion using the four quantum numbers.
- iv. Recognize how the quantum mechanical model of the atom is reflected in how the periodic table is organized.
- v. Use Hund's rule and the Aufbau principle to write electron configurations for atoms and ions.

Students will be able to

- i. Rationalize the macroscopic properties of gases in terms of the kinetic molecular theory
- ii. Explain the relationships between temperature, volume, pressure and quantity in terms of the kinetic molecular theory
- iii. Interpret barometer and manometer readings
- iv. Use the gas law equations to calculate pressure,

of atomic orbitals (LACOs) approach; understand bonding orbital vs antibonding orbital; draw MO diagram, and predict bond order and magnetism of diatomic molecules.

The CHMA10H3 lab content is organized as the following modules on Quercus:

introduces the students to the organization of the labs, schedule, Zoom link list for the practical sections, preparation instructions, assignment description, assessment criteria and lab policies.

is dedicated to explaining safety policies and practices in first-year undergraduate labs.

is designed to introduce , and practice Ladderane experiments for students to try out before their first official Ladderane experiment.

will be dedicated to the individual experiments.

Each experiment module on Quercus has the following Assessment components:

: The pre-

The laboratory component is worth 25% of your final grade. The laboratory component is marked out of 100 total marks.

	% Of final grade	Marks
Pre-Lab Quizzes (5 in total)	7.5%	6 marks (x 5)

_____ You must complete the above forms within _____ of the missed work to be considered as a late submission.

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Students must complete